

Connecting the Next Billion:

The New Frontier of Upward Mobility

Olli-Pekka Kallasvuo Chief Executive Officer Nokia

With

Jan Chipchase, Nokia Design

&

Frances Linzee Gordon, Lonely Planet

2010 International Consumer Electronics Show

Las Vegas Hilton Theater

Las Vegas

08 January 2010

Olli-Pekka Kallasvuo
International Consumer Electronics Show



Las Vegas 08 January 2009, 09:00-10:00 PST

(Note: Speech as delivered may have deviated slightly from written text)

(Introduction by Karen Chupka, Senior Vice President of Conferences and Events, CEA)

Thank you, Karen. And good morning, everybody!

Every time I see that video, it reminds me why I love this business. Because when you get right down to it, what we do, every day, is enable billions of conversations, billions of connections.

Today people use our devices to connect by voice, by text message, by chat, by email, photo, video and social networks. So the ways we're "Connecting People" keep expanding, but the goal remains the same: to help people everywhere make the most of every moment, of every opportunity.

So, here we are again in Las Vegas – a place where it's easy to find conversations taking place 24 hours a day, including between people and their slot machines.

Vegas, of course, is dedicated to the pursuit of fun and games. It was designed to be an unreal world – a city of escape.

What I want to do this morning is take you to a very different, very real world.

It's the world where most of Earth's inhabitants live. And most of it is about as far from the glitz of the Strip as you can imagine. It's a world in which millions of people face a daily struggle just to survive.

But it's also a world of increasing opportunity and upward mobility. where wealth is being created at an incredible rate, where innovation is thriving, where business opportunities abound, and where the future is brighter than it has ever been.

Mobile communications have played a big role in bringing hope and higher living standards to billions of people. This trend promises to accelerate in the coming decade, as the capabilities of smartphones spread across the globe.

As this new frontier of upward mobility expands, it will open up countless opportunities – not just for the mobile industry, but for a wide range of businesses, content providers, software developers and entrepreneurs.

Before we get to that, I'd like to talk about how we at Nokia look at this world, how we try to understand it, and about the role the simple cell phone has played in opening this new frontier.

When we started out in this business, when Nokia first began using the slogan "Connecting People," it was just about connecting by voice with portable phones.

Back then, just over 20 years ago, "portable" looked like this. This is our classic Mobira Cityman from 1987 – Nokia's first handheld wireless phone. It marked the start of what turned out to be the fastest-spreading technology in history.

Today, our industry estimates there are about 4.6 billion mobile subscriptions among the planet's 6.8 billion people. We're nearing the day when we'll be able to declare the entire world connected.

Our industry's brief history has been a truly remarkable story. It's a story of how innovation and competition continue to improve technology and make it more affordable and more reliable, bringing its many advantages to those who stand to benefit the most.

Of course, as much as we marveled at the Mobira back in 1987, it was a very basic phone.

Today, this is what you and I would consider a very basic phone: the Nokia 1616. By our standards in the West, it's nothing to get worked up about.

But compared to the Mobira? Well, it's sort of like comparing Ford's new Mustang G-T to a Model T!

For developing markets, it's a high-performing model designed specifically to meet their very demanding needs. Of course, this phone makes calls, sends text messages, has an appointment calendar and a color screen. But it also has multiple address books, because in many villages and families, a single phone is shared among several people.

It includes a built-in flashlight, because many of the people who buy it live in places where electricity is unavailable, scarce or unreliable. It has a dust-resistant keypad, making it durable in harsh environments. It has an FM radio, a speaking alarm clock, and an extended-life battery.

Today, farmers in India and Indonesia can use this phone to get the latest information on crops, prices and weather with an application called Nokia Life Tools.

You can use it to learn a second language, or check your horoscope, or get the latest news on your favorite Bollywood stars. And you can load prepaid minutes on this phone as a kind of currency, to send to far-off relatives in need of cash.

The Mobira? It made call, when it could pick up a signal, at a cost of more than a dollar a minute. That's if you could afford its \$6,000 price tag.

Nokia's global scale – combined with our manufacturing and distribution efficiencies – have allowed us to relentlessly drive down the cost of our entry phones to make them more and more affordable to more and more people.

Today, you can buy this phone in India, Africa and China for the equivalent of about \$32. This is what some of us might spend in a week drinking venti lattes at Starbucks.

It also reflects a more than 300 percent drop in the price of our most affordable phone – in just the past five years.

To a tenant farmer in India or a merchant in Kenya, \$32 is substantial – for some it can be more than a month's income. Yet that farmer or merchant will save and pool his money with his friends or neighbors to buy one of these.

Which humbles me – the idea that people who materially have so little, decide to invest their hard-earned money in our products. When you think about it, these are some of the most critical, most discerning consumers on the planet – by necessity: When you have so little money to spend, you tend to be very careful how you spend it.

Perhaps the nearest comparison is when you or I bought our first car. We didn't have much money, but we worked hard, saved up and paid for the car in installments. Owning a car made your life easier, it gave you more freedom, and a certain status.

That's really what a basic mobile phone represents to many people in the world today. But it's even more than that.

The mobile phone is an investment in their livelihood, in a better life. It can increase the owner's income substantially. It opens up the possibility for new kinds of businesses. It allows farmers, fishermen and merchants to avoid middlemen and earn more money for their labor.

Over the past five years, Nokia has sold more than 750 million entry-level phones, similar to this one, mostly in the world's high-growth economies. They have, in fact, become a necessity for upward mobility.

Of course, the rapid spread of this technology in the developing world has occurred in a fundamentally different way, compared with the West.

Modern western telecommunications began with the telegraph and then telephone lines strung across the continent. Access to the Web spread first though PCs over phone lines, then via broadband cable, and now wirelessly.

But across the rest of the world, where there is less of this legacy infrastructure, many people are going wireless first.

Think about it: There's an entire generation of people growing up today who are connected to the rest of the world solely though their mobile device.

(Sound of dial tone)

Many of them have never even heard that sound - the sound of a dial tone - and they probably never will!

Over time, the "public call office" popular in the developing markets is doomed to go the way of the public phone booth here in the West. Likewise, for the majority of the world's people, their first and only access to the Internet will be through a mobile device – not a PC.

And this access is spreading very, very fast. In China, every month more than 7 million people gain access to the Internet for the first time, and mostly on mobile devices. And that's an important point.

While entry phones play a critical role in these markets, the high-growth economies of China and India in particular are seeing rapid growth in sales of smartphones as well.

So how has Nokia succeeded in these economies?

First, we approach all our markets from the point of view that you can do good business, and "do good," at the same time. Our focus on "Connecting People" is inherently about doing good, about bringing people together – it gives us a strong sense of purpose.

We also strive as a company to be a responsible global citizen. Which means giving back, being a leader in promoting sustainability, and truly respecting different cultures.

This is part of what the Nokia brand stands for – and I believe it's one reason why our brand is consistently rated as among the most valuable and trusted in the world.

Nokia is perhaps the most global company on the planet. It was obvious long ago, being based in a Nordic country with about the same population as Minnesota, that we had to look outside our small home market to grow. Which meant we needed to really understand every market we entered.

Business people often tend to lump all of the growing countries outside the West into one category. They call them "developing countries," "emerging countries" or "emerging markets." In most cases today, those labels are a bit out of date. I mean, is there any doubt the economies of China and India have emerged?

Each of these markets is uniquely different and complex. A one-size-fits-all approach just doesn't work.

For years, Nokia has had teams working around the world to develop a deep understanding of people, cultures and markets. We take this understanding very seriously – we try to never stop learning.

Now, I'd now like to bring on stage a guy whose job is to visit those places and essentially serve as our cultural anthropologist. Jan Chipchase has worked for Nokia for nine years, traveling to the far corners of the Earth to help us understand how people live and how mobile phones might help them live better.

I like to think of him as "Nokia's Indiana Jones," and he may also be the only Nokia employee with more frequent flyer miles than me!

Please welcome, Jan Chipchase...

(Jan Chipchase, Nokia Design)

Thank you, OPK. And good morning everyone!

I work out of one of Nokia's five global design studios. My job is to identify new opportunities for the company, and help our teams understand both the similarities and differences between cultures.

The timeframe that I'm interested in ranges from now to about 15 years ahead of the market. So if you think of this dot as now, I spend my time exploring this fuzzy, unknown space out here, where there are any number of possible outcomes.

Some people describe this space as being a cone of uncertainty. But like many of you, I think of it more as a cone of opportunity – a place where the future is constantly being invented and reinvented.

And whilst this is the headspace in which I operate, my physical office looks like this.

Most people expect to find cutting-edge technology use in cities like Tokyo or San Francisco. We do run research in these places, but we've increasingly turned to places like Brazil, Ghana and China for inspiration on how the future will turn out.

These nations have a growing middle class, but also support large populations living near the poverty line. They live in communities that often don't appear on a map, and have limited access to many of the resources you and I take for granted.

Every company talks about putting customers at the center of what they do. I'd like to give you an idea what this means for Nokia.

Each of these dots represents months of teamwork to prepare and run field studies, from conducting background desk research to hiring local experts and guides.

For example, we might head to Kampala to understand the very basic human motivations behind why people share, or look at more practical issues, such as how people who can't read and write are using our products in India.

The driving principle behind the research is that we learn the most by being in the contexts in which people do the things they do. So, if we are interested in commuting habits in India, we need to be able to have a team on the ground that is capable of gathering data through careful observations, interviews the collection of photos and videos.

The logistical issues are interesting enough. But the most challenging aspect of the work really is the moral questions that it raises: How do you conduct the research in such a way that shows sufficient respect to the individuals and the communities?

And, fundamentally, as representatives of a large global company, do we even have the right to be there?

This is not a question we've taken lightly, and over the years we've developed and refined a suite of methods to do this with the sensitivity that it requires.

Let me give you some examples of what we've looking for and the kinds of questions that it raises.

This room is a home for a family of four, living in Dharavi, a neighborhood in Mumbai, India.

A simple question: How does the mother save for her children's schooling when she doesn't have a secure place to store her money, and there's always someone looking for a handout?

The UN estimates there are around 800 million illiterate people world wide, many of whom are already our customers. Bearing in mind all phones have textual interfaces, how do people who can't read and write navigate a world of words and numbers? And how does this change the kinds of designs targeting these customers?

Increasingly we're finding innovation at the edges of "the grid."

Simple question: How do you keep your devices charged if you don't have direct access to the electrical grid? This is how they do it in rural Uganda ... and here's a charging station in Kampala.

These kinds of grassroots solutions to local problems are becoming increasingly sophisticated. Last year in Ghana we came across this hardware hack that allows two SIM cards to be placed into one SIM card slot. You put this in your phone and it allows you to switch dynamically between two operators.

Many business models are dependent on containing customers within a walled garden. What happens at the grassroots level when they find ways to break out?

This gentleman and his laptop are from a market in Delhi, India. You hand him your memory card and for a small fee he'll upload whatever content or applications you want.

A bunch of companies, including Nokia, have launched app stores with great fanfare. As far as I'm concerned, we're playing catch-up with these "corner shop" app stores.

What does it take to compete with this? What kind of service is more convenient for these consumers, and can create a win-win for operators and the content providers?

A couple of years ago I was traveling through Ulan Bataar, Mongolia. It was in the middle of winter and was bitterly cold, and these guys kindly invited me into their monastery. As soon as we're inside, they both fish out their mobile phones. The guy on the right has taken my phone, has switched on Bluetooth and is datamining it for interesting content.

What surprised me what not just the level of technical literacy but that he actually owned a recently released phone that was considered a high-fashion statement in London or Milan.

It's a very simple lesson, but worth articulating: Once objects become small enough to fit in a pocket, they rapidly find their way to the four corners of the globe.

Any manufacturer or service provider who wants to compete in this space is competing with the best in the world – because that is now the benchmark for local consumers.

What I like about these examples is that they challenge our assumptions about what we think we know about our customers, and what it is we are designing. They open our eyes to the vibrancy, ingenuity and innovation that exist in these markets, they show us the potential of what is possible.

You might imagine that after all this travel I'd like to put my feet up at home. But to unwind, I like to go to the places that don't fit easily with my day job.

So, in the past year, I headed up to the remote mountainous regions in the west of China to better understand the use of communication tools there. I've just returned from Afghanistan, where I've been scouting new potential projects.

My hunch is that Afghanistan's unique culture, this moment in its history and the very limited infrastructure make it ideal for exploring some of the new mobile services that our researchers are studying. People around the world have shown us that adversity and scarcity lead to real innovation.

People in some of the world's most remote and poorest countries have inspired us and amazed us. They know what they need and they find ways to make it happen.

To be prepared for our future, we all need to listen, think and not jump to conclusions about our customers.

Do that and you have a good chance of making your business succeed and, even more importantly, improving people's lives in ways both large and small.

Thank you.

(Mr. Kallasvuo)

Thank you, Jan. Not only are you a cultural anthropologist, you're also an amazing photographer.

We at Nokia have known for years about the difference mobile communications can make in the lives of people around the world. But we had not really talked about it much.

You see, even though we are a truly global company, our roots remain in Finland. And we Finns are by nature modest – perhaps too modest for our own good!

So in an effort to get the word out more widely, we invited Lonely Planet – the largest travel publisher in the world – to investigate the impact of mobile communications for themselves.

Lonely Planet and its team of writers have a great reputation for giving independent, impartial travel advice. We gave them complete editorial freedom to draw their own conclusions.

What resulted was the "Progress Project," a series of short videos that show how people's lives are being improved though this technology. Let's take a look at scenes from two of the videos, which show how "Nokia Life Tools" and an application called "TEJ" are making a difference in India.

(Video)

You can see how this technology is truly improving people's lives. And here to tell us more from her personal perspective, I'm pleased to introduce the host of the Progress videos, welcome travel journalist Frances Linzee Gordon ...

(Frances Linzee Gordon, Lonely Planet)

Thank you, Olli-Pekka. Good morning, everyone.

Have you ever noticed if you ask anyone about their best vacation, chances are they'll tell you all about the people they met, not necessarily the places they've been?

As a travel journalist, I'm no different. My best memories all involve people.

I believe passionately that good travel journalism is not about the museums, monuments or tourist attractions. Rather, it's about the people.

The minute you connect with people, you begin to truly step into that country and culture – and only then can you begin to write good guidebooks or make good travel films.

This is what ultimately attracted me to the Progress Project – it was all about people.

However, when Nokia and Lonely Planet first approached me to do this project, I have to say, I was less than enthusiastic.

I've worked as a Lonely Planet journalist, photographer, presenter and speaker for nearly 15 years. Lonely Planet prides itself on giving impartial, objective and independent advice. What I love about working for the company is the complete freedom it gives its writers. They leave it up to us to make up our own minds about things.

So we made it clear to Nokia that we were happy to collaborate on this project, but we ultimately would make up our own minds about it.

And I know this probably is the worst place to admit this, but I am not a gadget girl. I'm certainly not a tech geek! Yet, here was a project that basically involved interviewing people around the world about how they use their mobile phones.

But one of the things I love about travel is how it broadens your perspective, and how it can shatter your misconceptions – something I'm sure many of you have discovered for yourselves.

My first misconception about this project was that Progress was merely about technology. In fact, it was really all about people – as you've just seen in the videos. How people use mobile devices to improve their health, wealth, business and education.

My second misconception? Before this project, like a lot of people, I didn't appreciate the potential for a global company to be a force for good. In Nokia's case, it wasn't just their tremendous global reach. It was also their commitment to innovation and development.

I was astonished to read in a recent BBC article that Nokia has spent more than \$40 billion in the last two decades on research and development alone!

My third misconception, and I'm sure none of you share this one, was that a mobile phones was just a mobile phone. That's no longer true, of course. As Olli-Pekka noted, even the most basic ones today are capable of performing highly complex tasks.

They even have the potential to save lives, as they have done in the fight against disease in Brazil, where we shot a video on the Nokia Data Gathering program.

This program uses mobile devices to map the spread of diseases in real time, pinpointing areas where outbreaks are occurring and help is most needed. In this way, health authorities can prevent the outbreak of epidemics that can kill hundreds or thousands of people every year.

In the past, their efforts were hampered by the geography, lack of funding and manpower. Using Nokia Data Gathering, alerts can be sent out and information from remote areas can be transmitted back to the authorities instantly.

An epidemiologist I spoke to said the incidence of dengue fever had dropped in the last year by 93 percent, thanks in part to Nokia Data Gathering.

So mobile phones can improve the well-being not just of individuals, but the collective well-being of entire

regions, countries and continents. We're talking here about global implications.

What utterly fascinates me about this project is the sociological phenomenon it is generating. It is no

exaggeration to say: Something of a social revolution is unfolding around us.

Mobile phone technology is allowing people to overcome environmental difficulties and obstacles, to rise

above their social status and conditions, and to empower themselves by themselves.

In Nokia Tej, the local businessmen can cut through India's legendary bureaucracy and paper trail using an

application tailored especially to them. Saving hours in a day, they are able to concentrate on what they're

good at: Simply getting on with business.

The farmers using Nokia Life Tools can leap-frog the politicians to bring about their own development of their

own land. One of the last people you saw in the video was Datatari, the delightful farmer who owned just four

hectares of onion fields in western India.

When we said goodbye, I teased him that when I returned he would have made his fortune. He laughed, but

you could see in his eyes, he believed he could.

And you know what? With his tremendous will and his tools he had in hand, we all believed he could, too.

Interestingly, these are the very two things that sociologists say are required for human progress: The will,

and the means. There's no question in my mind of the will of the wonderful people I met while filming the

Progress Project.

Just imagine what good can be done with the billions that Nokia spends on research and development plus

the combined R&D investment of all the companies here at CES!

With the will and the means, I suggest: It's up to us to get it done.

Thank you.

(Mr. Kallasvuo)

Thank you, Frances.

Not long ago, people who spoke about mobile communications at conferences like this predicted mobile

devices would soon bridge the digital gap and bring the Internet to emerging markets. I was one of them!

In reality, it hasn't happened as fast as some of us expected – largely because of the lack of infrastructure.

One way Nokia is getting around this is by adapting services to the local infrastructure, and trying to reduce any barriers to customers. In reality, the lack of 3G technology in many of these parts of the world is not a barrier to offering modern mobile services.

For example, we deliver services and information from the Internet via S-M-S, the common technology for text messaging.

SMS offers a way to provide mobile apps to basic cell phones. It also is an inexpensive solution in areas without data coverage, or where data plans are too costly.

A good example of using SMS technology is Nokia Life Tools. Another is a series of services being codeveloped by the Nokia Research Center in Palo Alto and our local research team in Bangalore, India. They are designed to be culturally in tune with the way people tend to navigate in India's crowded cities.

Most basic phones in that part of the world don't come equipped with GPS navigation capability. So rather than using GPS to determine coordinates on a digital map, we use SMS to map a city based on the location of cell towers and neighborhoods.

While the result is not always as precise as GPS, it's solid enough to provide some surprisingly useful services. One such service is called "M-Bazaar."

It's like a mobile Craigslist or e-Bay, but targeted at developing markets, where classified ads don't really exist. Sellers post items or services for sale, which are linked to their location. Buyers subscribe to the service for the type of product or service they want. The program finds matches and delivers them by text message.

For the first time, workers in the services trades can reach out digitally to a larger audience of customers looking for what they sell, rather than just relying on word of mouth to advertise their services.

Such simple technologies can make a real difference to people's lives. But it is not always about keeping in touch, or finding potential customers.

We all know cell phones can be used to buy goods and services. But in areas where banks and ATM's don't exist or are few and far between, imagine the benefits of using your phone to pay bills and transfer money.

We all take banks for granted. But here is a statistic that shocked me the first time I heard it: While there are nearly 4.6 billion mobile phone subscriptions in the world today, there are only about 1.6 billion bank accounts. Which means much of the world still has very limited access to basic financial services. So there's tremendous potential in mobile banking, for literally billions of people.

It means people don't have to travel miles or wait for hours in line at the nearest bank or post office. It means they can securely manage their money anywhere, and get paid quickly.

Last year, we introduced "Nokia Money," a service to deliver basic mobile financial services on a global scale. We're bringing together the carriers, regulators, merchants, bankers, and other device manufacturers to strengthen the necessary infrastructure.

We believe it will be more successful if it is not tied to a single bank, a single carrier or a single country. By working together with pioneering companies like California's Obopay, Nokia Money will launch commercially during the first half of this year.

Another area where we are growing Nokia's services ecosystem is e-mail. Now I know email is not something that generates much excitement today.

But here's another statistic which might surprise you: nearly 75 percent of the world's population still has no access to e-mail. 75 percent!

Most of us in the developed world approach email today as something of a necessary evil – especially when our inbox is stuffed, or our mother is sending us another video of a dancing kitten from the web.

But imagine your life without it. We now accept it as a basic communications tool, no less vital to our daily lives than our phone.

Now imagine someone in China or Africa who is gaining access to email for the first time, how it will improve their efficiency and ability to connect with others. What's making this scenario increasingly possible? People no longer need a PC to sign up and use email.

Using our Ovi Mail service, people around the world are now able to sign up for a free email account in a couple of minutes when they set up their new Nokia phone.

In just a year, we signed up more than 5 million Ovi Mail accounts, exceeding the first-year user total for Gmail, Yahoo Mail and Hotmail. The top countries for Ovi mail are China, India, Vietnam, Indonesia and Chile.

As I said, there are huge opportunities to accelerate development in the growth markets. This is particularly true for software developers. The developer community is focused today on smartphones and apps here in the West – and for good reason.

But in addition, there are big long-term opportunities in the developing markets as well, given their sheer size. As our efforts to "democratize the smartphone" begin to pay off – that is, as smartphone features are driven into the lower price segments – the potential is staggering.

Which means demand for applications is growing as well. But this should not blind us to the huge, largely untapped market for apps and services for the less affluent in these economies. In looking at these markets, you have to think in terms of multiples that we're not used to thinking of in the West.

While a service like Nokia Life Tools may cost the customer only a dollar a month, when you multiply that dollar by several hundred million customers, you begin to appreciate the potential.

Nokia has been working hard to build up our legion of developers globally. In China alone, we already have 300,000 developers working with Nokia on applications and services. They understand the potential of the Nokia ecosystem.

For developers here in North America, Nokia and the Symbian operating system are a prime "export channel" that gives them potential access to our 1.2 billion customers around the world.

A developer today in Palo Alto can come up with an idea, push it out through Nokia's Ovi Store, and in an hour people around the world can be downloading it.

I mentioned earlier that Nokia operates from the philosophy that you can do good business and "do good" at the same time. And that particularly applies to what we are doing in the world's developing economies.

For the past two years, Nokia has run a competition aimed at developers around the world. It's called "Calling All Innovators," and its aim is to inspire the imagination of developers to make a difference through mobile communications. The theme for this year's competition is "Generating Apps That Make a Difference."

We want to encourage our developer community to create locally relevant apps and services that not only expand how mobile devices can be used – but also improve people's lives.

This year we're happy to have a new partner for "Calling All Innovators" – Sesame Street. Sesame Street already brings its great brand of quality educational programming to 125 countries worldwide, including many in the markets we've been discussing here today.

We're convinced that "Calling All Innovators" is a great way for us to help Sesame Street create educational apps for developing markets, and reach children around the world who are most in need.

I hope we've sparked your interest in the developing economies and maybe inspired you to think how your expertise or business could contribute. Because I firmly believe that we have only scratched the surface of the potential to do good business and "do good" in these parts of the world.

So to conclude this morning, I want to make a significant announcement. I want to put our money where our mouth is.

I'm pleased to announce – as part of the "Calling All Innovators" competition – the first "Nokia Growth Economy Venture Challenge."

We're challenging developers and innovators around the world to take action. We want you to come up with new and innovative ways to help people and promote upward mobility around the world.

To encourage that, the winner will receive a \$1 million investment from Nokia. And I stress the word "investment."

It's an investment aimed at creating a strong, vibrant business that will also improve people's lives.

We've seen what the tech community can do when it focuses on problems that are also opportunities. We want to channel that energy toward improving lives in the developing world.

The idea can involve a hardware, software or service opportunity, but it must clearly warrant a \$1 million investment. And it must be aimed at areas of the world where the average daily income is less than \$5 a day.

Details of the Growth Economy Venture Challenge are available on this website. We plan to announce the winner in June.

I can't tell you how excited I am to be able to do this and to see what amazing ideas result from this challenge. Because this clearly is one of those opportunities to do good business, and "do good."

Ladies and gentlemen, in the real world, far away from here, these little devices already have done more to improve lives at the base of society's pyramid than perhaps any technology in history.

Billions of conversations, billions of connections, every single day. We're connecting people on a scale unimaginable back when we started out in this business.

Our entire industry should be incredibly proud of the role it has played in opening up this new frontier of upward mobility. It's a great story, a story of how technology has improved, and continues to improve people's lives.

The exciting thing is, we've only just begun.

Thank you.

###