


CONNECTING PEOPLE: THE TRANSFORMATIVE POWER OF 5G



Dr. Volker Ziegler

Head of B5G Leadership at Nokia Bell Labs

Dr. Volker Ziegler has lead the Nokia end-to-end 5G program from its inception until the end of 2018 and has served as Head of 5G Leadership and Chief Architect of Nokia Mobile Networks. Volker played a key role in defining Nokia e2e 5G offering and positioning Nokia strongly in 5G and associated innovation, technologies and architecture. He is currently transitioning into a new role on B5G leadership with Nokia Bell Labs, the industrial research and scientific development arm of Nokia; he is designated to lead Nokia digital transformation initiatives aimed at exploring and leveraging innovations with partners in the ecosystem for the Beyond 5G era. Mr. Ziegler has more than 25 years of international experience in the telecommunications industry and is renowned for his strong leadership skills, his great focus on creating new opportunities and business development impact.



There is nothing wrong in being curious about emerging technologies and their application areas, but innovation should always be driven by user experience”



Digital transformation will have a definitive impact across the spectrum of consumers, enterprises well as society at large. For consumers, digital transformation will be all about user experience in dimensions such as virtual and augmented reality, haptics and infinite bandwidth. For operators and enterprise, it will reduce costs significantly and facilitate optimizations of operations and allow faster time-to-market. With enhanced connectivity we can achieve better services, more and new business but also better quality of life for connected consumers. For instance, this is about how people and things can be intelligently connected in cities where automated transportation promises higher safety and better efficiency. One of the major contributors to this transformational journey will be end-to-end connectivity enabled by 5G. I believe that the overall potential of enterprise market opportunities for Digital Service Providers will grow by at least three times in the next five years leveraging the e2e 5G transformational technologies and associated performance attributes.

CHARACTERISTICS OF TRANSFORMATIVE TECHNOLOGIES



Low Latency



High Reliability



Network Slicing



Automation

5G and Software-of-Everything

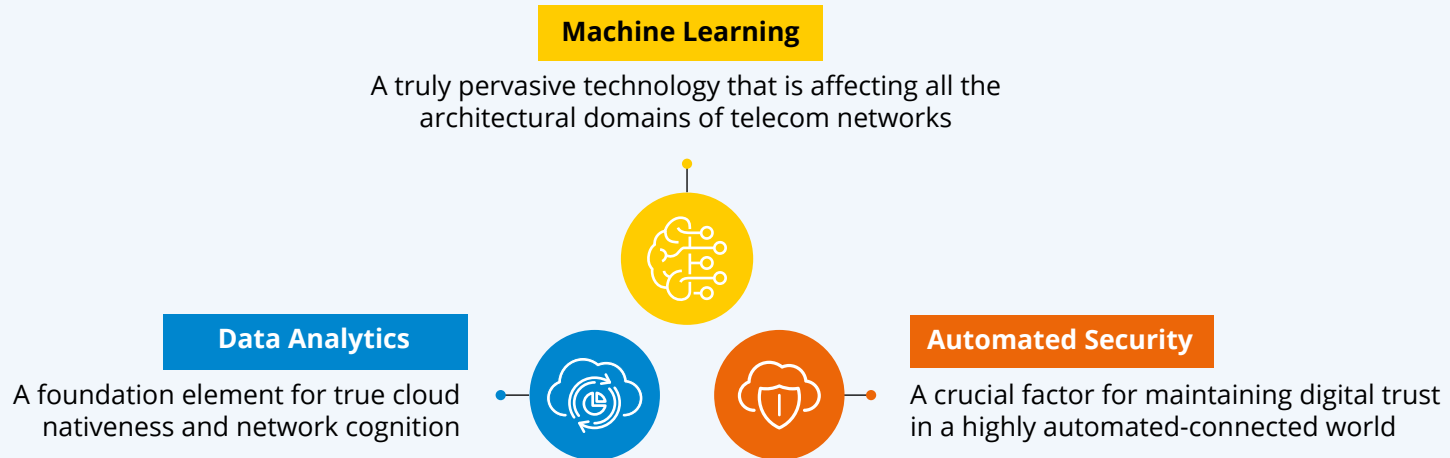
The primary reason for this transformational opportunity arising from digital technologies is the shift towards software centric products which create means of flexibility that were simply not available in the past. For instance, AI powered Software-Defined Networking (SDN) will propel automated behaviours that will dynamically optimize networks and services built on top of the distributed cloud architecture. These micro service architectures are truly changing the development and operations paradigm and driving them towards continuous integration and delivery. These are profound shifts that are changing how we serve our customers and the way we work across the product lifecycle; right from design and manufacturing, distribution, services and even disposal, which can be argued in the case of physical products like a base station.

When I look back at my leadership role with Nokia in the last three years, I think the most exciting element of change has obviously been about digital initiatives in conjunction with end-to-end 5G. We have come a long way in terms of truly leveraging a very broad architecture vision for the 5G evolution and beyond – we call it Future X.

Impact of new-age technologies

I believe, the most significant elements driving change in modern-day industrial ecosystem are automation, continuous integration & delivery and emerging technologies such as Machine Learning, Data Analytics, Cloud as well as Security. All of these are playing a very important role in enabling this change.

IMPACT OF NEW-AGE TECHNOLOGIES



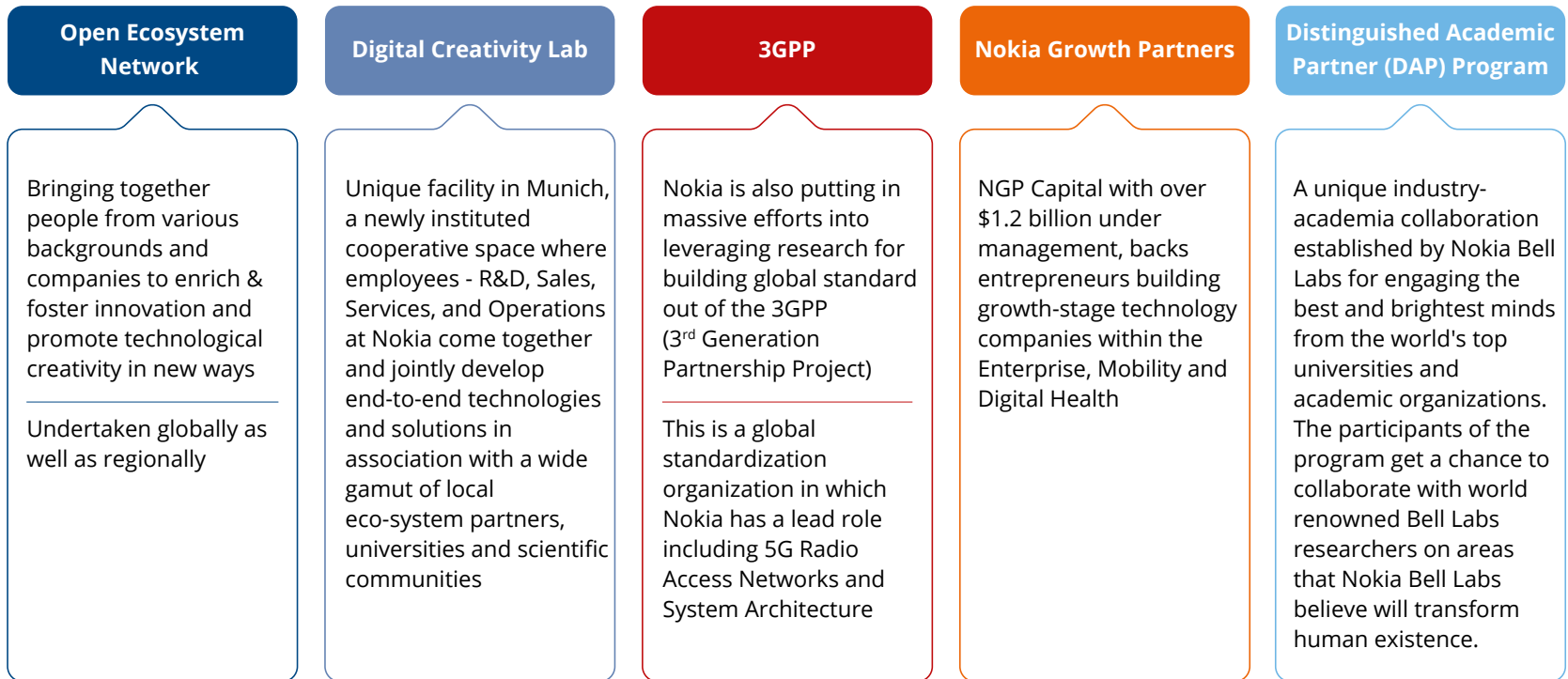
Technology is enticing but it should be the right fit

It happens often that in the race to be the most innovative enterprise and breaking new technology into the market, companies get euphoric and carried away. While there is nothing wrong in being inquisitive, innovation should always be driven by user requirements. I believe that the right approach for new technology implementation is understanding the problems organisations are trying to solve for the customers. That is how big enterprises frame problem statements which often define their success and longevity.

Woing partners, outside and within

Engaging partners, outside and within is key in today's digitally connected world, interdependence is compelling enterprises to partner across the ecosystem to foster innovation and drive change. In this respect, I believe, Nokia is a trendsetter because of its open nature of operations. This clarity is not just confined to the up-to-date technological developments like open API but also from the purview of collaborating and co-innovating with various companies big and small.

NOKIA'S ECOSYSTEM ENGAGEMENT MODEL









Developing culture of openness among employees



Apart from collaborating externally, another major facet of successful digital transformation is the buy-in from employees for adopting and driving digital change. One of the major reasons that I believe Nokia has been able to transform itself and lead the change is due to its core values of renewal and challenge.

So, essentially, it's the passion to do something new that brings about change but more importantly it is about living the

mentioned values to their core. And it is critical for people in executive or leadership roles to act in line with these values to ensure their effective adoption across the organization. And while hiring candidates with cutting-edge skill sets is important, I think inherent capabilities such as motivation for constant & agile learning and deep emotional intelligence for working together are also factors that should be considered. A crucial focus for business success in the 21st century is about how companies work with people (employees, customers, partners and peers) alike to achieve success together. And success will depend on open minded people, well connected and ready to shape the dynamic opportunities of an ever changing world - with 5G, the next industrial revolution is on.

What you (probably) didn't know about Dr. Volker Ziegler

-  **My Favorite Book**
The Future X Network: A Bell Labs Perspective by Marcus K Weldon
-  **Tech I'm betting on**
5G
-  **My Decisions: Gut or Hard Analytics**
30-70
-  **My key message for young engineers**
Aim high, focus on customer, Achieve together
-  **To think out of the box**
Meditate, Exercise, Playing Music
-  **My favourite characteristic in a leader**
Passion for creativity but also the commitment to deliver

 **Diversity is the force behind developing the best ideas. And emerging markets are very important for fast-tracking digital innovation and recruiting the best talent. In this context, India particularly is a high growth market.** 

Dr. Volker Ziegler on impact of Digital Engineering

Impact of Digital technologies on R&D or product development



Your role evolution due to digital initiatives



Employee adoption of digital learnings



Given Rating



Average rating amongst interviewees

1 Lowest

5 Highest