# LOOKING AHEAD

ENSO FORESIGHT 2021 START TO BUILD YOUR COMPANY'S FUTURE NOW!





### LOOKING AHEAD: TECHNOLOGY TRENDS DRIVING DIGITAL INNOVATION

NTT DATA R&D experts are continuously analysing real-world case studies and various sources to identify the most significant technology and societal trends that we believe will drive change over the next three to ten years. The Information Society Trends provide our perspective on the evolution of society and business. The Technology Trends summarise our views on innovative technologies and their impact on the world.

### **INFORMATION SOCIETY TRENDS**



### <sup>IST</sup>01

#### Growth of a Seamless World

IT will become seamlessly woven into all facets of people's lives, with online and physical activities valued equally. In this "online-first society", people, companies and governments will realize the value in blending these activities to improve productivity, solve social problems, develop disruptive scientific solutions and maximize growth.

**TECHNOLOGY TRENDS** 

The Transformative Power of AI

TT**01** 

™02

**Π03** 

**™04** 

The continuing growth of AI has led to advancements in increased model size and performance. These innovations are being applied to commodity AI research. Technologies supporting new AI uses will emerge, including efforts to improve learning data preparation. AI will evolve from a purpose-built tool to a broader exploratory technology.

The Complication of IT Infrastructure

As AI dramatically increases hardware and

network performance requirements, it is driving

designs. In supporting these challenging inno-

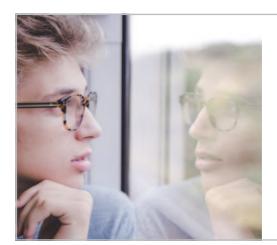
vations, cloud service providers will develop

expertise and lead the way on best practices.

innovations in miniaturization, new materials

and processing methods - and a move to

purpose-built, software-specific hardware







### IST **02**

#### Individual-Centered Design

Competition will drive service providers to deliver tailored experiences based on each customer's context, time and location. This trend toward personalization will come into conflict with online user privacy and security concerns. Service providers will have to address these personal-ID issues to enable personalization while protecting users' privacy.



### Software-Driven Evolution

Competition among service providers will focus on delivering differentiated customer experiences through software. Manufacturers will rely on software to increase product value and accelerate deployment. Accordingly, companies will seek AI tools to increase productivity and new organizational structures to drive continuous improvement.





## IST **03**

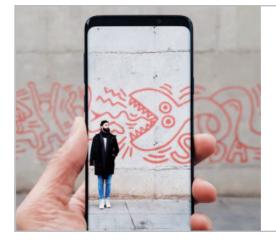
#### Forge New Norms

IT and society will come into conflict, as the pace of technology adoption outruns efforts to solve issues that may arise from it. Al-related issues and growing online crime will endanger technological enhancements. Service providers will need to build trust by collaborating with governments to establish and implement new norms.



#### The Growth of Consolidated Data

Data collection and analysis are essential for effective planning and decision-making in an increasingly data-driven society. As this trend accelerates, technologies that integrate data and perform cross-sectional analysis will improve, as will technological counter-measures to protect privacy.



PICTURE CREDITS / Title: Edryc James P. Binoya / IST01: Barbara Zandoval / IST02: Christian Wiediger / IST03: Swapnil Dwivedi / TT01: Reinaldo Kevin / TT02: Jakob Owens / TT03: Alvaro Reyes / TT04: Lina Trochez / TT05: Laurenz Kleinheider / TT06: Dose Media / TT07: Luis Quintero / TT08: Martin Widenka



# Simulation Takes on New Challenges

IT-based simulation has become increasingly accurate, expanding its application in automobile design, drug development and other fields. Al will make it easier for simulations to mimic reality while helping reduce calculations. Finally, by supporting the discovery of new materials and proteins, Al will enable new paths in research and development.



#### **Distance Accelerates Automation**

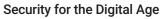
Technologies that capture human work and automate those tasks are proven to increase productivity for remote workers. By enabling AI to learn as an apprentice does by observing a master – and eliminating the need for stepby-step programming – these technologies are bringing AI to new applications and automation opportunities.



#### Synergy in Human-Machine Systems

Pervasive AI is redefining the relationship between humans and machines. Humanmachine synergy in systems driven by AI will create added value. For example, AI may offer safer driving for unanticipated dangers in vehicles, but humans can provide the flexibility needed to adapt in changing conditions.





Given the limitless application of data, its protection is being re-engineered. On top of traditional protection methods, organizations are implementing zero-trust security measures to counteract breaches quicker and to minimise damages. Business leaders are also adopting privacy protection technologies to keep individual data anonymous.

# FROM PAPER TO DEFINITIVE ACTION

"If you do not change direction, you may end up where you are heading" Lao Tzu, Chinese philosopher.

But to remain a profitable and sustainable business, which direction should you take? Set your course to your desired future with one of our foresight formats, that we have developed in our co-creation and innovation space "Ensō – The Space for Creators".

#### Ensō Foresight Workshop MICRO

Spend half a day with us and let us dive deep into 1-2 selected foresight topics, full of interesting insights, interactive parts and great discussions.

# Ensō Foresight Workshop MEGA

In one full day, we will deep dive into 4-5 selected foresight topics, make the topics tangible by showing live demos and give you some tips on experimenting with latest technology on your own. In several interactive sessions, we will work together on tackling challenges and creating solutions that work first time.

### Ensō Foresight Workshop GIGA

If you spend two days with us, you will gain insights into the future of society, generating an understanding of your future customers. Using a human-centered design approach, you will build visions for your products and services while getting to know relevant technology by trying out demos in a "Tech Fun Fair".

### Ensō Foresight Keynote

With a keynote speech, we can give many people new insights and impulses to use in a short amount of time. Using stunning presentations and high-quality visualizations, we make it easy for people to follow and to keep the key aspects in their minds during their daily life.







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