The Brick 09

Annual Magazine

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THEME:
LET THE CHILDREN PLAY

HOW ANDY BECAME A LEGO DESIGNER

STRONG PROFITS IN 2008 – NOW AIM IS GROWTH

LEGO FACTORIES ARE GOOD NEIGHBOURS

THEME:
Toy safety

WORLD'S YOUNGEST climate experts

FIRST LEGO League challenges 140,000 children to come up with solutions to climate problems.

Dear Reader,

Like so many of my LEGO colleagues, I spend a lot of time travelling in connection with my work. Almost always – on a train or a plane – when I get talking to the passenger sitting next to me, the subject eventually turns to what we do for a living. And every time I tell a fellow passenger that I work for the LEGO Group, I get a totally wonderful reaction. A nice, funny – or touching – story about what LEGO bricks have meant to the person sitting next to me or his or her children or grandchildren. And I know that my colleagues all over the world have had the same experience over and over again.

Isn't it wonderful to be working for a company that generates such positive experiences and stories for millions of people all over the world? So positive that – as soon as they hear our company's name – they want to share their stories with us. No wonder we feel fortunate to be working right here.

And we ourselves also have many amusing, interesting and challenging experiences in the course of our everyday work that we're just bursting to tell others about.

This new magazine – The Brick – has come into being because we want to share some of these stories with you. In it, we will invite you into our universe and tell you about some of the things that don't always make the media headlines. Things that will give you an insight into how we think and work, and into what is important to us in our work with LEGO products.

At the same time, The Brick sort of replaces the type of annual reports and sustainability reports we've been publishing in recent years. We will continue to prepare an annual financial report containing our accounts and a management report. We will also continue to prepare a report on our non-financial data: a Progress Report. So our reporting of facts and figures will remain unchanged. But with this magazine we would like to reach out to readers who want to know a little more about the company behind the world-famous bricks.

The mission of the LEGO Group is to inspire and develop the builders of tomorrow. I hope The Brick will give you some idea of how we work to live up to that mission. In the 77 years of our existence, our aim has always been to contribute to children's development. We try to do that by creating the best and most enjoyable opportunities for play – which also develop creative problem-solving skills, the ability to collaborate, and fine motor skills and creativity.

The fundamental basis of our play is the world-famous LEGO brick. It is the keystone and core of our activities. So it was only natural to call our new magazine The Brick. We hope the magazine can bring you subjects and stories of interest – sparking off inspiring thoughts and ideas.

Happy reading.

Jørgen Vig Knudstorp
LEGO Group President and CEO

The Brick

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CONTENTS

A new model with a long history

These two police stations look quite alike – despite having been designed 20 years apart. In 2008 Designer **Raphaël Pretasacque** was inspired by the LEGO police station he had played with as a boy, when he was designing the latest model:

"When I was asked to design a police station, the first thing I thought about was the model I had when I was seven or eight years old. I thought it was really something! It had sliding doors. We hadn't made anything with sliding doors for a while – so that's why they've made a reappearance in the police station. As I worked on the design, I concentrated on the memories I had when I was younger."

Some of the components in the two police stations are almost identical. The police stations share the same colour scheme (black and white), and both have a jail and garage – and electronics on the roof. And the doors of the new model closely resemble those of the old.

Police station in 1986

Police station in 2008

CLASSIC PRODUCT STILL IN TOP SPOT

The police station in the LEGO City range was the best-selling LEGO product in 2008. An icon on toy shelves and a classic product which often tops bestseller lists.

BY NINA HERMANSEN

The LEGO Group manufactures many different models and themes. But time after time one particular model heads the list of bestsellers. It happened again in 2008. We're talking about the police station from the LEGO City range.

In a LEGO context the police station has long been a classic favourite. A new police station is marketed every 2-3 years (there have been 11 police stations over the years). LEGO Designer Raphaël Pretsacque is the man behind the latest police station. He believes the product owes its popularity to one particular factor:

"It's very easy to create a scenario with a police station. You've got the good guys and the bad guys. The good guys try to catch the baddies and put them in jail – and, of course, the prisoners keep escaping. It can go on for ever! It's one of the most iconic LEGO products we can make, and there's been a police station in our range since way back to the introduction of the minifigure."

According to the designer, the police station appeals particularly to boys aged five years and above. The police station represents something heroic, something good. It is also a model which has been designed to represent simplicity and realism. On the few occasions designers have tried to pep the model up with transparent, green colours and futuristic details, the children weren't very enthusiastic. A police station has to be what a police station has always been – with cells, policemen, prisoners and vehicles. To a child it'll never go out of fashion.

The battle of good against bad is one of the most common role plays when LEGO designers turn their attention to new products. But what is it about the police that grabs a child's interest?

Raphaël Pretasacque: "Maybe children see police officers as role models. They may possibly adjust their attitude later in life but, as children, they see the police as the right thing to be. The good hero."

Will the police station continue to capture first place on the bestseller list? Difficult to say. It will certainly face tough competition from the new board games LEGO Games, from Power Miners and from the agricultural theme, Farm, which is a new addition to the LEGO City range.

WORK HAND IN GLOVE – AND BUILD LIKE A 7-YEAR-OLD

The LEGO Group always focuses on the child's building experience. A recent test involved 110 boys – and more than 200 employees who happily became "children" again.

BY PERNILLE STANBURY PHOTO NIELS ÅGE SKOVBO

A bunch of adults are seated at tables piled high with bricks and building instructions. Each adult is issued with industrial work gloves and a sheet of stickers, and given a task: Remove a single sticker from the sheet and place it on a LEGO brick – while wearing a work glove on your "good" hand.

There's a lot of chuckling and laughter around the tables. Because it's possible to perform the assignment – but not easy with a heavy glove on. Now they know something about how it feels to be a boy of six or seven whose fine motor co-ordination skills haven't fully developed yet.

Children's building experience

The LEGO Group keeps its main focus on the child's building experience. And the building experience is in focus at the tables. Seated at the tables are designers and other product developers – for example, staff who produce building instructions.

They are attending a workshop on the child's building experience – learning to empathise with a seven-year-old youngster who's received a police station for Christmas and is bursting to get it built.

Before the workshop, 110 boys between five and nine years of age were gathered for a test in the city of Aarhus, Denmark. They were filmed while building various LEGO models, with emphasis on how well they were able to handle individual bricks and other elements, and whether they could follow the building instructions.

Kim Yde Larsen from the Development Department says: "The conclusion is that children are able to handle our different bricks but that a child of 5-6 has difficulty interpreting and putting building instructions into practice. They make a lot of mistakes as they build. The 7-to-9-year-olds on the other hand do well. Our test reminded us that designers shouldn't use bricks that are too similar, and that no stage of the building process should be too difficult. It's also important that models are structurally stable."

Gut feeling – and facts

The various exercises in the test had been selected on the basis of frequent discussions among employees in the Development Department – for example, how skilled children are at placing a sticker on a brick.

"We had a gut feeling about what they can do but we haven't done actual tests to support our theories. But the test surprised us in many positive ways; it illustrated that children can manage many of the things we were in doubt about – if they're shown how. The process of building something should be

"We're adults who spend our time designing and building – and there can be a tendency to forget who your consumer is."

challenging ... but not too challenging ... otherwise it becomes frustrating," says Kim Yde Larsen.

The results of the test were shared with over 200 employees from the Development Department at workshops. They watched the video recording made of the boys, and did some tests themselves – like sticking on a label wearing a thick working glove.

"We're hoping now, of course, to be able to improve the model quality even more," says Kim Yde Larsen.

Dyed-in-wool LEGO enthusiasts

One employee who feels he benefited greatly from the workshop is Designer Søren Gehlert Dyrhøj. He says:

"We're adults who spend our time designing and building – and there can be a tendency to forget who your consumer is. We forget what children can cope with, and of course it's our responsibility to make sure that our products can actually be built in a logical fashion. Otherwise the poor consumer is confused, can't build the thing – and isn't likely to buy any more LEGO products. Often we designers look at our products in the context of our own children but in many cases they're already dyed-in-the-wool LEGO enthusiasts. There is no doubt that building something is an acquired skill. It's important they enjoy the experience from the beginning and see it as a fun thing. At the workshop we watched videos of children playing – and could see, for example, that they can have difficulty tying a knot when they build a crane and have to attach a piece of string."

"We forget what children can cope with, and of course it's our responsibility to make sure that our products can actually be built."

Beneficial for young designers

Michael Lee Stockwell, who writes building instructions, also feels he has benefited:

"I'm pretty well acquainted with the experience that children get from building because it's part of my job to know that. But to younger designers who don't themselves have children it can sometimes be difficult knowing what a six-year-old can and can't do. The situations tested on the children in the video were brilliant, and they brought clarity to a lot of the problems we often discuss. We're often in discussion with our colleagues from marketing; they would like age grouping to be as low as possible – but at the same time have exciting products with lots of functions."

What's it like having a Mum/Dad who works for the LEGO Group?

The best part about our Dad working for LEGO is that we have lots of it at home to play with and we also get to hear about and see the newest LEGO sets before our friends. We also like to go to the office and look at and play with all the cool models that are in the office.
We have lots of friends and they all love coming over to our house to play with all the LEGO sets we have. We think our Dad has the best job in the world – because he gets to play with LEGO every day!

"THE BEST PART ABOUT OUR DAD WORKING FOR LEGO IS THAT WE HAVE LOTS OF IT AT HOME."

Jonathon (age 9) and Thomas (age 8), Canada.
Dad: Shawn J. McConvey, Customer Development Manager.

Your cultural background, history, finances and nationality are all factors that play a significant role in determining the kind of toys stowed away in your children's rooms in your home.

tell me wh

– and I will tell you what kind of toys you buy

BY ROAR RUDE TRANGBÆK **PHOTO** ROAR RUDE TRANGBÆK, ASYA MARDO, VIACHESLAV KOCHETKOV

Action figures are more popular in the USA than in Germany. Due to history, aggressive play is generally unpopular amongst mothers in Germany, explains Niels Sandal Jakobsen from Marketing Intelligence at the LEGO Group.

Children are born equal, and equipped with the same desire to play, learn and explore the world – regardless of whether they come from New York or Namibia. And if they could, they would choose the same toys," says Niels Sandal Jakobsen, Director of Marketing Intelligence at the LEGO Group.

Niels Sandal Jakobsen knows what he is talking about. As director of Marketing Intelligence, it is his job to know what kinds of toys parents and children want – and why. Even though children may be equal when they come into this world, there are great differences between what their parents choose to buy for them when they pick something from a toy store's shelves.

"When we need to know what makes people buy different toys in different countries, much of what we learn has something to do with cultural background, how people generally define what it means to be a child and exactly what "playing" means in different cultures," he explains.

You get very different answers to these questions, depending on whether you ask an American, a German or a Russian, for example.

Raising a winner or a social being

Niels emphasises, for example, that there are very different views about the function of toys, depending on whether you live in Central Europe or in an Anglo-Saxon country, such as the USA.

ere You Live

"In the Anglo-Saxon world, toys are to a greater extent seen as things that affect individual dimensions of a child. For example, some toys can strengthen a child's skills in mathematics. Parents tend to believe that children are made up of a number of different "cogs" that can be individually adjusted in order to steer the child's development in a specific direction," Niels Sandal Jakobsen explains.

Surveys in the USA indicate that this is something American parents try to do as much as they can.

"American parents tend to see it as their duty to prepare their children for a tough world – and raise them as winners. To a great extent, this is an elitist approach to the world, where the individual is more in focus than the society and where parents seek to strengthen individual skills in their child," he adds.

Meanwhile, in Central Europe and especially in Germany, parents tend to believe that any given toy affects all the child's competencies.

"German parents give top priority to their child becoming a social being, able to function in a social environment. Here society has more weight of importance than the individual," explains Niels Sandal Jakobsen.

He hastens to add that when he talks about differences between cultures and people across the globe, he generalizes and uses brash simplifications. And that there are no valid grounds for contending that one approach is right and the other wrong. What interests him more is to note how different approaches to play and childhood have consequences for how parents buy toys.

Play as a system

In the USA, for example, parents have a tendency to buy many different kinds of toys and then find out what the child prefers to play with.

"An American Mom buys the toy her child wants here and now. If the child changes his mind a week from now, then the contents of her shopping cart will change too. This means that the American consumer purchases a broad selection of toys. This does not mean, however, that American mothers buy on impulse – purchasing a wide variety of toys is in fact a deliberate policy. They aim to find something that their child is 'good' at - something that gives the child an experience of success," explains Niels Sandal Jakobsen.

Soft toys – a sure hit

In days gone by, Russia was often thought of as a sleeping bear that was dangerous to awaken. Today, however, when people in Russia talk about bears, they refer to bears that are literally cuddly soft toys. The Russians are in fact crazy about soft toy animals.

"The market for cuddly soft toys in Russia is huge. They are traditionally products Russians give as presents and not only to children. A soft toy animal is a welcome gift even for adult women," explains Vladimir Yakovlev, Marketing Director at Russian toy distributor SAKS.

SAKS distributes ten different well-known toy brands to stores across a huge area, stretching from St. Petersburg in the West to Vladivostok in the East.

"Plush bears, dogs and cats are selling especially well all over Russia. I suppose it's got something to do with the Russian mentality – a plush animal in the form of a fish wouldn't be a big hit here. As a proportion of total toy sales, sales of soft toys here are higher than the global average," adds Vladimir Yakovlev.

Tell me Where You Live

In Central Europe, the parents generally have a bigger say in what toys they spend money on.

"German parents are more likely to look for toys that they believe will contribute to making their children well-balanced social beings. They do listen to their children but are more loyal to one kind of toy that they believe has the effect they want," he adds.

Star Wars and systems

How popular a LEGO product or other toy becomes depends in part on where you are – New York, Berlin or Moscow. In addition to parents' views about children and play, historical, cultural and economic conditions also affect toy sales.

"There is tough competition to gain children's attention and interest in the American toy market because there are many more toy choices for children than in a market like Germany, as there are generally more choices of consumer goods in the US," explains Laura Post, Senior Director of Consumer Intelligence for the LEGO Group in North America.

So the combination of the U.S. being a consumption-driven culture, and parents wanting to make their kids happy has created a large and diverse U.S. toy market. Another trend that has developed during the last 20 years on the North American market and has spread to the rest of the world is licensed products. Today, about one in four toys sold in the USA is a licensed product that ties in to a movie or TV show, like LEGO *Star Wars*.

"LEGO *Star Wars* sells well in the USA because the movies are an integral part of American cultural history. Many parents see the movies as having been an important part of their childhood and want to pass this cultural inheritance on to their children," says Laura Post.

In the USA, the LEGO *Star Wars* products account for almost one-third of the LEGO Group's sales – more than anywhere else in the world. And even though the gap between the LEGO *Star Wars* products and other LEGO products is shrinking, as the LEGO Group boosts its focus on non-licensed lines, Jedi knights and Darth Vader will no doubt continue to be among the LEGO top sellers in the USA.

"We think LEGO *Star Wars* will continue to be an important part of our portfolio in the U.S., alongside other offerings like LEGO City and Agents, which are becoming as interesting to U.S. kids," says Laura Post.

While the movie industry has significance for toy sales in the USA, Germany's history has a role to play in affecting the kinds of toys German parents buy for their children.

"The country's past continues to play a role for Germans. Aggressive play is generally unpopular amongst mothers in Germany. For example, sales of action figures, which some German parents consider to be aggressive toys, are lower than in the USA, or indeed Denmark. Denmark is a neighbour to Germany but has a different history," explains Niels Sandal Jakobsen.

By contrast, construction toys are extremely popular in Germany. Take a look in the drawers in a German child's room and you will most often find either LEGO bricks or Playmobil. About 14 percent of all toys sold in Germany are construction toys. In the USA the corresponding figure is about four percent. The reason is that Germans in general prefer certain types of toys for their children, including creative toys that develop social competencies.

"Germans love to buy more toys of the kind they already own. They love to add value to the toys they already have, like when they buy LEGO bricks that can be combined with the bricks they already own," explains Niels Sandal Jakobsen.

Buying power

Looking further to the east, there are other factors that influence the kinds of toys you find in family homes.

"Eastern Europe and Russia are relatively new markets. As yet, we know relatively little about consumers in these countries. We do know, however, that economics play a significant role in toy purchases as the level of income here is still lower than in western countries," says Niels Sandal Jakobsen.

Olga Lombas, Marketing Manager for the LEGO Group in Russia nods in agreement to this observation. She says the LEGO product you are most likely to find in children's rooms in Russia is BIONICLE.

"This is primarily because of a great popularity of the line, and the fact, that it is a relatively low-price product that suits the Russian consumer. Some children can afford to buy BIONICLE with their pocket money. And, at the same time, many parents agree to buy BIONICLE for their children. This is a young market; Russian parents don't have their own experience with LEGO toys, and basically, there is a first-generation of parents now getting used to LEGO play themes, whereas in Germany, parents have been playing for generations, and want to pass their experiences on to their children," explains Olga Lombas.

Even in countries that are traditionally considered prosperous, economics still play a role in sales of LEGO bricks.

"LEGO products are not expensive but they're not the cheapest toys on the market either. For example we know that the typical consumer who buys LEGO bricks in the USA is white and middle-class. A matter of simple statistics," explains Niels Sandal Jakobsen.

While the differences between countries, cultures, incomes and historical backgrounds may be easy to pinpoint, Niels Sandal Jakobsen emphasises that the similarities are still greater.

"Of course, there are cultural differences – and it is important we don't ignore them and the fact that they change very slowly. Even so, we are all pretty much the same. Parents all over the world want to give their children what the children want. Children are pretty much the same too. They are brutally honest – they will tell you exactly what they think is fun and what isn't fun to play with," he says.

"Eastern Europe and Russia are relatively new markets. As yet, we know relatively little about consumers in these countries. We do know, however, that economics play a significant role."

Russia

Toys, luxury and prestige

Shopping for the perfect gift

Irina and Sergey, Moscow, Russia
Mission: "Gifts for our three-year-old son and eight-year-old daughter."
Good toys: "We don't want anything made in China – and the toys must contribute to our children's development! We thought maybe a construction toy or possibly a board game."

Olga Haldurdyeva and Olga Amanewa from Turkmenistan
Mission: Olga Amanewa: "We came armed with a detailed wish list from my son who is twelve. He wants a specific set of LEGO bricks – and there is not much to choose from back home in Turkmenistan."
Good toys: "Appear on our child's wish list – and withstand the test of time."

Prestige is very important to Russians when they buy toys. Increasingly, however, Russian parents want toys to contribute to the child's social and creative development – and be of good quality.

BY ROAR RUDE TRANGBÆK **PHOTO** ROAR RUDE TRANGBÆK, ASYA MARDO, VIACHESLAV KOCHETKOV

Mascha Kukina, aged 27, is on a mission. She moves from shelf to shelf, all of them bulging with toys, at the Mega Mall shopping centre on the outskirts of Moscow. The expression on her face could almost be described as desperate. Her daughter turns three in a couple of days and she has to find her present today – and the task is far from easy.

"I just don't know what to buy. My daughter tends to fall in love with a beautiful toy the minute she gets it – then, after only a short time she doesn't want to play with it anymore. I would like to find her a toy she'll find fun to play with and that keeps her interest. The toy should also develop her creative skills and her personality," explains Mascha Kukina.

She has looked at dolls, plush toys and LEGO DUPLO, but has not yet made up her mind. Mascha Kukina is just one of an increasing number of Russians giving top priority to toys' developmental properties when they choose gifts for their children.

Detsky Mir (The children's World), Russia's largest children's goods retail chain with 128 stores across the country, recently made an extensive survey on consumer behaviour among 900 families with children, and concluded it with a need-state segmentation. The results were surprising.

Creative focus

"According to the survey, we can very generally split Russian families into four different categories, according to their values and views on children upbringing: Parents who focus on close emotional interaction with their offspring, parents who want to develop their children's gifts and creativity, parents who see themselves as "educators" and "providers" and, finally, parents who put leadership ambitions above all for their children," explains Anastasia Laska, Marketing Director at Detsky Mir.

The last two categories account for just less than half of the parents in the survey, indicating that, in recent years, there has been a major shift in parents' attitudes towards children and their upbringing.

"If we'd carried out the same survey a decade ago, the proportion of parents who believed that their children had to be "provided for" and "educated" would have been greater. There would also have been more parents who

GLOBAL BESTSELLERS

Russian and Eastern Europe: BIONICLE is no. 1
USA: LEGO *Star Wars* is no. 1
Germany/Central Europe: LEGO City is no. 1.

Soft toys are a sure hit in Russia. "They are traditionally products Russians give as presents and not only to children. A soft toy animal is a welcome gift even for adult women," says Vladimir Yakovlev, Marketing Director at Russian toy distrbutor SAKS.

Elena and Andrej Garbunov, Moscow, Russia
Mission: "We're looking for a gift for our son Nikita's fifth birthday."
Good toys: "Most important is that he plays with it and finds it fun. The toys must keep him occupied so that we have some time to ourselves – we spend a lot of time keeping him busy and playing with him."

Oleg Zorenko, Moscow, Russia
Mission: "To buy a gift for my son Dimitri, aged 9."
Good toys: "It's important that my son has fun when he is playing. And it is also important that we get a 'father-son' experience out of it. It must be something we share, a kind of bonding between us. We bought LEGO bricks today."

Mascha Kukina is looking for a gift for her daughter who turns three. "I would like to find her a toy she'll find fun to play with and that keeps her interest. The toy should also develop her creative skills and her personality."

would have greater ambitions for their children. In Soviet times, there were more "leader at any cost" people. It was a psychological thing," states Anastasia Laska.

A larger proportion of parents today focus on developing their child's social, communicative and creative skills and this is significant for the kinds of toys Russian parents choose to spend money on. Toys like LEGO products, that make a strong contribution to a child's development, are selling well. Sales of boxes of LEGO bricks at Detsky Mir stores in February 2009 were double the February 2008 level – despite the economic crisis, the effects of which are also being felt in Russia.

Luxury gives status

Russia's history also bears an important influence on the kinds of toys that end up in the hands of Russian children, believes Olga Lombas, Marketing Manager for the LEGO Group in Russia:

"During the Soviet era, we became accustomed to a lack of quality products. In those days, consumer goods were of a much lower standard here than in the West. This explains why quality products and branded goods are in huge demand in Russia today and why we find a broader range of expensive fashion clothing in Moscow than in Copenhagen and other major Western cities. We Russians have a passion for luxury brands," she explains.

"There's massive demand for high quality toys and western brands because many Russians still regard western products as prestige products," Olga says and adds:

"If you visit friends or family and bring a box of LEGO bricks or another toy from the West for the children, you are seen as a really good 'gift-giver'. It's all about prestige. You gain prestige if you're able to buy a well-known branded product."

Prestige is indeed one of the most important factors influencing 'gift-givers' when they choose toys on toy-store shelves, confirms the Marketing Director at Detsky Mir. One in four customers visiting the chain's 128 nationwide stores is looking for a gift.

"For these 'gift-givers', as we call them, what matters is less what the child wants or what the toy can do for the child. The 'gift-giver' thinks it is more important to give a toy that is either expensive or sold under a specific brand name. If you give an attractive and expensive gift, you gain the respect of the child's parents," explains Anastasia Laska.

However, the Detsky Mir survey illustrates that the situation is somewhat different when parents buy toys for their own children.

"Brands are still important to parents but they focus more on the quality and safety aspects of the toy and they tend to look for toys that contribute to their children's development through play," she emphasises.

Greater focus on safety

Toy distributor, SAKS, also feels consumers' preference for branded goods, but Marketing Director Vladimir Yakovlev believes that toy quality is playing an increasingly important role.

"Many toys at the cheaper end of the market are produced in China. This is the kind of toy you find, for example, at small stalls on the market square. Toys produced in China have earned themselves a poor image as both parents and children have had many negative experiences with the quality and safety of these products. We notice that customers are very alert to this when they buy toys. Toys that are made in China are something they tend to avoid, even though some well-known brands of quality toys are also produced in China," he adds.

The quality, the brand and the capacity to develop are all far less important than the one factor overshadowing all others when Russian parents choose toys for their children:

"The child's wish list is absolutely the most important factor for parents – I believe this is the case all over the world," says Anastasia Laska.

Back at Mega Mall, Mascha Kukina has found a gift for her daughter; a soft toy bear.

"I hope she'll see it as her friend and tell it all her secrets," she says.

Asia

A different kind of market

BY ROAR RUDE TRANGBÆK

"The Asian toy market is very different from the rest of the world," claims Niels Sandal Jakobsen, Director of Marketing Intelligence at the LEGO Group.

"While we know a great deal about parents in Europe and the West, we have less insight into the Asian market because it is so different," he says.

The reason for this is that people in Asia generally have a particular view of what it means to be a child and what play is really all about.

"Education is a high priority in Asia and there is very little time for play during the day. Especially in Japan, most people believe that play and toys are primarily for amusement. You learn nothing from play. You learn at school, which places enormous focus on education across Asia," explains Niels Sandal Jakobsen.

As Asian children spend most of their day at school, playing is by many parents regarded as a haven where children don't have to learn anything.

"Play is what happens when you've had enough of learning and you just need to relax," explains Niels Sandal Jakobsen.

This has consequences for toy sales to Asian consumers.

"A Japanese toy store buzzes with sounds, blinking lights and vibrant colours. The toys sold there are primarily fads and crazes – products with "here-and-now" appeal. They're designed to amuse children for a short time," says Niels Sandal Jakobsen.

Also significant for the LEGO Group is the very special view Japanese consumers have to construction toys.

"Building with bricks is seen merely as 'stacking' and often regarded as something for very small children. If they saw a six-year-old building with LEGO bricks, some Japanese would believe that the child wasn't very intelligent – it's about time he or she got more advanced toys to play with," says Niels Sandal Jakobsen.

However, there are exceptions to this rule. LEGO Castle products enjoy massive popularity on Asian markets.

"When we launch new products in the Castle series, sales will often account for nearly half of total sales to the Japanese market, for example. There is apparently something about the Castle theme that has special appeal to the Japanese consumer," he adds.

The hunt for good toys

BY JESPER LUNAU **PHOTO** JESPER LUNAU

In the run-up to birthdays and Christmas, parents join the hunt for good toys. Toy companies hunt all year round in pursuit of what makes toys good. The Brick has also joined the hunt for good toys. There are differences between manufacturers', children's, parents' and retailers' versions of what really makes good toys good. The retailers have been given the floor because they sell the products and are in close contact with both consumers and manufacturers.

"There is a big difference between a good toy and a selling toy. In some cases, the success of a toy is created mainly through commercials," explains Wolfgang Höger, Purchasing Manager for Toys at Kaufhof, a retail chain in Germany and Belgium. Wolfgang Höger explains that good toys are not necessarily the toys in greatest demand:

"TV advertising creates demand and wishes. Children often want toys they've seen advertised. You make the toys and you can make the children want them, but this has nothing to do with good or bad toys."

What children have written down on their wish list is very important. A child's wish list is the most important place to be seen for any toy company that is aiming for success. Wolfgang Höger believes that children now have the upper hand:

"The children's wishes are the strongest power for earning money. Children go to their Mum, tell her what they want and she says 'No'. They go to ask Dad, and he says, 'Ask your mother'."

Families have fewer children now and the individual child gets spoiled more. At the same time, the numbers of grandparents in a position to spoil their grandchildren has also increased.

"The children then go to Grandma. She also says 'No' ... and finally to Grandpa, who gives in," says Wolfgang Höger with an ironic smile.

Wolfgang Höger (left) is Purchasing Manager for Toys at Kaufhof which has its headquarters in Germany. The retail chain has an annual turnover of EURO 3.6 billion (USD 5bn) and runs a total of 130 stores, 115 in Germany and 15 in Belgium.

Not only good toys on the market

When all is said and done, the retailers are the people who decide what we find on toy store shelves. At Kaufhof, Wolfgang Höger makes the final decision on purchases from toy manufacturers. He has to keep one thought constantly at the back of his mind: will the toy sell?

The products may well be very good but if there is no demand for them, they are worthless for the business. This makes it difficult for him to define what good toys are. He is nevertheless willing to try:

"The best possible toy is one that a child needs to have fun and to play and that also helps him or her develop while growing up."

Wolfgang Höger also differentiates between two categories of good, developmental toys. The first category includes what he calls the fantasy world of toys:

"These are toys that are good because they allow children to expand their imagination. Take a fire engine, for example. A four-year-old knows what to do with it."

An imaginary fire engine drives around under Wolfgang Höger's hand. "Ba-boo, ba-boo", he says, temporarily breaking off from his analytical explanation. He raises the invisible ladder on his invisible fire engine. Two fingers become the fire fighter climbing up the ladder. Mr. Höger is still a child at heart.

"Children create a world of their own where the fire engine can come to rescue. This world can be outside or inside, flying through the air or across the ground, whatever the child wants. The fire engine becomes more than just a vehicle. It becomes part of the child's fantasy world."

Construction toys inspire

The other category of what Wolfgang Höger defines as good toys is construction toys. These are toys that typically come as separate elements that the children themselves have to assemble. Wolfgang Höger believes that this in itself is an important factor that makes for good toys:

"When you build, your brain is activated. I think construction toys are good toys because they let the children develop their minds."

Most construction toys provide more than one final design, and their strength lies in the fact that the child can build any kind of toy that might be lacking in his or her room. Being able to build different things out of the same materials strengthens a child's development.

"Some toys can do this. There are two or three different models pictured on the box but in the hands of any child, the result can easily become seven different models. There's development for the child and development in the toy too."

Wolfgang Höger sees combining his two categories as a shortcut to making a good toy. One example of a combination of this kind is LEGO Power Miners:

"The mineworkers go underground. Here the children can create and play in their own fantasy world. If they don't like the story as it was presented to them, they create a new story. The Power Miners could be above ground if it suited play better. The world is freer for them. They don't have to fit it into a schedule."

"Children create a world of their own where the fire engine can come to rescue. This world can be outside or inside, flying through the air or across the ground."

Hidden benefits

Toys are for children. Toys are the things children's rooms are filled with and things parents spend a great deal of money on. Anyone who has ever gone along to a toy store with a child knows that children have a very clear opinion about what they consider to be good toys.

Toy manufacturers all over the world also have their own ideas as to what constitutes a good toy. Of course, they believe that their own product is the best on the market.

Wolfgang Höger believes that a good toy is one that does not explain too much to the children. If a toy is too obviously an educational toy then children won't play with it, and if the rules are too restrictive, they will soon give up playing with it.

The optimum situation is where children play with a toy and are unaware that they are learning something from it.

They are just having fun.

German consumers look for the brand

According to Wolfgang Höger, German consumers are very focused on brands. Three generations of Germans have played with LEGO bricks. Germany was one of the first countries that the LEGO Group exported to.

LEGO Group plans

The LEGO Group is planning to grow at an annual rate of 3-7%. Growth will be organic – based, for example, on new products and new markets. The important thing is not to be the biggest in the business – but the best.

"We're not looking to be the biggest in the business – but the best."

BY PERNILLE STANBURY PHOTO KATONA LÁSZLÓ

The LEGO Group has ambitious goals in spite of the global financial crisis. The "survival phase" is over. Now the objective is annual growth at the rate of 3-7%.

That does not mean, however, that the LEGO Group will be looking to acquire other companies. Growth will be organic – for example, by building on the company's classic products and on markets such as Scandinavia, Germany and the Benelux countries, where consumers have been loyal supporters of LEGO bricks for many years.

In addition, the plan is to be more aggressive in the USA and Eastern Europe, including Russia – countries where the company believes there are still market shares to be won. In China and Mexico children don't as yet have many LEGO bricks to play with – here, too, there is potential for increased sales.

Completely new products

In addition to the company's range of strong core products, consumers will see completely new products every few years.

Mads Nipper is Executive Vice President of Markets & Products – which makes him the top man with responsibility for development and product sales. He says: "Two thirds of our growth over the next seven years will be driven by existing products and concepts. We will build on our strong core products such as LEGO DUPLO, LEGO Technic and LEGO City but our designers are also working to create completely new products. Products obviously based on the LEGO idea but never seen before. One example is the new, build-them-yourself board games, LEGO Games, that we're launching in Germany and the UK this coming autumn, and in the rest of the world next year."

Growth germinating on many fronts

As distinct from earlier practice, growth must not depend on one, single-product launch generating billion-kroner sales. On the contrary, growth should germinate in many different, smaller areas and come via many channels. Lisbeth Valther Pallesen is the Executive Vice President for Community, Education & Direct. Her brief includes contact with adult fans and direct consumer sales. She highlights three channels within her area: LEGO Education, direct sales to consumers and LEGO Universe, a new online game to launch in 2010.

Lisbeth Valther Pallesen says: "LEGO Education supports our objective to

to grow

develop and inspire children because we can deliver stimulating education with documented results. Direct sales to consumers – via our own Brand Retail stores and the Internet – supplement sales via the classic retail sector without taking away sales from ordinary retail outlets. And LEGO Universe will take the brick into the digital age – where many of our fans already live."

It's not just the money

Ambitions for growth might persuade some people that the LEGO Group is only about making money. But that is not the case, says LEGO CEO Jørgen Vig Knudstorp:

"It's like oxygen – we humans need oxygen to survive but that doesn't mean we're here only to breathe. Without money our company can't survive – but that's not what we exist for. Our most important focus is children and their development – the LEGO name, after all, comes from "leg godt" (Danish for play well). Our approach to playing well is that play should be safe and healthy and develop the child. Our products open up the potential for play which is both systematic and creative. Children develop their sense of logic and math skills and – at the same time – they're given endless potential for creating their own universe with the bricks," he says.

The LEGO Group tries increasingly to extend this potential to disadvantaged children. In 2008 LEGO Charity supplied more than 12,000 large boxes of bricks to children all over the world. Plus more than 50,000 ordinary LEGO sets and presents.

Only the best is good enough

Since the company was founded in 1932, its motto has been "Only the best is good enough", and Corporate Management emphasises that this applies to everything. The LEGO Group must manufacture the best toys, be the best supplier to retailers, and the best place to work for employees. The latter means, of course, that the company focuses increasingly on its working environment and on keeping the number of sick days low.

"At the same time, sustainable growth is important to us. As a manufacturing company we make up part of the global system, and we must shoulder our responsibility for the state of the planet. Our behaviour influences other people's lives – including the lives of future generations – which is why we must live up to the highest environmental standards and be aware of the impact of climate change," says Jørgen Vig Knudstorp, who is totally laid back about the fact that there are larger toy companies out there.

In the words of the late Godtfred Kirk Christiansen, son of the company's founder: **"We're not looking to be the biggest in the business – but the best."**

CEO Jørgen Vig Knudstorp loves building with the bricks that offer children (and adults) potential for play which is both systematic and creative.

Each year thousands of children and young people take part in **FIRST LEGO League.** Four of the participants this year are from Cambridge in England. They call themselves TechnoBotts 3 – in the FIRST LEGO League national final they gave their competitors a run for their money.

BATTLE OF ROBOTS AND CHILDREN

BY NINA HERMANSEN **PHOTO** RICHARD KEIL

Each year thousands of children and young people take part in FIRST LEGO League. Four of the participants this year are from Cambridge in England. They call themselves TechnoBotts 3 – in the FIRST LEGO League national final they gave their competitors a run for their money.

Music is pounding out of the loudspeakers. The deep bass line reverberates through your breastbone. The floor vibrates, and the audience is shouting in chorus. Home-made signs, banners and flags are held high into the air. On a large stage stands British children's entertainer, Paul Sleem. "What time is it?" he asks. A roar from the 200 children in the audience drowns out his voice: "LEGO Time!"

This Saturday, children from England, Scotland and Northern Ireland have gathered at Loughborough University in England to participate in the final of the British national FIRST LEGO League (FLL).

The 200 children make up a total of 24 FLL teams, and have all won a regional tournament. Now they gather to find the national winners. Seated in the front row are four boys. They are wearing identical, dark-green T-shirts. They are the TechnoBotts 3 team from Cambridge. And it's the third time they are taking part in FLL. The last time round they secured the trophy for best robot presentation. This year, their robot has been designed by the oldest of the four boys, 15-year old Eric. He is on a high and visibly excited about today's task:

"We're expecting to win because we're good at operating robots," says Eric with a confident smile. The four boys have been meeting every Wednesday and Saturday for months to work on their robot and prepare their presentation for the grand final.

Organic food

Participants wait in a room next to the stage between operating their robots and doing their presentations. Each team has prepared and decorated a small stand for presenting its project. The theme this year is climate change, and

teams have decided on a subject related to the theme. Everything is presented creatively – from tasty samples of organic, local foods to large, colourful posters.

TechnoBotts 3 have ensconced themselves in a corner. They are working away, preparing their presentation. They have made two kinds of homemade badges with their team logo – which they hand out to everybody who passes their stand. Their project is eye-catchingly presented on a board with LEGO Technic bricks, and on the wall behind them is a black banner with balloons attached displaying their team name in orange lettering.

"Our school didn't want to support us. They said children our age don't play with LEGO bricks," says Eric, obviously in total disagreement. Instead, he and the other three team members have taken total responsibility for their project themselves. Eric hasn't just designed the robot – he has also programmed it. The four lads have named their robot Robert.

Operating Robert

And Robert is about to show what he's worth. Tables have been set up in the arena, in front of the large stage, to enable four teams simultaneously to carry out missions with their LEGO MINDSTORMS robots. Each mission is awarded a number of points, and the teams with the most points continue through to the next stage. Finally, it's the turn of TechnoBotts 3. Two of the team stay on the sideline to cheer on the other two. Eric and team-mate Andrew enter the actual competition area to operate Robert.

"Audience, are you ready?" shouts Paul Sleem. A deafening roar from the audience – and the pumping, chaotic bass line starts again. It's crunch time. Robert has to complete 18 minor missions in 2½ minutes. Shouts and screams. It's nerve-racking – but TechnoBotts 3 have everything under control. Robert manages all the missions – with 15 seconds to spare. The team scores 395 points out of 400. Top score so far.

Presentation for the judges

But it's not enough just being able to control a robot. TechnoBotts 3 must also present their project for a panel of judges in another room across the hall. Their subject is flooding. They have discovered that because of climate change it rains more, and they feel it would be a very good idea to gather rainwater in a tank and recycle it in the home.

The tension builds as they prepare to meet the judges – almost like an exam. They have donned true angler's footgear – waders. They know that creativity is highly valued. They plan to present their project in song. The driving rhythm of Michael Jackson's "Beat It" throbs from the loudspeakers, and the judges can't help smiling. All nervousness seems to have vanished. The four boys know the text by heart, and they know their subject.

Intense battle

As the day progresses, all the teams go through their paces. There is a wealth of imaginative robots – and solutions for many kinds of problems from foodstuffs being too expensive to flooding and pollution. The four members of the TechnoBotts 3 team are optimistic – the main screen shows them in first place in the robot competition. As the first team ever, they scored a maximum 400 points in their second attempt at robot operation. People are beginning to talk all over the building. These boys must be really good.

And true enough, TechnoBotts 3 are in the robot-operation final. They've beaten all the other teams they've been up against, and now face their most serious competitors, the female team Eco-Ambers. In the hall, the atmosphere

is at boiling point. Everybody is excited. The decibel limit for young ears has long been exceeded, and applause, yelling and the smell of victory permeate the room. A crowd of children and adults have gathered around a large table. This is something they definitely want to see! "Audience, are you ready?" shouts Paul Sleem again. That was never in any doubt.

Eric and Andrew get Robert going, never losing their cool – although they're white-knuckled. Their two teammates jump about excitedly on the sideline watching the robot go through its paces. Their delight is obvious every time the robot completes a mission. A sigh of relief. "10 seconds to go," shouts Paul Sleem. Both robots have finished the course. Now all the team members can do is wait for the points.

And the winner is ...

The competition is over. But the most important part is still to come. The announcement of the best teams in four categories. The TechnoBotts 3 are back in their places on the front row. Clearly bursting to know whether they are going to get more points than the girls from Eco-Ambers. Paul Sleem is on stage next to a table with a number of large, yellow LEGO trophies. He calls all the children up onto the stage. Because first there's dancing. Grease with John Travolta blares from the loudspeakers. The audience is on its feet dancing.

But suddenly all is quiet again, and the intense atmosphere returns. Time to award the prizes. All the teams receive beautiful, shining gold medals. As proof that getting this far is an achievement. But the day's highlight is the presentation of the yellow LEGO trophies. The names of various teams are announced. Teams from Northern Ireland, and from Birmingham. Cheers and jubilation from the audience. Participants are photographed with Paul Sleem – holding their trophies aloft for all to see. TechnoBotts 3 – not surprisingly – wins the prize for best robot operation.

Ticket to Atlanta

All category prizes have been presented. But there is still one to go. The overall British FLL champions. The biggest and most prestigious prize of all. The one that brings the winning team to the World Festival in Atlanta in the USA, an international tournament. Paul Sleem is on stage with the biggest of all the yellow trophies.

"This team has achieved close to the maximum points in all tasks. As the first team ever, they score 400 points in robot operation. The team is, of course ... TechnoBotts 3!" The boys can hardly believe it. Then they're on their feet. One punches the air like a triumphant footballer who's scored the winning goal. With their banner, they race up on the stage where they are presented with the trophy. Lots of flash photography. This must be recorded for posterity. Their faces are one big smile. The boys didn't think they would win the main event. In spite of their earlier confidence they're taken aback.

"We really didn't expect this," says one of the boys emphatically. He's almost lost for words. The team members hug each other, not really able to get their heads round it all.

The British FIRST LEGO League is over for this year. All 24 teams return home sporting their medals. Some of the teams even have trophies. TechnoBotts 3 can return to Cambridge with their medals and another two large trophies for their collection. For them, the next challenge will be the battle for the international championship when – once again – it's "LEGO Time" in Atlanta.

FIRST LEGO League

FIRST LEGO League is a programme and a competition set up by the non-profit organisation FIRST and the LEGO Group. The primary objective is to interest children and young people aged 9-15 in science. Children from schools and associations all over the world form teams, and each year up to 18,000 teams compete in regional, national and international tournaments.

Every year, FIRST LEGO League chooses a global problem – this year it is climate change.
The programme consists of two parts: A robot section and a project. In the first part, each team must programme and control a LEGO MINDSTORMS robot to carry out timed missions. A robot, which the children can themselves design and programme for various tasks.

In the second part – the project – teams must research and solve an existing climate problem and finally present their facts and solutions to a panel of judges. Points are awarded in four categories: Robot capability, robot design, project presentation and teamwork. Winning teams move on to participate in larger, global FIRST LEGO League tournaments.

The culmination of the teams' efforts is participation in a FIRST LEGO League Tournament, which has all the razzmatazz of a major sports event – with loud music, cheering spectators, points awards, and impressive trophies and glory to the winning teams. Winners of the national or regional tournaments have the opportunity to compete against the world's best teams in one of two global tournaments: the "Open Championship" and the "World Festival", held in Atlanta every year in April.


Generation
TOBIAS
FLL

WORLD'S YOUNGEST climate experts TO MEET IN COPENHAGEN

BY JAN CHRISTENSEN **PHOTO** © MICHAEL BO RASMUSSEN / BAGHUSET.

Six months before world politicians gather for a global climate summit in Copenhagen, a meeting of children and young people will beat them to it. In May 2009 the winners of regional technology competitions – also known as the FIRST LEGO League – assemble in the Danish capital. A Danish team, Dauerkraft, secured its place in the international final. One of its ideas: fitness centres can generate energy via exercise bikes.

Hundreds of children and young people from all over the world will visit Copenhagen at the beginning of May. Their objective: to win a two-day FIRST LEGO League tournament focusing on global climate problems.

The tournament takes place only six months before the Danish capital hosts the UN Climate Change Conference, COP 15. And the young participants are not coming to Copenhagen only to discuss solutions to climate problems. They will be competing to produce the best ideas for actually doing something about them.

World's biggest technology tournament

"Children's Climate Call" is the title of the global final of the world's biggest technology tournament for children and young people, FIRST LEGO League, which – since September 2008 – has encouraged 140,000 children to come up with solutions to local and global climate problems. The FIRST LEGO League Tournament challenges children and young people in the areas of research, problem solving and science.

Each year a new theme is introduced involving two tasks: The first – a practical assignment – is based on the selected theme, involving programming a LEGO MINDSTORMS robot to manoeuvre through an obstacle course. The second – a theoretical assignment – requires participants to research a specific subject, analyse the data collected and present a proposal for a solution.

Scandinavian masters

A Danish team won the Scandinavian regional tournament and is raring to compete in the finals in May. The team is made up of eight young people aged 13-14. They call themselves Dauerkraft. The name is inspired by their cross-border German neighbours; it translates as "Sustainable energy".

Dauerkraft reached the final with a number of creative proposals on how to reduce CO_2 emissions. One example is to have fitness centres utilise the energy generated on exercise bikes. Another is a "walking school bus" system under which older pupils would pick up younger pupils on their way to school.

Dauerkraft defined its theme by studying the subject and researching conditions in their own local area, Sønderholm, west of Aalborg in Jutland. They found plants suddenly flowering during the winter months – and they noticed that the usual winter storms were becoming particularly severe. Team members were also invited by three families to check out their energy consumption. The families' transport turned out to be the big problem area.

From optional to global

The Dauerkraft team was set up in 2007 at a FIRST LEGO League optional class at school – and managed to get all the

...climate experts

way to the global final in Tokyo in 2008. When the school year ended, members of Dauerkraft chose to continue working in their spare time.

Per Rottbøll Carstens explains: "We carried on because of the companionship and the competitive element. We enjoy our meetings." He adds that the eight team members had known each other and been friends since their first year at school.

The team still has an adult coach, Michael Bo Rasmussen, who is also the father of one of the participants. Under tournament rules, a coach is mandatory – helping to interpret the assignment. But the coach must not interfere in definition or solving of the problem, unless invited by members to give an opinion.

World champions?

In May, the Dauerkraft youngsters will be travelling to Copenhagen to fight for something that eluded them in 2008: The world championship. Although fully aware that the competition will be tough, the team is convinced that – this year – it can win the overall tournament. This ambition is more than just wishful thinking – Dauerkraft was well placed in Tokyo. This time the focus is entirely on winning.

Team Member Helene Tange Sørensen smiles confidently: "We're much better this year – we no longer see this as just a school project."

Future forms of transport

Next year's challenge, "Smart Move", will be presented in September. It will be about future modes of transport, and once again it will involve thousands of children. And although glory and trophies are what teams are fighting for, the skills and development acquired by every participant in a FIRST LEGO League tournament is the most important "trophy" of all.

Read more about Children's Climate Call at
www.childrensclimatecall.org

Read more about FIRST LEGO League at
www.firstlegoleague.org

CLIMATE ACTIONS

In Copenhagen six specially selected teams will compete in the special Climate Actions tournament – a separate part of "Children's Climate Call". Participants in "Climate Actions" will be co-operating with experts from universities and industry to develop an implementation plan for their research projects. The winning project will be implemented as a pilot project by NIRAS, a firm of consultant engineers..

Two global FIRST LEGO League tournaments are held every year. "Children's Climate Call" is this year's open championship, which is arranged in a different venue each year. Its sister tournament, the "World Festival" is always held in Atlanta, USA

Dauerkraft reached the final with a number of creative proposals on how to reduce CO_2 emissions.

FIRST (For Inspiration and Recognition of Science and Technology)
FIRST is an American non-profit organisation whose aim is to inspire young people's interest in science and technology. FIRST focuses on the development of innovative programmes to motivate children and young people to study scientific subjects and pursue careers in the world of science.

SAFETY AT THE FINGERTIPS

Good design, advanced technologies and fingertip sensitivity all have something to do with making LEGO bricks safe for children all over the world to play with.

BY ROAR RUDE TRANGBÆK **PHOTO** NILS ROSENVOLD

"There's no way you can test your way to safety. You design your way to safe products."

This is Michael Larsen's mantra. He is one of many people who help make sure that no LEGO product falls into consumer hands until it lives up to the world's strictest safety requirements. Safety testing takes place in Billund in Denmark, where Michael Larsen, who is Senior Consultant, Product Safety, and his colleagues test the LEGO bricks in a purpose-built laboratory. They carry out so-called type approval of every single LEGO element before it goes into production.

LEGO bricks must meet strict requirements in order to be approved. The toys are sold all over the world so Michael Larsen exposes the plastic bricks to the worst imaginable abuse in the laboratory. If the brick fails the test, then the brick design has to be trashed – or altered.

"Children are the most vulnerable consumers there are, and they must be protected. And parents feel safe in the knowledge that our products are safe. Parents shouldn't have to keep an eye on their children when they are playing with LEGO bricks. That's why it's so important that the products we deliver are safe and meet the strictest requirements," emphasises Michael Larsen.

The LEGO Group sets high standards for toy safety.

"We always refer to the world's most stringent requirements. We have legal requirements from across the world gathered in one book, which has more or less become the LEGO Group bible," says Michael Larsen.

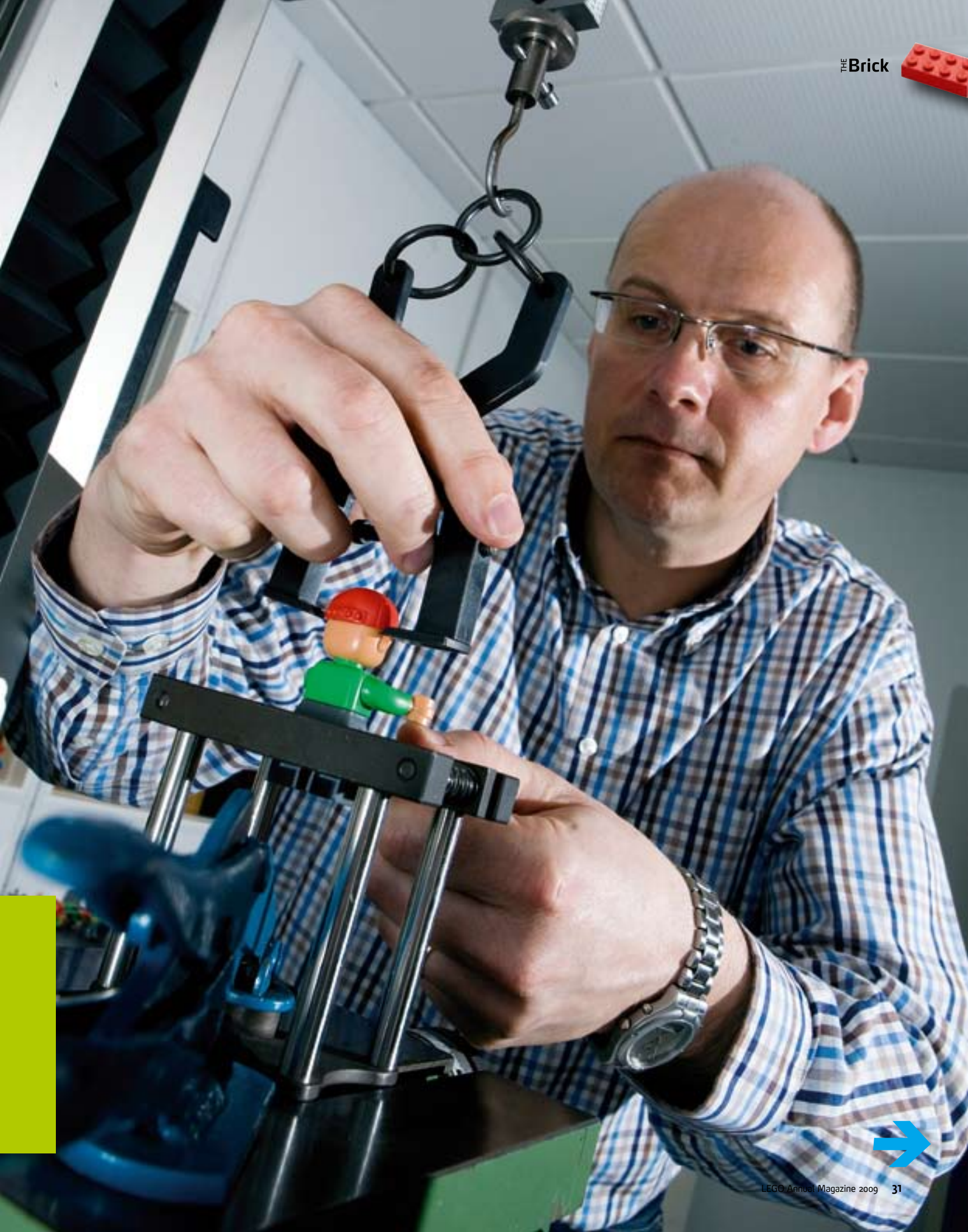
Sensitive test apparatus

In the laboratory he tests the LEGO bricks on a variety of machines that pull, crush and drop the toys under controlled conditions. For example, a toy must be able to withstand falling from a great height without breaking or forming sharp edges children can cut themselves on and the head of a DUPLO figure must be able to withstand a strong pull without coming off.

In fact, Michael Larsen's most valuable test instrument is not an advanced mechanical contraption. He uses a different kind of sensitive apparatus at the end of his arms: his hands and fingers.

"A lot of my work depends on my fingers. When we find a fault, half the time we find it when we are sitting playing with the bricks in our hands. It's a question of experience. I have worked here now for 22 years and I know all the different LEGO bricks. It's also a question of looking at things from

How hard do you have to pull on the head of a DUPLO figure before it comes off? This is one of the questions Michael Larsen, Senior Consultant, Product Safety at the LEGO Group, works with. His task is to discover any faults and risks before LEGO bricks fall into the hands of children all over the world. "Children are the most vulnerable consumers and we have to protect them," he says.



A METAL FOOT FLATTENS A PLASTIC DUPLO BUCKET. A CHILD WHO WEIGHS 50 KG MUST BE ABLE TO STAND ON THE BOX WITHOUT THE RISK OF IT SPLITTING OR CRACKING, FORMING SHARP EDGES THE CHILD CAN CUT HIMSELF OR HERSELF ON. "THIS IS A GOOD EXAMPLE OF A PRODUCT WE'VE DESIGNED FOR COMPLETE SAFETY," EXPLAINS MICHAEL LARSEN, SENIOR CONSULTANT, PRODUCT SAFETY.

A BATTERY OF SAFETY TESTS

LEGO bricks and DUPLO bricks undergo a series of physical safety tests before they go into production. Here are just a few examples:

Bite test: All bricks and elements for the DUPLO age group must pass a bite test, corresponding to 22.5 kg of pressure. Whistles and other toys that are used in the mouth must withstand pressure of at least 50 kg without breaking.

Pull test: All bricks and elements that have a protruding part that a child can grip at least between thumb and index finger must undergo a pull test. The element must withstand a pull of 10 kg.

Pressure test: Bricks and elements are exposed to 15 kg pressure. They must not break or form small pieces, sharp edges or points.

Step test: Elements that are designed to be stood or sat on must be tested to ensure that they do not crack or break. The elements must withstand 50 kg of pressure.

a child's perspective. What might a child think of doing with any given toy?"

Flexible boxes

Children can be extremely imaginative once they open the box and start to play. One example of a LEGO product which met all the safety requirements but which the company chose to recall was an innocent-looking, ladybird-shaped rattle.

The rattle was approved for infants where there are particularly strict requirements to the size of the toy so that very small children cannot put it into their mouth.

"The problem was that there were reports of a total of four children who somehow managed to get the rattle into their mouth. There were no adverse effects but we could not live with the risk, so we recalled the product, even though it met all the legal requirements. It actually isn't difficult to meet the requirements. What is difficult is predicting what children might do with a given toy," explains Michael Larsen and produces another LEGO product from the laboratory: A light green storage box for DUPLO bricks.

"About 20 years ago, we received complaints from parents who told us that our DUPLO brick storage boxes tended to split. It turned out that when children couldn't reach something on a shelf, they stood on the box in order to reach it. That was more than the early DUPLO boxes could withstand. We hadn't considered this as an alternative use of the box," explains Michael Larsen.

So the LEGO Group decided to develop a new box for storing bricks, one that took into account that children would use it to climb on. Technicians tested more than 10 different types of plastic before the DUPLO box was perfected.

"Our requirement is that the box doesn't split – even when it completely deforms under 50 kg of pressure. Sharp edges are prohibited and the box must return to its original shape," explains Michael Larsen, and then shows how this works.

He turns on specially-developed test apparatus, modelled on a child's foot, and places the plastic box under the metal foot. When he pushes a button, the foot presses down on the green box so that it changes shape, but doesn't break.

"This is a good example of a product we've designed for complete safety," says Michael Larsen, with more than a trace of pride in his voice.

Close cooperation with designers

Work on making LEGO bricks physically safe doesn't start in Michael Larsen's laboratory, however.

"We're involved right from the start. When a designer gets a bright idea for a new element, we are invited to come and look at it. For each new element we prepare an Element Risk Assessment, which is our evaluation of the things we should be especially aware of in terms of safety," explains Michael Larsen.

It hasn't always been this way.

"When I started working at the LEGO Group 22 years ago, the design process was completely separate from safety work. Back then, the designers presented us with a finished product design and within five minutes we could tell them: 'No, this won't do, you can't do this if the product is to meet the requirements.'"

Even though we now work in close contact with the designers who come up with imaginative new LEGO bricks, there is still a need to test the products one more time.

"There's almost always something that has to be amended, and that's what we are here for. We have to make certain that faults are corrected before the product reaches the consumer," Michael Larsen emphasises.

TWO PRODUCT RECALLS

Only twice in its 77-year history has the LEGO Group recalled products from the market due to potential product safety issues.

1: In 1998, the LEGO Group recalled a rattle on the European market. There were four reported cases of children putting the whole rattle inside their mouths, which represented a potential danger.
"The product was immediately recalled even though it met all the standards. But in fact we heard from many consumers who wanted to keep the rattle. It was very popular," explains Michael Larsen, Senior Consultant, Product Safety.

2: In September 2006 the LEGO Group recalled a large LEGO truck. The truck had been sold in the USA for several years. It had a large box of DUPLO bricks on the back.
"Children took the truck outside to play, even though it was not designed for this. The metal wheel axles didn't always survive. In some cases, when the metal rusted, the wheels fell off, exposing the sharp ends of the axles," explains Michael.

Read more about product safety and recalls on the US Consumer Product Safety Commission web site: www.cpsc.gov.

Key word for safe toys: CHEMICALS!

Toy manufacturers, facing stricter EU requirements, bring safer toys to children all over the world. And the LEGO Group is leading the way.

BY ROAR RUDE TRANGBÆK **PHOTO** NILS ROSENVOLD

War has been declared on heavy metals, perfumes and other toxic chemicals in toys. In 2008, stricter regulations governing lead content in toys were introduced in the USA. Following close in its wake, the new 2009 EU Toy Safety Directive brings even stricter requirements covering numerous areas of toy safety.

"There's always room for improvement and the new EU directive is aggressive. The new directive tackles the question of chemicals in toy products. The LEGO Group and the toy industry are backing the initiative wholeheartedly," states Peter Trillingsgaard.

He represents the LEGO Group in Toy Industries of Europe (TIE), the European toy manufacturers association, and has actively exerted influence on the new EU Toy Safety Directive.

Older and wiser

Peter Trillingsgaard believes that there are plenty of good reasons for tightening the rules. The existing EU Toy Safety Directive was introduced back in 1988 and, even though the existing rules have been continuously updated, it was time for a new directive.

"The toy industry is learning more about product safety all the time. The toy industry has the physical safety aspects under control – i.e. the way toys are constructed. The key word in the new directive is 'chemicals.' Where chemistry is concerned, scientists and researchers are constantly learning more about how chemicals affect us, which means that threshold values must be adjusted in accordance with new findings," Peter Trillingsgaard explains.

Chemicals are everywhere

Peter Trillingsgaard doesn't need to wander far from home to find an example of how much better informed we have become over the years when it comes to chemicals in toys.

"Thirty years ago, the LEGO Group and other toy manufacturers used dyes containing cadmium. Back then, there were threshold limits for the permitted amount of cadmium which the LEGO Group maintained to the letter. We did things by the book. Today, we know more about the toxic effects of cadmium and we will not use it in our toys. This is a good example of how we have become wiser and it is nothing to be ashamed of," explains Peter Trillingsgaard.

You don't have to worry if you have LEGO bricks at home that are more than 30 years old – they are completely safe to play with.

The files full of regulations, standards and requirements that toy manufacturers have to meet are getting fatter. A new EU Toy Safety Directive means more paperwork, more laboratory testing and more work for Peter Trillingsgaard, who works with product safety at the LEGO Group. Even so, he welcomes the new directive. "The new directive tackles the question of chemicals in toy products. The LEGO Group and the toy industry are backing the initiative wholeheartedly," states Peter Trillingsgaard.

CHEMICALS!

"The potentially toxic chemicals that are found in minute quantities in both old and new LEGO bricks are combined in the brick and no harmful doses can escape – not even if you suck on a LEGO brick for hours each day for several years. Migration to the skin is extremely slight. Migration or transfer of chemical substances to the skin is usually measured in parts per million, but for LEGO bricks, the unit used is parts per billion. The LEGO Group maintains extremely high safety standards," Peter Trillingsgaard adds.

In fact, we are surrounded by chemicals every day, not only when we use toys. They are also found in food, clothes and other everyday products.

"If we look at an ordinary coffee cup, for example: If the cup is black, it will not be approved for use as a toy. A laboratory test would reveal that the content of certain toxic substances would be higher than the permitted threshold values. The whole idea of the coffee cup is that you put it to your mouth – which is not the case for a LEGO brick. It's important to bear in mind that just because a cup or a toy contains toxic substances it doesn't necessarily mean that they will cause harm," he explains.

Consumers do not generally have anything to fear from the toys on toy store shelves. Peter Trillingsgaard believes that the majority of toy manufacturers do make safe toys.

"In recent years, the industry has improved. There's been so much focus on toy safety from politicians and consumers alike, which has brought better, safer products. Existing regulations are already strict. We hope that consumers will notice no difference at all when the new regulations are introduced, because the toys ought to be safe already," he says.

Expensive testing

While hopefully consumers will not notice neither the new EU Toy Safety Directive nor stricter US toy regulations, toy manufacturers, including the LEGO Group, will have to take them very seriously. Stricter chemical standards mean that toys will spend more time in laboratories and the paperwork will increase correspondingly.

"Here in the LEGO Group, introduction of the new standards will mean that we'll have to employ more people to administer all the new regulations. By far the largest increase will, however, be in the cost of laboratory testing." Peter Trillingsgaard estimates that it will cost something in the region of 20-50 million DKK (4-9 million USD) extra a year.

In the future, every single toy must be tested and approved even more thoroughly than is currently the case, and Peter Trillingsgaard is convinced that small manufacturers will feel the pinch.

"We estimate that our testing costs per product will increase from a few hundred dollars to several thousand dollars for the more complex products. His assessment is that some small toy manufacturers will simply not survive the massively increased testing costs.

Never take chances

The LEGO Group is ahead of the field and already screens all raw materials and products in order to

CMR substances

CMR is an abbreviation for three types of chemical substances that can have negative effects on human health:

Carcinogens: Substances that can cause cancer

Mutagens: Substances that can cause inherited genetic defects

Reproductive toxins: Substances that can be harmful to human reproductive capacity

be certain that its bricks meet the stricter safety requirements of the future.

"We already have comprehensive insight into our production, from raw materials to the finished LEGO brick, and we already operate with high standards of safety so the new regulations don't necessarily mean that we have to use different materials to produce LEGO bricks," Peter Trillingsgaard adds.

However, the new regulations require technological advances in the equipment used to test all of the different kinds of toys in the future. Peter Trillingsgaard explains that the new threshold values for heavy metal content are so low that, in some cases, it will be impossible to measure them using current technology.

"Technological advances are required before such small quantities can be measured. At the same time, establishing new standards for how we measure the toys will be a monumental task. We'll be kept busy in the coming years but we're confident that we can do it," confides Peter Trillingsgaard.

"It's in our own interest that we increase toy safety. Where children are concerned, we never take chances."

FACTS ABOUT THE EU TOY Safety Directive

The first EU directive on toy safety was introduced in 1988. The Directive has since been expanded and the number of so-called standards increased. No comprehensive changes have been made to the Directive in 20 years.

The new toy safety directive was approved by the European Parliament in 2008 and Member States are expected to sign it during 2009. The Directive will come into force in 2011 and 2013. Meanwhile, standards will be formulated for how toy safety will be measured.

The new Directive will have a significant effect on toy safety at the global level as many toy manufacturers market their products across the world.

The new EU Toy Safety Directive sets stricter requirements for toys in a number of areas. These include:

- More than 1,000 CMR substances will be prohibited (CMR stands for Carcinogenic, Mutagenic or toxic for Reproduction)
- 55 fragrances will be prohibited
- 11 potentially allergenic fragrances will continue to be permitted, although toys containing these fragrances must carry a health warning
- The prohibition of the use of carcinogenic nitrosamines is extended to a total ban on their use in toy products for children under three years and in toy products that are intended for use in the mouth (such as musical instruments)
- The list of heavy metals/substances for which there are threshold values is increased from eight to 19 substances
- Lower threshold values for quantities of a large number of heavy metals

The Olympic Games

BY JOE MENO **PHOTOS** HONG KONG LEGO USERS GROUP

During the summer of 2008, the Hong Kong LEGO Users Group – a group of adult LEGO fans – built a model of Sports City, which held many of the events of the 2008 Summer Olympics. Building discussions began in January of 2007; however final construction took two months. Since there were not many plans available to use for reference, the builders used their own experience and creativity to design the models.

Oustanding models included the Aquatics Center (Water Cube), which was internally lit, the Beijing National Stadium (Bird's Nest), which replicated the construction methods behind the real building, and the Olympic Village. The rest of the display showed classic Chinese architecture and scenes from ancient Greece as well as some European styled buildings, including a Dutch windmill.

The city took up 300,000 LEGO bricks and 4,500 minifigures. Sponsored by Sun Hung Kei Property Limited, the display was shown at Grand Century Place in Hong Kong for seven weeks in July and August. During that time, over 140,000 visitors came to see the display, making it one of the highest-attended LEGO model displays of the year.

Joe Meno is editor of BrickJournal, a magazine for and about LEGO fans. The magazine is published quarterly and features interviews, articles about fan events, detailed advice about LEGO constructions and more.
www.Brickjournal.com

in bricks

First grade students at School No. 1941 build their way to the answers to mathematics problems using DUPLO bricks. "It makes it easier for the teacher to make lessons interesting for the children. You let them play and learn at the same time," says Principal Tatiana Malysheva.

Moscow is investing in the youngest children

Play and learning are linked at forward-looking schools, kindergartens and learning centres in Moscow.

BY ROAR RUDE TRANGBÆK **PHOTO** ROAR RUDE TRANGBÆK, ASYA MARDO, VIACHESLAV KOCHETKOV

The statistics speak for themselves. Two hundred new kindergartens have been built in Moscow in the last two years. In the next two years, 100 more will be built. With an even flow of new schools and other child care institutions, the picture is very clear: Moscow is currently making huge investments in the city's youngest citizens.

"Since 2000, there's been increased political focus on education and families with children in Moscow. During the 1990s, politicians discovered that educational materials were entirely lacking at some schools and outdated at many others. So efforts have been made to improve standards. Today, we also focus on very young children before they reach school age. We know that, if we are to develop 'whole' children, we have to catch them at a very early age," explains Elena Bulin-Sokolova, Director at the Centre for Information Technologies and Learning Environments in Moscow.

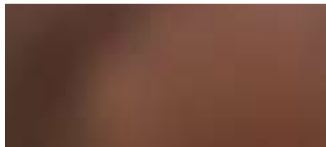
More than 100 experts in education and child development work at the centre that was founded twenty years ago. It was originally founded to develop better educational materials for Moscow schools. Today, however, the centre functions as a child development think-tank and advisory body for the entire Moscow education sector.

"Our goal is not only to promote the development of new materials for teaching use but also to catalogue materials and tools that schools, kindergartens and learning centres can use, compiling a kind of 'shopping list' of toys and other materials, and a guide to inform teachers how best to use these materials to promote child development in the best possible way," explains Elena Bulin-Sokolova.

Rapid development

In recent years, theories, materials and all kinds of good advice have reached the youngest citizens of Moscow. Moscow's Western district, home to about 2 million people of which 63,000 are children under seven, is no exception. Children and their parents have been given many new options over a period of just a few years.

"Two years ago, there was practically nothing to offer preschool children. Parents took care of their children at home. Today, we have, for example, more than 40 so-called Play and Learning Centres for children six months to three years old. Parents can come here to learn to play with their children. Thirteen more new centres will be built next year. We've seen massive development over a very short time and it's great to be part of it," explains Natali Koroleva, Manager of the District's Preschool Department.



"If an educator or a teacher lacks theoretical and practical knowledge of the developmental characteristics and techniques associated with a toy, then the toy remains only a toy," says Elena Bulin-Sokolova, Director at the Centre for Information Technologies and Learning Environments in Moscow. Every year more than 10,000 social educators and teachers are trained at the centre.

Today, the district offers four different options for children under seven, depending on need.

Apart from the Play and Learning Centres, which are an option for all children, there are eight toy libraries where parents whose children have development problems can get good advice about the use of developmental toys and loan suitable toys to play with at home. There are also eight special centres, for children with special needs, such as speech defects. Finally, parents with three or more children can apply to be paid for looking after their own children in a so-called "family kindergarten"' These parents are granted access to facilities, specialist advice and toys.

"The Play and Learning Centres are the biggest success. This option is available to a broad target group of parents who need help to learn how to play with their children in order to promote their development. There's a big need for this here," explains Natali Koroleva.

"This is a new way of learning. We involve the students and try to bring down the barriers between teacher and children. We want to give these children an education in freedom."

Conservative system

Elena Bulin-Sokolova believes that toys and play are important aspects of children's development, not only for the youngest children in the preschool age group, but also for children in school.

"You should never expect a child to sit on a chair just listening to the teacher. A child must play games, dance, and play and stimulate all the senses in order to learn. Unfortunately, the entire education sector is conservative and it will take a long time to distance ourselves from the concept of the active teacher teaching children who sit and listen, and win hearts and minds for the idea that the children have to be active. It takes decades to change attitudes but we're making headway," assesses Elena Bulin-Sokolova.

One example is developments taking place at School No. 1941 in the Moscow western district. The school is five years old and, along with about 10 other schools in the area, it has earned the title 'Health School'.

"We have doctors and therapists attached to the school and we focus on the children's health. We've timetabled lessons where the children can get massage, physiotherapy or aromatherapy. Our aim is to get healthier children and we can see that our efforts are bearing fruit. We have less absenteeism and less sickness and the children's level of academic achievement is improving," says Principal Tatiana Malysheva.

Apart from greater focus on health issues, the school has also given students a more active role in lessons. In mathematics lessons in the first grade, students "build" their way to the answers to mathematics problems using DUPLO bricks.

"It's a simple method but it makes it easier for the teacher to make lessons more interesting for children. You let them play in this way and they learn at the same time," explains Tatiana Malysheva.

Close by, a class of nine-year-olds is gathered in a special project room. Chairs and tables have been removed and replaced by a soft carpet. The students are sitting together watching a series of photos projected onto a screen. They are learning the story of the coming of spring. This is a great festival in Russia, where people say goodbye to the long, harsh winter. In the project room, the children talk about why they celebrate the season. The teacher lets the children talk, guiding their discussion along the right lines. The lesson ends with a song, a dance and home-made blinis (small Russian pancakes) with jam.

"This is a new way of learning. We involve the students and try to bring down the barriers between teacher and children. We want to give these children an education in freedom. They don't only do or say what the teacher says. They also learn to tackle issues from a variety of perspectives and that's a very good thing," emphasises Tatiana Malysheva.

Toys are not just toys

"It's also important that we don't wait to make an effort to encourage children's development until they have started school," stresses Elena Bulin-Sokolova from the Centre for Information Technologies and Learning Environments.

"In the past we focused only on the development of children once they had started school. We're making an effort now to make earlier initiatives because children need constant stimulation from a very early age, with materials that can hone their senses, motor skills and, of course, social skills too," she explains.

Along with her more than 100 colleagues at the centre, she is always looking for new toys and new ways to stimulate children's development and new approaches to using toys and educational materials.

"We collect inspiration from around the globe. We prioritise our cooperation with toy manufacturers who understand child development and who know how children develop at different ages," explains Elena Bulin-Sokolova, taking a German-made wooden toy from the shelf.

The toy is a modern interpretation of a traditional kind of toy where you build a pyramid by stacking different sizes of ring, supported by a pin in the middle.

"The rings are made in a variety of materials: leather, wood, stiff plastic bristles and soft fabric. They are all different to the touch, have different weights, different smells and look different. The pyramid itself is a traditional product but the designer has incorporated all the child's senses into the product, which makes it interesting," Elena Bulin-Sokolova adds.

Finding the right kinds of materials for children is one aspect of work at the centre. Another involves training people to use toys in teaching or play situations.

"Training teachers and social educators is one of our most important tasks. Every year we train or retrain more than 10,000 social educators and teachers. It's an important function because if an educator or a teacher lacks theoretical and practical knowledge of the developmental characteristics and techniques associated with a toy, then the toy remains only a toy," concludes Elena Bulin-Sokolova.

Massage and aromatherapy are just two of the options open to students at School No. 1941. “Our goal is to get healthier children and we can see that our efforts are bearing fruit. We have less absenteeism and less sickness and the children’s level of academic achievement is improving,” says Principal Tatiana Malysheva.

Moscow

Tatiana Malysheva is Principal at School No. 1941 in western Moscow. The school focuses on health issues and on new teaching methods. “We want to give these children an education in freedom. They don’t just do what the teacher says. They learn to tackle issues from different perspectives,” she explains.

In a special project room, teaching takes place without chairs and tables. Instead students play, dance and sing through the story of the Russian spring festival, where they say goodbye to the long, harsh winter. At the end of the lesson, students bake blinis - small, Russian pancakes.

PLAY ON the curriculum

What makes teaching material good?

"Good teaching material must be able to do two things. First, it should be a tool through which children can accumulate skills and knowledge. Second, the material must be relevant for the teacher to use – if it doesn't make life easier for the teacher, who often has 20 to 40 students to take care of, then, from the educational perspective, it's a poor product. And it should be fun in a difficult, challenging sort of way," says Jens Maibom, Vice President at LEGO Education.

Russian mothers attend "school" to learn how to play with their children. The project is a big success.

Aleksey (left) is 16 months old. "I want to see my son develop on many different levels. Mentally, physically, emotionally – and train his motor skills too. He must become a complete person. I get the knowledge here that I need to make sure that he does," his mother says.

BY ROAR RUDE TRANGBÆK **PHOTO** ROAR RUDE TRANGBÆK

On a Friday morning in February, the mercury in the thermometer peaks at minus 10 degrees Celsius. Thick snow covers western Moscow. Inside "Kindergarten No. 2523," the heavy city traffic and icy weather fade into the background. Children shrieking, laughter and music fill the rooms and corridors at the local Play and Learning Centre, housed in one of the kindergarten buildings.

These sounds are coming from 24 children between 6 months and three years old, who are playing with their mothers. They are building towers, playing boisterously in an activity room on mats and cushions, dancing and singing. Psychologists and educators observe from the sidelines, join in and offer good advice to mothers in the process.

Learning to play

The Play and Learning Centre opened two years ago. Along with 43 other similar new centres in this western district of Moscow, it is a huge success. Most Muscovite parents normally look after their children at home until they turn three and can join a kindergarten. Some even look after their children at home until they can start school.

"Parents sit at home with their children, doing nothing at all. Many parents don't know how to play or how to interact with their children. At home, the children are isolated from their peers. At the centre, children play together and their parents learn how to play with their child in a way that encourages both social and physical development. There's a great need for this," explains Margarita Vorobeva, Manager of the Play and Learning Centre.

She believes that an entire generation of young mothers is unaware of vital knowledge about child development.

"The end of the 80s and the beginning of the 90s were turbulent years in Russia, when the education system and institutions, especially for the youngest children, more or less collapsed. We're now feeling the effects," explains Margarita Vorobeva.

Many children who grew up in that period are today's young mothers and they are unaware of how children develop.

"The mothers want the best for their children but they lack very important knowledge about education and early child development. Here we can give them this knowledge. At the same time we give the child a gentle introduction to kindergarten and school. Of course, the child gains a lot by coming here – but the child's mother learns more," Margarita Vorobeva emphasises.

Learning from the experts

Mila Lebedeva, aged 27, lying on the floor playing with her daughter Vasilisa, agrees. Taking a short break from play, she explains that she visits the Play and Learning Centre once or twice a week with Vasilisa, who is 16 months old.

"I want to give my daughter the best, but I don't know how I can help her. I know nothing at all about child development and that is why it is so great that I can come here, spend time with my daughter and learn from the experts about how to play with her and support her development. I find it difficult to keep things in perspective at home," explains Mila Lebedeva.

She and Vasilisa have been attending the centre for the past year. Mila Lebedeva believes she can see a big difference in her daughter.

"Vasilisa is far more socially-oriented than my friends' children of the same age who don't attend a centre," she says.

Toolbox for parents

Mila Lebedeva's observation is not just due to blind motherly love. Psychologist Arina Kisel has made similar observations. Arina Kisel works at the Play and Learning Centre, focusing on the individual child's development in a variety of areas. She observes the children in a variety of play situations, notes their movements, achievements and social interaction then compares these with the level of development that is considered normal for children of the same age.

"We can see that the children here are better cognitively developed than children who do not visit one of the centres. At the same time, we're giving the parents effective tools they can use when they play with their children at home. It's not always enough just to buy a toy, read the instructions and give it to the child to play with. We can inspire the parents to use the toy in new ways that contribute to their child's development," explains Arina Kisel.

This appeals to 31-year-old Elena Dovgeyko, who attends the centre with her son Aleksey, aged 16 months.

"I want to see my son develop on many different levels. Mentally, physically, emotionally – and train his motor skills too. He must become a complete person. I get the knowledge here that I need to make sure that he does," she says.

Her rounded figure reveals that Aleksey will soon have a baby brother or sister.

"My next child will certainly come here too," explains Elena Dovgeyko, turning her attention to her son who is busy stuffing a rattle into his mouth.

Vasilisa (left), 16 months old, visits the Play and Learning Centre once or twice a week with her mother Mila Lebedeva.
"I know nothing at all about child development and that is why it is so great that I can come here, spend time with my daughter and learn from the experts about how to play with her and support her development," says Mila Lebedeva.

Play and learning go hand in hand

Play and learning

LEGO bricks are toys. Most children around the world know that. However, LEGO bricks are also educational. A small department at the LEGO Group prepares materials for use in kindergartens and schools across the globe.

BY ROAR RUDE TRANGBÆK **PHOTO** NILS ROSENVOLD

Characteristic of all the products from the LEGO Group's educational department, LEGO Education, is that they have been developed specially for use in teaching. LEGO Education has, for example, designed both huge, soft LEGO bricks for kindergarten children and advanced robots for older schoolchildren. But why does a toy manufacturer like the LEGO Group produce teaching materials in the first place?

To find the answer, we have to journey back in time. Thirty years ago, LEGO bricks were already familiar to children in most parts of the world.

"Back then, LEGO bricks were exclusively regarded as toys but then something happened in the UK: A new school subject was introduced called 'Design and Technology.' British teachers began to use ordinary LEGO bricks in teaching this subject. Students could conduct scientific experiments using models built from LEGO bricks," explains Jens Maibom, Vice President at LEGO Education.

Conservative teachers

At one point, some British teachers contacted the LEGO Group to enquire if it was possible to make LEGO products specifically for teaching purposes.

"It actually wasn't our own idea, nor was it something we were aiming for at the time. A simple enquiry from some teachers started the ball rolling. In fact, it's quite unusual that we were asked to make a product in this way," explains Jens Maibom.

The LEGO Group listened to the teachers and founded a new department to develop LEGO bricks for use in teaching. It took about 10 years to establish the concept that has became very popular in British and American schools and in kindergartens on the European continent.

"The education sector is very conservative so it's never easy to make inroads. If you want to convince a social educator or a teacher that he or she should use a certain type of teaching material, you have to come up with something very special. Progress is slow, news only travels by word of mouth and what we had to do in the beginning was develop some really great products," explains Jens Maibom, demonstrating one of the very first LEGO Education products.

Ethnic figures

The product appeals to children in kindergarten. It comprises a box of 24 LEGO DUPLO figures. It is a multiethnic box – the first box in the LEGO Group's history where the figures had different skin colours and obvious ethnicity. There are Chinese, Indians, blacks and whites. There are figures of all ages – both DUPLO children and grey-haired DUPLO grandmothers.

"Through play with the figures, children learn about ethnicity, family structures and social relationships, which are important parts of a child's development. These aren't characteristics normally emphasised in ordinary toys. You could say that the ethos of LEGO Education is that children should play – and they should learn at the same time," says Jens Maibom.

The box is still available in an updated version for use in kindergartens across the globe while other LEGO Education products have developed in more of a high-tech direction. Kindergartens are no longer the largest group of customers for LEGO Education. Primary schools have taken over first place. All because of a simple little brick.

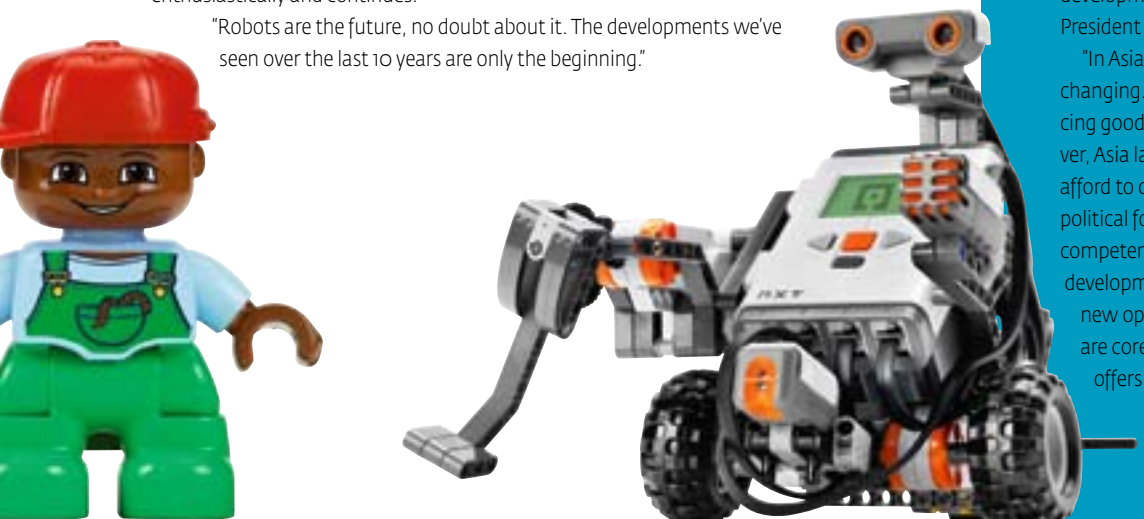
Robots are the future

"In 1986, the LEGO Group introduced the first brick with an integrated control unit so that children could program bricks to perform specific tasks. It was here the idea of the intelligent brick was born. At that time the market was not ready for the concept and the technology was available only to the few. The computer had not yet become a household object," Jens Maibom recalls.

A decade later the situation had changed and LEGO MINDSTORMS was launched. This product gave children the chance to program LEGO bricks and to get models to move according to their instructions. This signalled the start of a new era – especially for LEGO Education.

"Programmable bricks are a concept suitable for schools where there is currently a great deal of focus on IT. There's also an increasing tendency to ask how we can make the best use of computers. In this context, LEGO MINDSTORMS is ideal for making the connection between the computer and the real world. You can create some work processes at school that students will face later on the labour market," explains Jens Maibom enthusiastically and continues:

"Robots are the future, no doubt about it. The developments we've seen over the last 10 years are only the beginning."



Focus on the sciences

In **Russia**, sales of LEGO Education products are increasing. By tradition, the Russian education system has focused on physics and natural sciences, and Russia produces more engineers than anywhere else in the world. In historical terms, this tradition has contributed to the country's major technical breakthroughs, such as the launch of the first satellite, Sputnik, in 1957.

"With an eye on the historical perspective, LEGO Education products match the Russian education system perfectly, as they also focus on natural science subjects, such as Nature and Technology, and Physics," says Jens Maibom, Vice President of LEGO Education.

Furthermore, Moscow is currently modernizing the education system, bringing increased focus on the individual child and on the skills children will use when they join the labour market. This approach perfectly matches the principles of LEGO Education.

A creative future

In **Asia**, there is a great deal of focus on 'extra-curricular activities' where children attend a variety of different training centres when the school day is over in order to receive supplementary education. For example, there are about 150 LEGO Education Centres in South Korea, where children 'do LEGO', like children elsewhere do piano, ballet or sport.

"Here LEGO bricks are very much regarded as something that contributes to children's education and development, and less as a toy," says Jens Maibom, Vice President of LEGO Education.

"In Asia too, attitudes to education and children are changing. Across Asia they're technically clever at producing goods. In terms of creativity and innovation, however, Asia lags behind Western Europe and Asia cannot afford to continue 'copying' the West. There's increasing political focus on developing creative and innovative competencies in coming generations. This kind of development presents LEGO Education with interesting new opportunities because creativity and innovation are core values in everything that the LEGO Group offers children and young people," he adds.

Maibom in the firing line

Isn't LEGO Education just a short cut to accustoming children to play with LEGO products and a way of getting more customers for the LEGO Group's products?"

"Some would claim that is true and that's OK by me. The claim would have some credibility if it wasn't for the facts. If LEGO Education was only a marketing stunt, if the products didn't work and didn't contribute to children's development, then the whole LEGO Education concept would have died a long time ago. Schools, teachers and social educators never invest in teaching materials that don't work, so the product idea really is a good one."

"But the LEGO Group doesn't produce teaching materials for purely altruistic reasons, does it?"

"Of course not. We have to earn money but we are more than just a commercial enterprise. The idea is that, in addition to traditional academic skills, schoolchildren have to learn to think critically, creative problem-solving, cooperation and communication because these are the skills they will need when they join the labour market. This is why 'to inspire and develop the builders of tomorrow' is included in the LEGO Group's vision. It is exactly what LEGO Education is all about."

"It all sounds almost too good to be true…"

"Ha ha ha! Yes, indeed it does, but I believe that LEGO products are in fact unique and it is very difficult not to get enthusiastic about them. Play is preparation for many of life's dimensions. Children acquire analytical skills and we're in dialogue with other people throughout our lives. I see LEGO bricks as an ideal product to promote skills development, because they can be used to express and build anything."

"Does this really work?"

"We're only now really beginning to research into how children learn and what affects their learning. The latest research from Brandeis University in the USA indicates that an interest in studying engineering increases by a factor of four when children have participated in the FIRST LEGO League. The most convincing evidence for me is that, whenever I go into a classroom and see a class working with LEGO bricks, the children's concentration is astounding – they work and have fun, and these are the best conditions for learning."

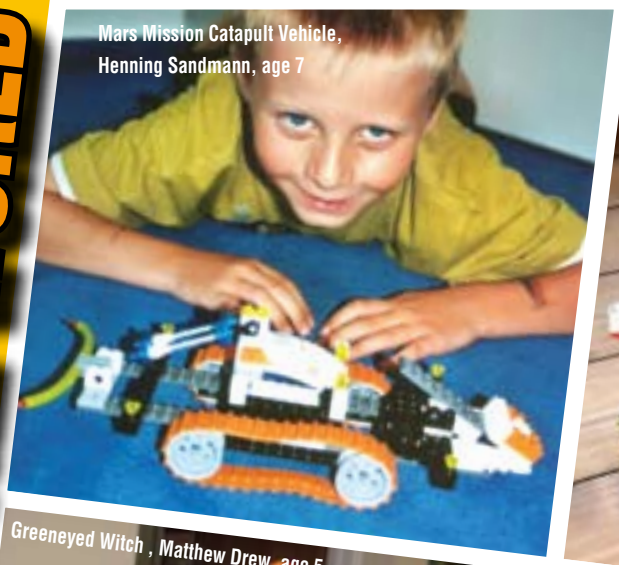
What's it like having a Mum/Dad who works for the LEGO Group?

I think it is totally cool because of all of the toys and the other great LEGO things I get – I've even got LEGO bedding in my room! A long time ahead of everybody else I always know about the new products. My Dad often brings something along with him, so I guess I do have a little bit more LEGO than my friends. At Christmas, when LEGO stuff is sold out in the stores, our friends usually ask whether they can buy LEGO sets via my Dad. Sometimes they even ask us when it's not Christmas ... When I am big, I'd like to work for LEGO, too. I'd love to have all these great toys around me all day and to always know all of the up-to-date and coming LEGO toys. That's truly terrific!

Joshua Strack (age 10), Germany.
Dad: Andreas Zimmermann, Sales Force, LEGO Central Europe.

"I THINK IT IS TOTALLY COOL BECAUSE OF ALL OF THE TOYS AND THE OTHER GREAT LEGO THINGS I GET."

COOL CREATIONS FROM ALL OVER THE WORLD


Mars Mission Catapult Vehicle, Henning Sandmann, age 7


Passenger Plane, Pablo Legewie, age 9


Greeneyed Witch , Matthew Drew, age 5


Digger, Christopher Gladman, age 4


LEGO Dream House, Niels Plaizier, age 8


Super Dragon, Kasper Hoekzema, age 9


Mars Vehicle, Robin Schubert, age 9


Secret Spy Chopper, Matthew Thompson, age 6

Fire Engine, Thomas Jansen, age 8

Laser, Ellie Rose Rigby, age 6

Turkish Bath, Pieter Zigterman, age10

LEGO CLUB CHILDREN SHOW WHAT THEY'VE BUILT WWW.LEGOCLUB.COM

Space Ship, Lars Padberg, age 7

Special-Racer, Max Obloch, age 9

A designer's life

There's more to being a LEGO designer than just building things. It's also a matter of understanding design. **Andy Woodman** is a LEGO designer. He spends a lot of his time building and re-building models but also spends an equal amount of time seeking fresh inspiration which can include playing lots of Xbox and Nintendo Wii.

BY NINA HERMANSEN **PHOTO** NIELS ÅGE SKOVBO

Piles of shiny, Ferrarired bricks are spread out on the tables. There are racing cars and trucks of all shapes and sizes on the nearby shelves. It's a big room, an organised chaos of bricks and tyres. This secluded building in Billund, Denmark, is where new LEGO products first see the light of day. It's where Andy Woodman works. He is one of the 200 designers employed by the LEGO Group. He has spent much of his time over the past five years designing models for the LEGO Racers range.

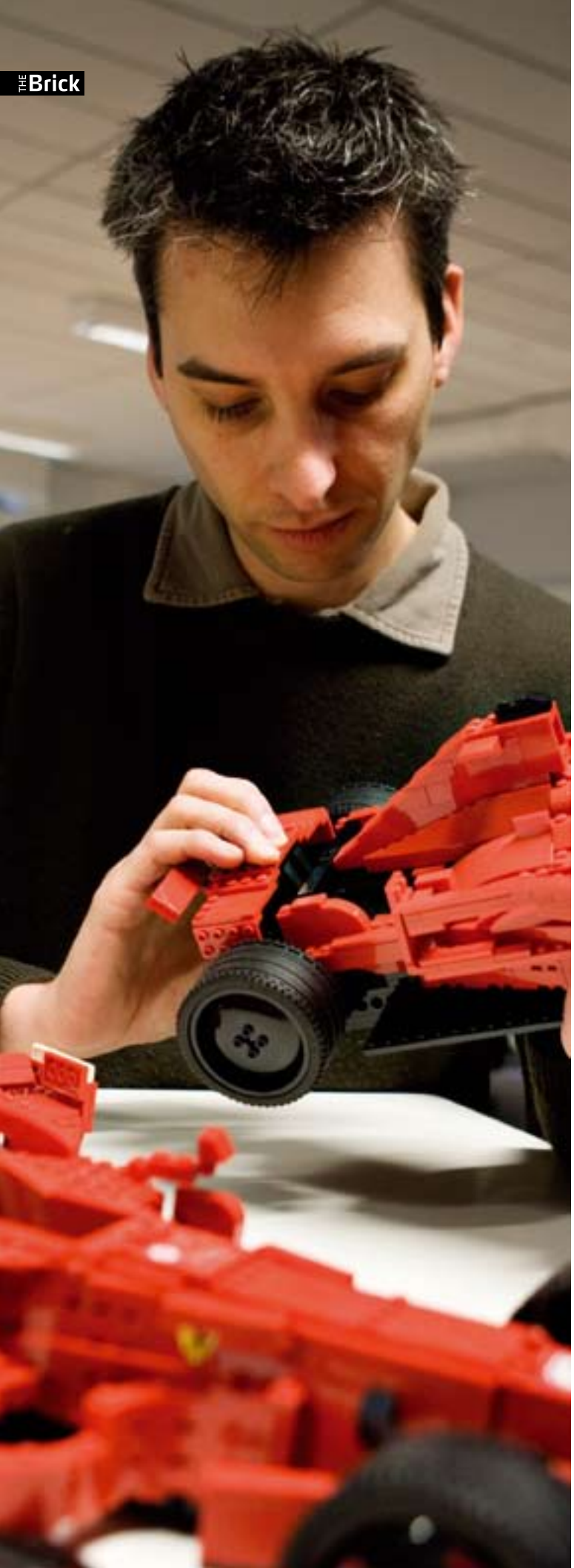
Andy Woodman speaks about his work in Billund: "No two days are alike, when you work for the LEGO Group. In the morning I check my mail and then the Internet. There's news from the motor industry almost every day so it's important to keep up to date. Sometimes I have a go at building a new Ferrari. Sometimes I'm in the midst of changing the design to make it easier for the user to build the model. So I take it apart and start rebuilding it – again and again!"

Bricks, travel and Xbox

But if you think that a LEGO designer sits building models for eight hours a day, you're wrong. Andy Woodman estimates that he spends about onethird of his time building. He spends the rest of his time testing new concepts, presenting models to new audiences and travelling. That could be flying off to Ferrari in Italy to see the latest model, testing in Munich, Germany, or meeting film makers in Los Angeles, US. Not to mention the time spent sketching – and playing racingcar games on game consoles.

"We play Xbox and Nintendo Wii because of course we're very much into cars


"Take a course of training in art or design.
Something you can use to demonstrate that
you understand design and design process."



and racing and because it helps us update our knowledge of what's going on in this world, what's exciting to the kids. We need to be 18 months ahead of the market because we have to design our products for future users," says Andy Woodman.

A LEGO designer doesn't have the luxury of unfettered imagination and unrestricted play. Designers can't simply invent a new form of LEGO brick. They have to build a new toy on the basis of the LEGO bricks and other elements that already exist. It can be frustrating trying to build precisely the model one has in mind – but lacking a particular shape of LEGO brick needed to complete it.

Andy Woodman: "It's a challenge. But a healthy challenge. Many of my colleagues in fact do feel a sense of frustration but personally I think that if we can't do something in one way, we have to try some other way. If we didn't run up against problems, life would be too boring – and it's always fun finding a creative solution to something nobody has solved before."

Training to be a designer

Many people dream of becoming a LEGO designer. Andy Woodman meets them all the time. He is often asked how to go about getting a job like his. But there's no clearcut answer because there are no schools or training courses to prepare you specifically for LEGO work.

Andy Woodman himself originally wanted to be an vehicle designer. He took a university degree in industrial design and later trained as vehicle designer at the prestigious Royal College of Art in London after which he worked for a number of automotive companies before joining the LEGO Group.

When graduates at the leading design schools present their final projects, the LEGO Group often sends representatives to the UK to look for new, young design talents. That's how the Group discovered Andy Woodman.

Two annual workshops

He was invited to take part in one of the workshops that the LEGO Group arranges a couple of times a year to recruit new designers. It is a gettogether for people the company itself has talentspotted or people who have applied for work. They carry out various tasks and are interviewed to see whether they may be potential LEGO designers. Andy Woodman was one of the lucky ones who made it through the needle's eye.

"You don't just sit down and build a model. Learning to design and develop a model is a long process you take in stages. We get many inquiries from people who are really good at building LEGO models – and that's fantastic – because it's not an easy thing to learn. But it's by no means everyone who can make models that others can sit down and have fun building," says Andy Woodman, who explains that when you design a model you have to take many factors into account – for example, the fun of building the model, its stability and its final price.

Take a course of training in art or design

Being a keen LEGO fan and good at building aren't quite enough in themselves. Andy Woodman has one or two bits of advice for anyone wanting to realise their boyhood dream:

"Take a course of training in art or design. Something you can use to demonstrate that you understand design and design process. You need to have a dream about becoming a designer, after your studies you can specialise in LEGO design. But be careful not to burn your bridges and close off all your options – because it's only a relative handful of people who become LEGO designers."

460 M, of Christmas window displays

BY JESPER LUNAU

It's always a rush in the toy business, particularly in the run-up to Christmas. Shops have to be decorated, and retail shelves stocked.

The good intentions of toy manufacturers, who supply the shops with decorative materials, aren't always followed up because retailers sometimes can't spare the staff – or the cash. If shops get a helping hand, it can make a big difference. That's been the LEGO Group's experience:

LEGO employees from bookkeeping, production and other departments swap their normal working environment for a retail visit for a few days. They receive their normal pay but go to a different place to work. They form small teams – and decorate a shop or two.

LEGO colleagues did that too in Germany in 2008. They gave 870 retailers a helping hand, starting in early October. Under the slogan "Mehr Stunden beim Kunden" (more hours with customers), a total of 91 Munich office and sales staff helped arrange window and in-store displays in toy shops and toy departments.

They decorated 460 metres of retail windows (47 windows altogether), and built 55 special exhibitions ranging from 10 to 200 sq.m. – a total of approx. 2,350 sq.m. focusing on popular products such as LEGO City and LEGO Technic.

Let the chil play

Children as learners and innovators:

Wait wait don't tell me! Let me try, play, find out!

BY PROFESSOR EDITH K. ACKERMANN

We all have been children, and we are surrounded by chidren all the time. Yet, sometimes we forget what it was like to be a child. For example, how did it feel, as a two-years old, to be denied the thrills of doing things on one's own? Or as an eager seven-years old to be ignored by an older classmate? Parents often wonder: What can I do to give my child a headstart in school - and in life - and make it fun at the same time? How can I help her succeed as a learner without hindering her imagination and creativity? How can I play with her without taking over?

In this article, I treat the growing child not just as a curious mind, a relational being, a little scientist, or a creative individual, but as a whole person! I encourage parents to have fun with their children while, at the same time, offering many intriguing and challenging variations of what children already love and know how to do. Joint play a good way for parents to leave adult worries behind and to genuinely enjoy— and fuel —children's own interests and abilities.

Children may have little knowledge or experience, but they have amazing talents as learners and innovators. Their abilities to self-improve are endless! Children seem to be born with a natural curiosity and a knack for "doing the right thing" in order to get to know more about what they don't know yet! For example, children love to do the same things over and over again, and in doing, they gain mastery and competence. More impressive, as they repeat an action, or mimik a person, they don't really do the exact same thing — as a machine would. Instead, they introduce variations which, in turn, triggers further learning and creativity.

From day one, babies are active, playful, and social. They signal their needs, explore their world, and tune in with their caregivers. Babies seek new challenges all the time and, before long, they invent newways of achieving their goals. As they reach their second birthday, most children start to reflect on their own activity, to evoke past or distant events, and to imagine alternatives in their minds. That's when our young explorers engage in fantasy play and make-believe activities as a means to understand the world and monitor their feelings (through enactment and performance), which often takes the form of role-playing games. Children are also good communicators and creative contributors to their surrounds: They will tell their stories to those willing to listen, and they share their feelings with their peers and parents. They will speak in "a hundred languages" to give form, or expression, to their ideas: from building to talking to performing to drawing. Early school years are marked by a child's expanding curiosity and mindful investigation. This is also a time when children like to take charge and follow through on what they undertake. They seek hard fun! They want to accomplish something and to be taken seriously! They like to leave their marks. In the child's experience, construction and narration go hand in hand. So do identity formation and knowing about the world.

The Whole Child Development Guide offers a set of lenses that have proven useful when looking at children's development and seeking to cater to their natural talents as self-directed learners and innovators. Each lens corresponds to a known area of development in the human experience, that can further be divided into sub-categories (Circle below):

ME (forming an identity) : Using our bodies / Knowing ourselves

US (growing together): Relating to others / understanding others

World (making sense of things): Exploring the world / seeking logic and coherence

Creations (inventions, innovations): Imagining possibilities / Creating forms and expressions

Often treated separately by researchers, these areas gain to be integrated because, in a child's experience, they merge! As a child matures in one area, s/he indirectly learns something in related areas. For example, through exploring the world, she learns about herself which, in turn, helps her understand others. Conversely, as she looks at herself through the eyes of others, this informs how she may tackle challenges, overcome obstacles, negotiate needs and wants, or persevere in the pursuit of her own goals. It is this system-like behavior of interlocking areas that ensures the depth and breath of a child's eagerness and ability to learn. It is their articulation that drives human growth throughout childhood into adult life.

Looking through the lenses:

ME / Using our bodies: Children actively explore things, using their bodies. They start as babies and they continue throughout their lives. One year olds can stand on their feet and they start moving around. Without much help, they then learn how to crawl, walk, jump, climb, and pick up and throw things. Young children also like to dance, move to music, and explore rhythms with their bodies. When older, they may engage in ballet, athletic teams, or become a drummer in a band. Children also progressively refine their fine-motor skills. They learn to pick up tiny objects between their thumb and index finger, and to use a pen or a pencil to drawor paint. Later on they refine their dexterity even further, by learning to type on a keyboard, or to play the piano. As we focus on a child's physical-motor development, we shall keep in mind that mind and body work together all the time.

ME / knowing ourselves: At first, babies are "fused" with the world, so neither people nor things exist as independent entities. As they grow older, however, children learn to set boundaries between "me" and "not-me" and, in doing, they come to realize what makes them unique and different from other people. Some authors refer to this as "process of individuation". Different milestones mark a child's journey from being self-less to becoming someone (a person with an identity over time). One big step is for a toddler to understand that the other toddler she sees when she is in front of a mirror is, in fact, herself! Another is for a "terrible two" to understand that she can "use words" in order to get what she wants instead of hitting or screaming.

US / Relating to others: Human infants are primed from birth to bond with whomever shows them care and affection. As they grow older, they become increasingly sophisticated at cultivating more nuanced relationships with people. One year olds adjust to others and actively engage in give-and-take rituals. Starting at age 2, children experiment with what is acceptable or not - they "test the limits", as we adults like to say - as they seek to stay connected (keep their caregivers' love) while not loosing their identity as persons. It is not before the age of 6 or 7 that most children learn to efficiently negotiate their needs and wants, especially in situations where resources are sparse, as when they have to share a desireable toy with their siblings.

US / Understanding others: A one-year-old will smile if she sees another smile. She may even cry as another baby, or her mom, cries. But such imitations can hardly be called empathy! Beyond feeling ambient moods, as if by contagion, it will take a while before children acquire a sense of what other people really feel and think, and before they understand someone else's intentions and expectations. In their third year, children can take on the role of others in their play, and influence other children or their parents by using persuasion, deception, and even humour. By their 4rth birthday, they begin to understand not just that others think differently, but they are able to characterize these differences in thinking. A big leap! As they grow older, they lean to put themselves in other people's shoes, or minds, and to look at the world through their eyes. They build their own theories of other people's minds…

World / Exploring and investigating: Children relentlessly explore the world around them, trying out whatever they come across that captures their attention. Babies like to put things in their mouths, and to grab and shake things. Toddlers develop a passion for stacking, nesting, and grouping things. Young children learn a great deal about important properties of the things they explore: some taste good, others don't; some feel soft, others hard; some can be touched while others slip out of the hand. As they perfect their manipulation techniques — and as they themselves become mobile — children also learn about the causal, spatial, and temporal qualities of their environment. They come to understand how things relate to (i.e. impact) one another, how things are located and configured, and how they evolve and change over time. They will learn that some properties of objects or events change while others remain the same.

World / Making sense of findings: Beyond figuring things out through inquiry, or trial and error, as natural scientists do, children also draw lessons on the art of rigourous thinking itself, as logicians or mathematicians do! Beyond experimenting, they mentally reorganize what they have learned. They seek coherence. They prioritize, schematize, and quantify! And once a child's newly built order prevails, the world will in turn be seen through those lenses.

Creations / Imagining possibilities: As they reach their second birthday, most children engage in such activities as feeding and talking to their dolls, drinking out of empty cups, teasing siblings, and cracking their first jokes. In other words, as soon as they are ready to talk, plan ahead, and think, children also start to "think out of the box," or imagine. One doesn't go without the other! This ability to make up things in their heads, or think creatively, does not decrease with age, nor is it a quality reserved to poets alone. Instead it infuses all walks of life, from scientists to gardeners, and becomes ever more elaborate as the child grows older. We all know, without imagination, there is no innovation, or invention!

Creations / Creating forms and expressions: Children not only make up things in their heads, or fantasize, they are equally eager to make their dreams come true, or realize! They like to express their fantasies, or live them outward, thus making them tangible and shareable. Children give form to their ideas in many ways, and they use a variety of means to do this. They speak in gestures and in voice, in pictures and in words, picking whichever medium captures their ideas the best. Children also love to leave their marks on their environments.

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Early childhood (1-4)

Children are born in a world of signs, symbols, and human-made artifacts, and – before long – they appropriate these tools and start making their own original contributions

Eventually they will use a whole array of expressive tools and media, from sticks to pencils, from papers to the walls of their room, to "cast in stone" otherwise ephemeral ideas.

Lessons learned

By building a positive and accurate body image/self concept, children acquire a reliable frame of reference - themselves - to help them act and move in space, as well as among other people. Body image, like self-awareness, provides an internal compas that children need to orient and situate themselves in relations to others.

By relating with caring others — and understanding how others feel and think — children become securely attached while, at the same time, preserving their identity (they can take charge and stay connected). Nurturing relations provide the mental flexibility needed for children to move-in and out of self, and graciously "get to yes" through negotiating conflicting perspectives.

In exploring their world - and seeking the cohence behind the surface of things - children come to mentally "reverse" the direction of thought and action, and to understand that objects or quantities can remain the same - invariant - despite changes in their physical appearance. Rational thinking provides the 'brain power" needed to anticipate what's to come in a sea of changes. Without imposing one's order the world would be a bewildering place!

Cultivating a child's imagination and creativity allows the emergence of new ideas and fosters innovation through "lateral" or "divergent" thinking: a manner of thinking that questions established truths and seeks alternative routes. Even in

1-2

During the first two years of their lives, children's explorations are mostly "hands on" (or, more often, "mouths on"). As they reach their first birthday, most toddlers venture their first steps and it won't take too long before they paddle on their own. That's when they like to carry their blankets and pull-along toys. At this age, children also like to uncover hidden things and to peek under curtains to see what's behind. They enjoy peek-a-boo, pleasant surprises, and wacky variations in turn-taking games. Concurrently, 15 month-olds start to distinguish their own images from images of other babies on photographs or non-live video. Signs of this recognition include: smiling, gazing, and pointing to one's picture when one's name is called, as opposed to frowning at or ignoring pictures of peers. Becoming mobile and gaining a fragile sense of self doesn't come without challenges, the most obvious of which is a "terrible twos" urge for autonomy and the related array of contradictory feelings of "let me go but don't let me go!".

science, imagination is often more important than knowledge: Without it, there is no learning or innovation to speak of.

Care-givers can support children's natural development by helping them to be mindful in her actions, generous in their relations, playful in their investigations, systematic in their creations.

Conclusions

Developmental stages offer a useful framework to highlight the milestones that mark a child's growing abilities to control her body and to expand her mind. This being said, we know that ages and developmental stages are only loosely connected. There are at least two reasons for this. First, all children are unique and different. Some children "grow older younger" while others are "late bloomers". Some grow evenly across developmental areas while others don't. Children also differ in their styles of interaction. Some are exhuberant while others are quiet. Some like to guess while others prefer to try. Some are outgoing while others are shy. The second reason is that researchers, parents, and caregivers themselves may disagree on when a given behavior emerges for the first time in a child's life: Some may identify a baby's first smile after a few days, whereas others see it emerge only after a few weeks. Some claim that babies "recognize" their care-givers - or themselves - early on. Others doubt it. Beyond hard facts, it is mostly a matter of subjective projections and definitions.

If there is one thing everyone agrees on, it is this: Children will always need the attention and comfort of caring adults to survive and thrive. In particular, children need to be loved for who they are, respected in what they are trying to achieve, granted the freedom to find their own ways in life, and supported when they ask for it or need it. While there are no quick answers on how to achieve this (parents usually know best), a good rule of the thumb is to be together in ways beneficial and enjoyable for both children and care-givers.

For children, making sense of the world - and understanding their own abilities as agents in the world - involves figuring out how things work, and why things are the way they are; and the way the children do this is mostly through play! This is why parents should be reassured: letting your children play, and playing with them without taking over is a wonderful way to spark their curiosity and fuel their talents as self-directed learners.

Early school years (5-8)

Between the ages of 5 and 8, children face a mutitude of new experiences outside the confines of their homes, not the least of which is going to school. The child's curiosity and eagerness to learn develops even further, and their imagination becomes 'channeled" to satisfy new needs, inner and outer!

3-4

During the third year, children's agility and dexterity increase a great deal. Their ability to manipulate ustensils, to get dressed by herself, allows them to be ever more independent. Yet, the biggest leap at this age is mental: the child now moves away from the "here and now" contingencies characteristic of sensori-motor intelligence, and becomes able to mediate her experience, i.e. to re-visit and re-enact what happened to her at other times, and in other places. 3-4 years olds engage in differed imitation (reproducing events in their absence), and in pretend and role play. Their budding imagination goes wild! Her abilities to do-as-if and play-what-if set in! 3-4 years olds love to dress up. They use many different materials as 'props' to enrich their make-belive acts: from building block to masks and costumes, from puppets to magic wands. 3-4 years old also love to sculp, scribble, cut and paste. They use playdough, glue and scissors, crayons and finger paints, This is also the age when children start to ask a hundred questions (Why? Why? Why?) and start to wonder what will happen if they intevene in a certain ways (from exploration to early forms of experimentation).

5-6

At this age children become experts at figuring things out for themselves and, beyond just 'messing around' they engage in systematic 'hands on' experimentation. This is also a time when many children like to take charge—and follow through on what they started.Some children will spend hours taking objects apart and putting them back together. Others may hesitate to break things apart but will vary their ways of interacting with things. As they reach their 6th birthday, children increasingly enjoy board games and Pokemon-type of item collecting and swaping games, where they learn to trade and cooperate. Children of this age are not especially good at loosing in competitive games, nor do they like to be criticized or stick out of a group as different. In their play acts and written productions 6-7 years olds seek precision and logical consistency, and pay closer attention to audiences, fictional or real, to whom they address their creations. Earlier forms of pretend and role play find new expressions through music, poetry, and drama.

7-8

At around 7 years old, children become competent social partners and they carve their own role when cooperating with others. Seven-year-olds also begin to have idols they identify with. By the time they reach their eighth birthday, they begin to enjoy talking over the phone with friends and using mobile phones and computers to communicate. As they become more involved in various endeavours and interests, our now socially competent and "industious" 7-8 year-olds face a new challenge: they have to learn to strike a balance between keeping their creative spark and spontaneity while following through on their self-set tasks—as well as the constraints set by others— in order to succeed! Many 7-8 years-olds play out this challenge by engaging in ever more complex rule-based games.

Playing safely and happily on the Net

For generations the LEGO name has been synonymous with happy, challenging and – above all – safe play. At LEGO.com those classic virtues have been brought into the age of virtual play. Guaranteeing fun and a safe play environment for the whole family.

BY MARTIN SANDGAARD PHOTO NIELS ÅGE SKOVBO

LEGO.com – which receives about 20 million hits a month – is one of the world's most popular toy websites. LEGO.com offers both traditional, product-oriented information and an opportunity for users to communicate with others through the social network My LEGO Network.

Social media for children and young people

A growing number of social networks – like My LEGO Network – are designed specifically for children and young people. And with the new technology and the possibilities it affords, comes the fear of abuse. Concepts such as "cyber-mobbing" and parental fear that children's trust on the Internet will be exploited are real-live aspects of this development. Providers of virtual, social networks have become increasingly aware of the great responsibility they have to offer a secure environment for the children they invite to their site.

A safe destination

LEGO.com takes its responsibility for a safe Net experience for children very seriously. It has a clearly defined policy and a number of specific rules and guidelines which ensure that the website continues to be a fun, secure place for children to play.

"It should go without saying that we accept neither adult approaches to children nor mobbing among the children themselves – so we practise zero tolerance in this respect. In the toy industry we're regarded as an advanced practitioner in the use of social media, and it's important for us that our users, their parents and society at large view us as a safe destination," says Peter Hobolt Jensen, who has day-to-day responsibility for LEGO.com.

LEGO.com has lots of fun and secure entertainment for children. A special parents' section provides inspiration for many hours' entertaining quality time for the whole family.

LEGO.com

www.LEGO.com is the LEGO Group's official website, made up of about 80,000 webpages, which receive about 20 million hits (visits) a month. Almost half – 49% – of all visits are from the USA. The site has a special parents' section which provides advice and guidance on the many facilities the site offers for fun and shared experience with your child.

Read more at ***www.LEGO.com***

Human factor guarantees quality

LEGO.com is determined to preserve the human factor as a guarantee of the quality and excellence of content.

"We think it's very important that all content on our website is monitored by human beings – not by machines or software. In that way, we can be sure that issues of doubtful content or sensitive questions are handled on the basis of balanced, human judgment. It's a simple – but, of course, resource intensive – procedure. Our team of moderators monitor more than 1.5 million posts, comments, images and other contributions annually," says Peter Hobolt Jensen.

No advertising, no links

LEGO.com shows children no advertisements from other companies – nor does it provide links to other social networks. Peter Hobolt Jensen says of this decision:

"We have no means whatever of monitoring the content of websites published by others. So we don't provide links to other sites – although that may mean that Google and the other leading search engines don't give LEGO.com such a high placing. But we'd rather be on the safe side. Generally speaking, we're probably a bit conservative when it comes to web safety."

And it works ...

The precautionary measures obviously work. Over the past three years it has been necessary to cancel only one single user account at LEGO.com.

Peter Hobolt Jensen: "My LEGO Network has more than 750,000 users, and I'm happy to say that we've established a website culture with a high degree of self-regulation – there are really relatively few cases of problematic content."

Award-winning trust

Efforts to safeguard a secure and at the same time fun, attractive environment on the Net have also been noted internationally. In February LEGO.com received "Wired Kids Best of the Web Award 2009" – an American prize awarded jointly by children, parents, special-interest groups and legislators to websites which distinguish themselves for being attractive to children but which at the same time observing strict standards of trust and safety.

Peter Hobolt Jensen: "Obviously we're extremely pleased to receive such an honour. It's a pat on the back we value in our efforts – together with other players in the field, such as Disney and the BBC – to generate a general understanding of how children should be secured a safe environment on the Net."

Won't compromise on fun

Fun and security may seem to be at opposite ends of the childhood spectrum – but to the LEGO Group it's not a question of either/or. Focus is still sharply directed upon positive play and creativity, the kind of thing the company has represented for decades. Says Peter Hobolt Jensen:

"Our ambition is to be the website of choice for the creative, digital family. We want to help families develop their creativity – and the creativity of their children – through things like image galleries, video, music, digital LEGO creations, setting up net profiles, setting up networks – and all the other fun, interesting things we're going to offer in future."

Cool web sites....

My LEGO Network

My LEGO Network is a "social network" site, providing children with a safe, secure environment in which to set up their own webpages and their own personal profiles. This is where they can assemble, build and share their creations with the rest of the network, e-mail their friends, listen to music, play games – and lots more! For more information visit:

http://mln.LEGO.com

Wired Kids' Best of the Web Award

Wired Kids' Best of the Web Award is an honour announced annually – chosen by American children for their favourite websites. Winners are selected for qualities such as focus on Net security, safety for children, and conformity with strict US legislation in the field. More than 50,000 US children and young people voted this year to select their favourite websites. For more information visit:

www.wiredsafety.org

Taj Mahal

*The LEGO model of the **Taj Mahal,** the famous Indian mausoleum, was created on the basis of satellite images from Google Earth – the designer has never seen the building in real life. The model is made up from 5922 elements, making it the hitherto largest LEGO set in terms of number of bricks.*

The hardest part to create for the designer, Henrik Andersen, was the dome. Square or rectangular LEGO bricks are not suitable for building in the round. Henrik Andersen had to give up on his first attempts with ordinary bricks, and tried a couple of rebuilds before he found a solution which produced the correct shape. Originally, the plan was to have a reflection pond as in real life – but that was beyond the budget.

When the model was finished, Henrik Andersen received a test set. But he had already built it so many times that he chose to give it to his 72-year old mother. She built it in two weeks.

The LEGO model of the Taj Mahal came on the market on October 1, 2008. Sales are going well, and the Sales Department expects to sell 10-12,000 sets a year. The model is likely to feature in the range for about three years.


INAL SCALE

LEGO FACTORIES are good neighbours

Red bricks, yellow bricks, blue bricks and grey bricks. Short bricks, long bricks, wide bricks, and chunky bricks. The billions of LEGO bricks sold to children every year all over the world are for the most part moulded and packed in Denmark, Hungary, Mexico and the Czech Republic.

BY ROAR RUDE TRANGBÆK **PHOTO** ARTURO LOZANO

Every year billions of LEGO bricks are shipped to children all over the globe from the four LEGO factories in Denmark, Hungary, Mexico and the Czech Republic.

Spread out across the world, the LEGO factories are valuable neighbours. In addition to creating jobs for many hundreds of people in times of financial crisis and rising unemployment, they also contribute know-how and a general rise in economic activity to the local area. This according to Alejandro Paez Aragon. He is Minister of Economics and Development in the Mexican state of Nuevo León where the LEGO Group is in the process of building the new factory that will supply bricks to the American market.

...good neighbours

Alejandro Paez Aragon, Minister of Economics and Development in the Mexican state of Nuevo León: A LEGO factory brings know-how and growth to the local area.

LEGO Factory Manager Pablo Salazar: We will be contributing USD 35-40m annually to the local economy.

"One of the advantages in having the LEGO factory is that the many moulding machines being installed here will generate a local need for maintenance and the local manufacture of moulds – and this will in turn create growth in the local area with local suppliers serving the factory," explains Alejandro Paez Aragon.

LEGO Factory Manager Pablo Salazar has the facts and figures of the financial effects of the new Mexican factory:

"Analyses have shown that we will be contributing USD 35-40m annually to the local economy, so the factory will be an important factor. We shall be installing a huge number of moulding machines – bringing lots of know-how and expertise on injection moulding to the region. The factory will have a positive impact on the local area."

The Minister of Economics and Development agrees that the presence of the LEGO Group in the region will bring social benefits with it:

"The LEGO Group is not the average foreign company. Many companies come to the region only to manufacture their products. But from the outset the LEGO Group has made it clear that it feels a responsibility to the local community – schools and educational establishments. This makes the LEGO Group unique."

FOUR FACTORIES

For a few years the production of some LEGO bricks was outsourced to an external partner – but in 2008 the LEGO Group decided to bring production back under its own management. Production is now concentrated in four countries:

The factory in **Denmark** is located in Billund. There has been a LEGO factory here since the business was founded in the 1930s – and has grown somewhat in size over the years. More than 1,000 people now work here manufacturing LEGO bricks.

The LEGO factory in **Hungary** is located in the town of Nyíregyháza. The LEGO Group took over the factory on December 1, 2008. The factory – employing more than 1,200 people – supplies toyshops all over the world with LEGO DUPLO products.

In **Mexico** the LEGO Group is in the process of building a completely new factory outside the industrial city of Monterrey, capital of the state of Nuevo León. When the plant is completed, production of LEGO bricks will be transferred to it from a factory in Juárez a few hundred kilometres away. The new factory will supply LEGO products to the entire American toy market. Once the factory is fully up and running, it will employ approx. 600 people.

In addition to its two new factories in Hungary and Mexico, the LEGO Group has also taken over a factory in Kladno in the **Czech Republic.** It has a workforce of 765 employees. No moulding of LEGO elements goes on here but LEGO bricks are processed – as they also are in Billund and Hungary – for example, by painting eyes, mouths and beards on minifigs. The Czech plant also has a packing section and a department which builds big models.

Some elements are moulded by external partners (for example, in China) and some products are packed by external partners (for example, in Poland).

When 34 year old Angel Gaytan Almanza got a job at the LEGO factory in Monterrey, he thought it would be just temporary. "Later I discovered it was a job with a future. It gives me peace of mind and security for my family," he says. Daughter Dariana Yaresi (10) has already played with her first LEGO bricks.

NO QUICK ANSWER TO PROBLEM OF working conditions

The LEGO Group would like all its suppliers to comply with international conventions. But in countries like China, for example, it is difficult. Employees there work much longer hours than the LEGO Group normally accepts. That's the dilemma: Should the Group let people earn a living – or walk away and risk them losing their jobs.

BY NINA HERMANSEN

Pay, working conditions and working hours. These are all important to a company and its employees. And the LEGO Group is no exception. It observes an ethical Code of Conduct with guidelines for working conditions at both the Group's own factories and suppliers' factories.

The LEGO Group manufactures most of its products in-house – in Denmark, Mexico, Czech Republic and Hungary. But a small quantity of elements are manufactured by outside suppliers – for example, in China, where among other things small electronic components are made for LEGO MINDSTORMS robots.

But working conditions and norms are not necessarily the same in China and in the West. In China many people travel far and wide to find work, leaving their families behind in the villages. The important thing for these workers is to make money so that their families can live in reasonable conditions, and they therefore want to work long hours. That's why Chinese employees working for

LEGO Group combats child labour

In the Code of Conduct it says that the LEGO Group will actively combat child labour.

In the past, if the LEGO Group discovered that a supplier was using child labour, the company would terminate the relationship. Now, the LEGO Group will try to do a deal with the supplier – not for the supplier's sake, but for the child's!

By working with the supplier, the LEGO Group makes sure the child receives an education and compensation in the form of a remuneration package.

Says Lise Fogh Larsen, LEGO Code of Conduct Manager: "We will try to help the supplier help the child. If we opt simply to terminate our relationship with the supplier, that can be irresponsible towards the child – who may find itself in an even worse predicament than before. We'll be showing greater responsibility by stepping in and helping. But, of course, there are consequences. If we discover that the child continues working at the plant and nothing has been done to improve its situation, there is probably little more we can do except terminate our supplier relationship – and instead pass the matter to the authorities."

working conditions

LEGO Group suppliers may work up to 72 hours a week - and in a few cases even more. Despite the fact that the LEGO Group feels the maximum should be 60 hours a week – or occasionally, 72 hours if local legislation allows it.

The LEGO Group faces a serious dilemma here. Does the Group allow Chinese factories to work this way – or should it terminate the supplier agreement and risk the Chinese employees losing their jobs?

Helle Sofie Kaspersen, Senior Director for Corporate Governance and Sustainability, says: "If we discover that working hours are too long, we can walk away. But then we face a new dilemma. If we do turn our backs on that supplier, Chinese employees will lose their jobs and their families be left without much-needed income."

Working conditions must be good

Strictly speaking you could say that the LEGO Group should be more demanding of its suppliers and insist that suppliers' employees work fewer hours. Says Helle Sofie Kaspersen: "The company is trying to get suppliers to comply with International Labour Organisation conventions but it would be utopian to believe that the LEGO Group can alter Chinese working conditions from one day to the next. We're not big players here. Our business accounts for only 1-2% of the individual Chinese supplier's turnover."

The LEGO Group is doing everything it can to alleviate the problem. But it's difficult. That's why the company insists that it must be the employees themselves who choose the high number of hours – and that working hours must not exceed the maximum set by local legislation.

It's also very important that all other conditions at the factories are in order.

Helle Sofie Kaspersen explains: "We have to ensure that working conditions are safe, and that employees get the additional payment they're entitled to. If not, it would be wrong and irresponsible."

The LEGO Group carries out factory audits – having external firms visit suppliers to check out conditions. This usually happens about once a year but isn't necessarily the perfect solution.

Code of Conduct Manager Lise Fogh Larsen says: "An audit is only a snapshot. We don't know what conditions will be like two weeks later. But in present circumstances, it's perhaps the best we as a company can do. We need to find a better way of making checks in the future."

If – during a visit – serious problems are discovered, the LEGO Group follows up aggressively on the issue at the supplier's factory to get conditions improved.

Corporate social responsibility

In the sphere of corporate social responsibility, the LEGO Group has to consider many dilemmas. The Group is first and foremost a business, and it is a well-known fact that – in many ways – it makes economic sense to locate manufacturing plants in low-wage economies. So the LEGO Group doesn't just pull the plug on low-wage manufacturing and use West European suppliers.

Lise Fogh Larsen: "You could say that we're creating jobs – a socially responsible thing to do. We're being responsible by being in the country keeping its economy moving. The people who lose their jobs because of the financial crisis, for example, are left with no income at all. The important thing for us is to make sure employees are treated properly."

Up to 3% of finished materials are manufactured in China. In addition to components for LEGO MINDSTORMS, this may, for example, be special elements or clothes for the figures.

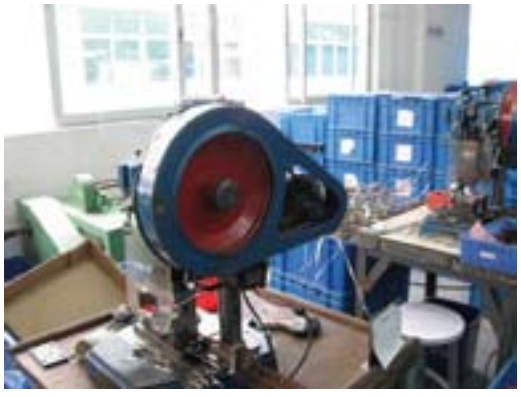
CODE OF CONDUCT

In 1997 the LEGO Group adopted a Code of Conduct – which is revised on an ongoing basis.

The Code of Conduct is in place to ensure that all LEGO products are manufactured ethically, fairly and responsibly.
Direct suppliers sign a statement that they will comply with the guidelines and ensure that their subcontractors do as well.

The LEGO Company Code of Conduct covers:
- Child labour
- Compensation and working hours
- Discrimination
- Coercion and harassment
- Forced and compulsory labour
- Workplace environment
- Freedom of association
- The environment

You can read more about the LEGO Group's Code of Conduct by visiting **www.LEGO.com** – you will find it under About Us/Corporate Responsibility.



What's it like having a Mum/Dad who works for the LEGO Group?

It's good because he teaches us about LEGO a lot and he lets us help him build things. And I like that my friends at school think it's really cool that my Dad works there because they all think LEGO is so cool and they ask me if they can maybe come to my house and play LEGO with me and my Dad too.

Skylar (age 8), USA

It's so much fun because I get to do LEGO stuff with him and I really like doing LEGO because it's fun to do because you make all different things with it and if you make a mistake you can always go back and fix it because you can just take it apart. Plus all my friends think it's awesome that my Dad works at LEGO, especially the boys because they really are into LEGO.

Fiona (age 6), USA.

Dad: Michael McNally, Brand Relations Director, USA.

"ALL MY FRIENDS THINK IT'S AWESOME THAT MY DAD WORKS AT LEGO, ESPECIALLY THE BOYS BECAUSE THEY REALLY ARE INTO LEGO."

Christian is an expert

Christian Thøgersen is 27 and has Aspergers – a form of autism – which makes him incredibly good at testing games. Using both orthodox and unorthodox methods. And it's a quality that's very useful to the LEGO Group.

Christian Thøgersen is happy at his job – imagine being paid for testing LEGO games! Working for The Specialists has brought more structure to his life, and given him an opportunity for social interaction with other workmates. Something that Asperger people often aren't too good at.

at finding faults

BY PERNILLE STANBURY **PHOTO** NIELS ÅGE SKOVBO

The first thing The Specialists tested for us was My LEGO Network, a social network on our website. It was a great success – they found an astonishing number of errors!"

Marianne Peschardt Assenholt speaks highly of the LEGO Group's collaboration with The Specialists – a company employing individuals with autism to solve specialised problems for the business community. She works on the quality assurance of games and other consumer offers on the website LEGO.com. It is important, of course, that children enjoy the same high quality in their computer games as they do with the physical products – so it's vital that errors are identified and corrected before children get their hands on the games.

This is where The Specialists do a valuable job of work. One of them is 27-year-old Christian Thøgersen who – in addition to My LEGO Network – has tested various games on the website. He is expert at approaching the game with the attitude of a child and playing the game as a child would. Children don't always do what you expect them to – and neither does Christian Thøgersen:

"I test games and applications by using them as intended – but also in ways that were never intended – to see if things can go wrong. I try to do everything the game can possibly be used for. When I find errors, I report them to the LEGO Group for correction."

Finding the most bugs

Like most of his colleagues at The Specialists – all of whom have a form of autism – Christian Thøgersen's main recreational interest is computer games. One of the main topics of lunchtime conversation at The Specialists, where he works, is computer games, and there is competition to see who has found the most – and the most interesting – errors. Or bugs, as they are called in the trade.

With Asperger syndrome, Christian Thøgersen has special skills that are useful in his type of work:

"I find it easy to run the same things over and over again, and I have a natural tendency to see patterns in things. So I can readily see when something breaks out of the normal pattern. I've often received computer software that's been tested many times – and yet I can still find new bugs. I focus on the little details because that's where the bugs are usually to be found," he says.

20-hour week is fine

Christian Thøgersen enjoys working for The Specialists, his employer for the past three years. He works flexible hours. People with Aspergers tend to become easily stressed, even by the social aspects of a workplace – so a 20-hour week suits him just fine.

Marianne Peschardt Assenholt is very pleased with the work her department receives from The Specialists. The only real drawback is that she has to get accustomed to the fact that The Specialists are not quite as skilled at handling anything unplanned.

She says: "We'll have to practise defining our assignments properly. But The Specialists are fast – and we often need a job done and returned by a very short deadline. They are also excellent at reporting bugs because they remember exactly what they did and how they got to the point where the bug arose. The Specialists can do the same job time and again without getting bored. They have to test the structure – but it's also important that they do the unexpected and discover what happens if they should press the 'wrong' button at the 'wrong' time."

Christian Thøgersen refers to it as "crash testing". He enjoys trying to crash the application – just to see if it's possible ...

THE SPECIALISTS:

The Specialists (Danish: Specialisterne) is a body established in 2004 by Thorkil Sonne, father of a 12-year-old son with autism spectrum disorders (ASD) – commonly known simply as autism. The Specialists employ about 50 people, two-thirds of whom have been diagnosed with a form of autism. Approx. 30 people with autism are in the process of having their working capacity determined – to decide which type of assignment they are best suited to.

In a blend of idealism and business, the company bases its investigations on the special characteristics of autism. People with autism often have a sense of detail and logical thought. They are careful, systematic and persistent with a high degree of concentration.

These are qualities the business community can use because it means these employees are often good at testing and quality-checking software. Other suitable types of work can be data entry involving keying the contents of documents into computer systems, or converting from one type of database to another.

The LEGO Foundation supports The Specialists with large donations over a period of years. It is done in acknowledgment of the fact that The Specialists use LEGO products in a creative way for the benefit of a specially vulnerable group of people.

Read more at www.specialisterne.dk (Danish, English and German)

SPECIA

ready to go international

Teaming up with the LEGO Group in various ways – partly to discover the individual skills of each Specialist. Partly to publicise the concept abroad.

BY PERNILLE STANBURY **PHOTO** NIELS ÅGE SKOVBO

The founder of The Specialists, Thorkil Sonne, plans to extend his operations beyond Denmark. Via autism circles and international media, news of The Specialists' success has spread, and Thorkil Sonne is in contact with individuals and organisations in 50 countries – from Australia to Uruguay.

There is a universal interest in setting up local branches for the benefit of people with autism, offering them meaningful employment. And supplying local business with a valuable asset and special skills.

MINDSTORMS robots

The Specialists have entered a partnership deal with LEGO Education because The Specialists use LEGO MINDSTORMS robots to help determine where the skills of individual employees lie.

Thorkil Sonne: "As the father of a boy with autism, I am well aware that autistic children are often good at playing with LEGO products. The common denominator is putting things into a system. We need a sophisticated tool to test the skills of The Specialists, and MINDSTORMS is very suitable because it includes a lot of programming work. With the aid of the robots we can determine what it is that motivates the individual – and what the person's job profile would be."

And Thorkil Sonne adds: "We would like to spread our knowledge to autism-related specialist schools, and as LEGO Education has many good school contacts, it is only natural that we join forces – so that MINDSTORMS Education can help people with autism at an international level."

The co-operative project is also interesting for LEGO Education.

Jens Maibom is head of LEGO Education: "Teaching children with special needs is a huge area. We've received many inquiries – and in each case it is necessary to work out individual solutions. We're learning a lot from our collaboration with The Specialists, and that can broaden our understanding of what we ourselves are capable of. Educating people with autism is a global challenge which we would like to take up – and from the commercial point of view it also has interesting aspects."

A global problem

The Specialists are working on plans to open a branch in Glasgow, Scotland, but interest has also been expressed in Switzerland, Norway and Germany. One of the challenges is to raise funding for the expansion and to adapt The Specialists to the local cultural and welfare models.

"We are pioneers. That's an exciting thing in itself but it also has its difficulties. There's nobody quite like us – but autism is a global problem so we feel something of an obligation to make our experience available to a wider world," says Thorkil Sonne.

The die is cast...

This summer the LEGO Group will take its place on retailers' games shelves – with a new product category. The LEGO Games product is based on the classic board game concept – but has endless potential for children to put their own imaginative stamp on the game.

BY PERNILLE STANBURY **PHOTO** NIELS ÅGE SKOVBO

It created quite a stir at the Nuremberg Toy Fair earlier this year that the LEGO Group would be launching 10 new games this summer. When the new games reach retail games shelves, the 77-year-old toy company will have moved into a new product category.

LEGO Games is based on the classic concept of a board game – and yet is obviously a LEGO product. First time they play a game, children have to build it from the familiar bricks (meanwhile Mum can perhaps be reading the rules of the game). Even the dice has studs and must be built before the game can start.

When the family has played the game a few times, there are endless options for making the game your own. It can be built differently, rules can be modified, and the dice can be given a different look with a range of different colours or "pips".

The first 10 games will be launched in German-speaking parts of Europe and in the UK in August 2009 – and in 2010 the rest of the world will also have a chance to shake the dice.

The games have been developed in collaboration with Dr. Reiner Knizia, one of the world's most experienced and successful games designers. They are aimed at children aged six and over but, of course, the entire family is encouraged to join in.

Creative Lead for LEGO Games, Cephas Howard explains: "Our brief was to create a new type of products which would be a growth driver in 2009 and beyond. They had to be aimed at our core consumers and build on the LEGO concept – but supplement our existing product range rather than overlap it. We had to come up with something that was 'Obviously LEGO – but never seen before'. And we were also told that a product with an increased social dimension would be a good thing."

Keen LEGO fans have something to look forward to: the plan is, every 3-4 years, to launch a new product line which also lives up to the classic LEGO concept – but has never been seen before.

10 games

Initially, 10 games will be launched

One of the games is a form of labyrinth. Another is "Ramses Pyramid", in which Ramses the Mummy King threatens to conquer Egypt. The player who manages to collect most magic crystals, evade the mummies, and climb to the top of the pyramid, defeats Ramses. "Ramses' Pyramid" won the innovation prize in the "Games & Action" category at the Nuremberg International Toy Fair in February 2009.


x2

The young judges

A small group of children have been selected to take part in the LEGO Group's Kids Inner Circle Panel. The panel tests new products and initiatives, and can even put forward new ideas. It acts as an "arbiter of taste" for the company – and as such is very important.

BY NINA HERMANSEN

There are many interesting websites out there where LEGO fans and other interested folk can chat, exchange ideas and display pictures of their special creations. But the LEGO Group itself has a very special website that is accessible only to a very small percentage of LEGO fans. It's where the so-called Kids Inner Circle Panel meets. A panel consisting of 5,500 children, all huge LEGO fans.

Conny Kalcher, Vice President of Consumer Experiences, explains: "It's a website where children share their LEGO interests. It provides news about LEGO products and initiatives. A sort of survey platform that allows us to follow the same children for a number of years and get to know what makes them tick. We blog with them, set up questionnaires and mini surveys asking what they would like for Christmas. But we also carry out major surveys. For example, to learn something of their Net habits."

The panel

The common denominator for these 5,500 children is that they're very interested in LEGO products – and in voicing their opinions. They have been selected to sit on the panel, either via their membership of LEGO Club or because they have previously

taken part in one of the company's consumer surveys.

On the website they are introduced to new products and themes, and can even put forward their own new ideas – or comment on other people's ideas. That way, the LEGO Group wants the children to feel they're taking part in a two-way communication with the company. In other words, the website is a forum where children are being listened to.

One of the most important aims with the panel is to identify the company's core consumer. By communicating with the young panel members on the website, the LEGO Group gets an idea of how children think and act on the Internet – and what effect LEGO products may have on them. It gives a feeling of what's important to a LEGO fan – and a basis for attracting even more children to the local toyshop. In many ways the panel is a kind of jury that is consulted before the LEGO Group launches a new initiative.

Conny Kalcher says: "We've lots of contact with the children – they're a living, breathing source of information. We turn to the children a lot when we want to check whether various things are relevant. Kids Inner Circle Panel gives us a quick channel for doing a survey. Rather than just sitting talking around a table, we can quickly circulate an e-mail telling them there's a new questionnaire we would really like them to respond to."

Children's panel is special

Agents and Power Miners – launched in 2008 and 2009 – are examples of product lines that have been put before the panel for comment. Members received trial packs of the products before they went into production and were asked for feedback on the product.

Tamara Dominick, brand manager for Agents and Power Miners, says: "On Agents, we found out that 60% of the children who responded to the question were extremely interested in having a set. We also discovered that the products appealed mainly to children between the ages of six and eight. In the case of Power Miners we asked them which product they wanted most of all, and the majority said Thunder Driller – which actually turned out to be the best-selling set in the range. This kind of information is immensely useful in planning our business."

She is in no doubt that the children's panel is very special – and also a very good channel for useful information:

Tamara Dominick says: "When we did the questionnaire on Agents, 618 members responded. You might think they are biased and only give favourable responses but that doesn't seem to be the case. We received compliments – but also complaints that the set was smaller than expected. Their honesty is very valuable to us."

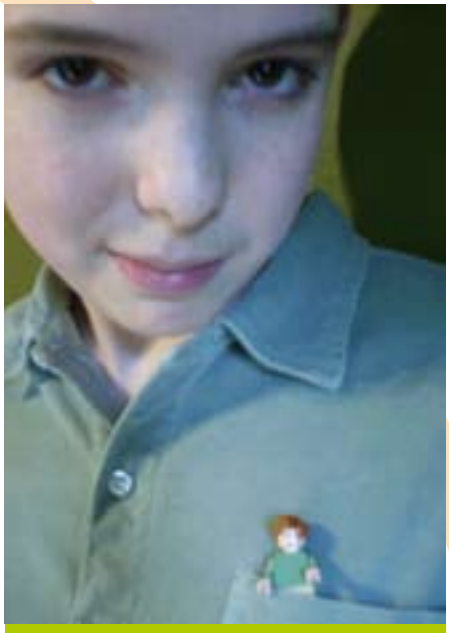
A place on the panel

Membership of the Kids Inner Circle Panel isn't open just to any fan.

Membership is only by special invitation to selected members of LEGO Club – because it's important that Panel members feel special, that it's not just something anyone can join.

Using help that a child gives you is a very delicate balance – and some people may think the LEGO Group is using the children and their "labour". But the company is very careful in this regard – to make sure that this isn't the case.

Says Conny Kalcher: "We're told the children are so chuffed to be involved. It wouldn't work if they weren't. There has to be give and take. The youngsters must be feel they're special to the LEGO Group. One of the things we do is to send them trial packs of some products. To make it an exclusive thing for them. When we ask them whether they'd like to recommend others who might want to be on the panel, they often say no. Not because they don't find it exciting but because they want to keep membership of the panel to themselves."



EVAN MULLOY – A MEMBER OF THE PANEL

What is it like to be a member?

It feels as though you are a kind of secret agent for the LEGO Group. It's a very good feeling actually, because I have the power to discuss with and help the LEGO Group – but I get to do it secretly.

LEGO is almost my entire life. I love to build with those little bricks and see what I can make with them.

If the LEGO Group was to go out of business, then I would go insane because no other building toy company is good enough for me.
That's why I want to help LEGO, to make sure they don't go out of business!

The panel gets very special privileges such as surveys, news about what is going on with the LEGO company at the time, plus gets to see super special sneak peeks about upcoming LEGO sets!

The one thing I like the most though is the blog on the website. At the blog, members often share ideas, talk about new LEGO sets, and ask LEGO employees questions. When I go to the website, I go to the blog before I do anything else.

Evan Mulloy (Bricknave) age 13, USA.

Planning a 10% energy reduction over three years

The LEGO Group has a climate plan – one of its objectives is to involve children, encouraging them to put forward proposals for improving the climate.

BY PERNILLE STANBURY

The environment and our climate are our shared, global responsibility – and, of course, the LEGO Group wants to shoulder its part of this responsibility.

In 2008, for the very first time, a calculation was made of the annual CO_2 emissions produced in the manufacture and distribution of LEGO bricks – from manufacturing the plastic that is the raw material, to moulding, packing and shipping all the way to the consumer. The consumer, who – it is to be hoped – recycles the box to protect the environment.

Calculations reveal that 60 percent of the total CO_2 emission stems from the production of raw materials and 30 percent from the manufacturing of bricks, especially moulding.

Against this backdrop, the LEGO Group has decided on three initiatives to benefit the climate:

By 2010, energy consumption must be reduced by 10% compared with 2007. Initially, extraordinary savings will be sought in energy consumption in Denmark.

"Eco design" is on the programme, too. This means looking closer at the materials used for manufacturing and packing LEGO bricks.

The third initiative involves children – the builders of tomorrow. The children have fun – while at the same time learning about sustainability and climate effects. For the past two years, these two themes have played a key part in FIRST LEGO League tournaments.

In 2007-08 more than 100,000 children from approx. 40 countries researched the field of alternative energy sources. The theme was labelled "Power Puzzle". And in 2008-09 140,000 children from every corner of the globe have been working to find imaginative solutions to the world's climate problems. As reported on pages 22-29 in this magazine, this year's challenge, "Climate Connections", will culminate with 700 regional and national winners competing at the global final in Copenhagen, Denmark, where they will hold their own Children's Climate Change Conference in advance of December's adult climate summit at the same venue.

Smaller boxes – will also help the environment

From 2009 LEGO boxes are being slimmed down a little. The change will save not only on carton but also on road transport. Simply because lorries will no longer be driving around carrying "empty space".

BY PERNILLE STANBURY

Young Peter probably won't notice – but the box of LEGO bricks he receives for his seventh birthday this year will be a little smaller than the one he got for Christmas last year.

Because box sizes are being reduced in 2009. On average, by 7% – one reason being that the new boxes should contain less empty space.

The LEGO Group saves money but the spin-off effect is that smaller boxes benefit the environment in several ways. First, less carton has been used for the box that Peter and his parents will be recycling.

Secondly, there is now a completely new system of box sizes. Peter probably won't be aware of this either but in future there will be only 53 different LEGO box sizes compared with 85 in the past. The new sizes have been designed so that they fit much better together when stacked on pallets or in containers for shipment by lorry or ship.

Lorries carrying "empty space"

And this is where the environment can smile. Previously, there were so many different box sizes that efficient stacking of pallets was almost impossible. There was too much empty space around the stacked boxes – with the result that lorries drove around carrying a lot of nothing. The annual cost was huge – plus there was a completely unnecessary burden on the environment.

Steen Ejlersen has been project lead for the development of new box sizes. He says: "Our pallet utilisation rate had fallen from 93% to 76% in the course of just a few years. Our objective is to get it back up to an average of 90%. Calculations show that with the new box sizes 1352 fewer lorry trips will be needed – every year – in Europe. Similarly, in the USA 598 lorry trips will be saved annually. By the end of February 2009 we could see that we'd reached our objective – to the benefit of customers, the LEGO Group and the environment."

59,213 sqm less carton

Wal-Mart, the major American department store chain, is delighted with the new box sizes. Wal-Mart is big on sustainability, and the new LEGO boxes mean that pallet utilisation will rise to 91% this year – compared with 76% under the old system. A saving every year – in Wal-Mart stores alone – of 5,681 pallets, 94 road trips and 59,213 sq.m. of carton.

What's it like having a Mum/Dad who works for the LEGO Group?

I like his shirt – the one that says LEGO on it! The kids from my class and I visited the factory when it opened, and my Dad showed us how they make LEGO. We were talking to the man who owns LEGO. Kids in my class now know that my Dad works for LEGO – and I'm proud of that. In Denmark he bought a LEGO skirt for me that my friends like very much. I know that LEGO gives LEGO boxes to kids who do not have money to buy it.

Hanna (age 7), Hungary.
Dad: Csaba Toth, HR Manager.

"THE KIDS FROM MY CLASS AND I VISITED THE FACTORY WHEN IT OPENED. WE WERE TALKING TO THE MAN WHO OWNS LEGO."

HERO'S PICTURE ON BOX

Some people are fans of musicians, others of actors. A small core of adult LEGO fans see LEGO Designer **Steen Sig Andersen** as their hero.

BY NINA HERMANSEN **PHOTO** NIELS ÅGE SKOVBO

Most LEGO consumers probably never think about who designed a particular model. But for a hard core of adult LEGO fans it is a piece of important and useful information. They meet in clubs – and virtually, on the Internet – to cultivate their shared hobby and idols: LEGO products and LEGO designers.

One of the very big names is LEGO Designer Steen Sig Andersen. He has worked as a designer for the LEGO Group for 28 years. Thousands upon thousands of bricks have been securely pressed into place by his capable hands – and he has designed some of the really large, exclusive models such as the Eiffel Tower and the Volkswagen Beetle. Models, particularly admired by adult LEGO fans.

One reason Steen Sig Andersen is a well-known face is that his picture has been displayed on the box for a product he designed. And adult fans tend to spend a lot of time finding out who the designers behind the models are:

"LEGO designers are popular among fans. It's not that they want to do our job – but through knowing us they hope to find out a little more about what we develop. But, of course, we keep that confidential," says Steen Sig Andersen.

Marvellous job

In addition to meeting in local clubs and in cyberspace, LEGO fans also meet up many times a year for fan events at which they build and exhibit their large creations. Steen Sig Andersen often takes part on behalf of the LEGO Group, and fans know who he is. He is frequently asked for his autograph.

Steen Sig Andersen has a good rapport with the many fans but is careful not to hand out too many of his business cards. He doesn't want his mailbox cluttered up with fan mail:

"It's a rather special situation. It's actually my job. But if fans are happy to get my autograph, then that's fine. I just try to make sure it doesn't escalate. But I do feel very privileged. I have a marvellous job, and I'm lucky to be working with something that fans feel is fantastic!"

When Steen Sig Andersen participates in various events in the fan environment – for example, when fans exhibit their large LEGO models – he is often asked to autograph sets that he has designed.

STRONG RESULTS for the third year running

Although global toy sales generally declined in 2008, the LEGO Group enjoyed growth in almost all countries. The crisis the company experienced a few years back now turns out to have had its advantages.

BY PERNILLE STANBURY PHOTO NIELS ÅGE SKOVBO

A few short years ago the LEGO Group faced a deep crisis – some even questioned whether the old Danish toy company could survive. The crisis is over – this was emphasised once again as Corporate Management announced a billion-kroner profit for the third consecutive year.

Pre-tax profit in 2008 was DKK 1.8 billion (USD 363m) compared with DKK 1.4 billion (USD 279m) the previous year. Sales rose from DKK 8bn (USD 1,584) in 2007 to DKK 9.5bn (USD 1,869m) in 2008.

There are several reasons for this fantastic result. LEGO CEO Jørgen Vig Knudstorp listed a few as he announced the Group's annual results at a media conference at head office in Billund, Denmark, flanked by other members of Corporate Management.

On top of the list

First of all, LEGO bricks have etched themselves so firmly in the minds of children that they put them top of the list when asked what they would like for a present. Secondly, children see the direct connection between video games and the products they build. And when children get the item they asked for, they enjoy such a positive experience that they ask for more LEGO sets for next Christmas or their next birthday. Both children and adults believe the products have been getting even better in recent years.

The company now has a proper grip of its costs – in particular, production and distribution costs for the billions of bricks dispatched from the factories every year. The LEGO Group has also become better at anticipating which products need to be stacked on retail shelves in the last crucial weeks running up to Christmas. With December sales accounting for 40% of the year's total sales, it is absolutely essential that the most sought-after sets are available on retail shelves during that month.

Ready and able for battle

And finally, it has turned out to have been an advantage that the Group had a chance – 4-5 years ago – to "practise" handling a global financial crisis. At times of economic crisis, experts advise companies to concentrate on their core business and cut down on production costs – an exercise the LEGO Group has already been through.

"So even if the financial crisis does have a negative effect on us, we feel we're ready and able for battle even in difficult times," Jørgen Vig Knudstorp told the assembled journalists.

Building wind turbines

Whereas the global toy market declined a little in 2008, the LEGO Group's market share rose from 2.9% to 3.6%.

And – as explained in an article on pages 20-21 – the LEGO Group has no intention of curtailing its plans for the future. Financial crisis or no financial crisis. The strategy for the coming years is growth. As the LEGO CEO puts it:

"In a gale, you can either seek shelter or build a wind turbine. The LEGO Group plans to 'build wind turbines' to benefit from the gale."

The Group's strong annual results for 2008 were announced at a media conference at head office in Billund, Denmark.


LEGO

What's it like having a Mum/Dad who works for the LEGO Group?

It's really cool! When I tell my pals where my Mum works, they're really envious. They think I get lots of LEGO every day – but I don't. But I suppose I do have more than most kids.

I really like going with my Mum to her office – because then I can sit and play with LEGO all day. Or play Indiana Jones or Power Miners on the computer. I think Mum thinks it's fun building LEGO with me – because it's her job!

"I REALLY LIKE GOING WITH MY MUM TO HER OFFICE – BECAUSE THEN I CAN SIT AND PLAY WITH LEGO ALL DAY."

Philip, (age 6), Norway.
Mum: Hege Bakk, Customer Service Advisor.

Key figures (2006-2008)

LEGO Group

(mDKK)	2008	2007	2006
Financial data (mDKK)			
Income Statement:			
Revenue	9,526	8,027	7,798
Expenses	(7,522)	(6,556)	(6,393)
Operating profit before special items	2,004	1,471	1,405
Profit before income tax	1,852	1,414	1,281
Net profit for the year	1,352	1,028	1,290
Balance Sheet:			
Total assets	6,496	6,009	6,907
Equity	2,066	1,679	1,191
Financial ratios (in %):			
Gross margin	66.8	65.0	64.9
Operating margin (ROS)	22.0	18.1	17.0
Return on equity (ROE)	72.2	71.6	147.1
Equity ratio	31.8	27.9	17.2
Non-financial data			
Consumers			
Number of product recalls	0	0	1
Consumer complaint call rate	0.123%	0.124%	0.118%
Net Promoter Score index	120	115	111
Employees			
Number of employees at end of year	7,337	4,723	4,958
Sick leave	3.0%	3.2%	
Injury rate per million work hours	4.4	8.0	8.6
Commitment of employees	77	78	73
Suppliers and customers			
No. of quality audited suppliers	23	8	23
No. of Code of Conduct audited suppliers	18	22	
Overall satisfaction by customers	119	111	107
Environment			
Water consumption, 1,000 m^3	68	92	71
Total energy consumption in production, GWh	108	119	124
Waste, tons	3,057	2,422	4,252

Parentheses denote negative figures.

Find more detailed information in Annual Report 08 and Progress Report 08: **see www.LEGO.com/aboutus**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