



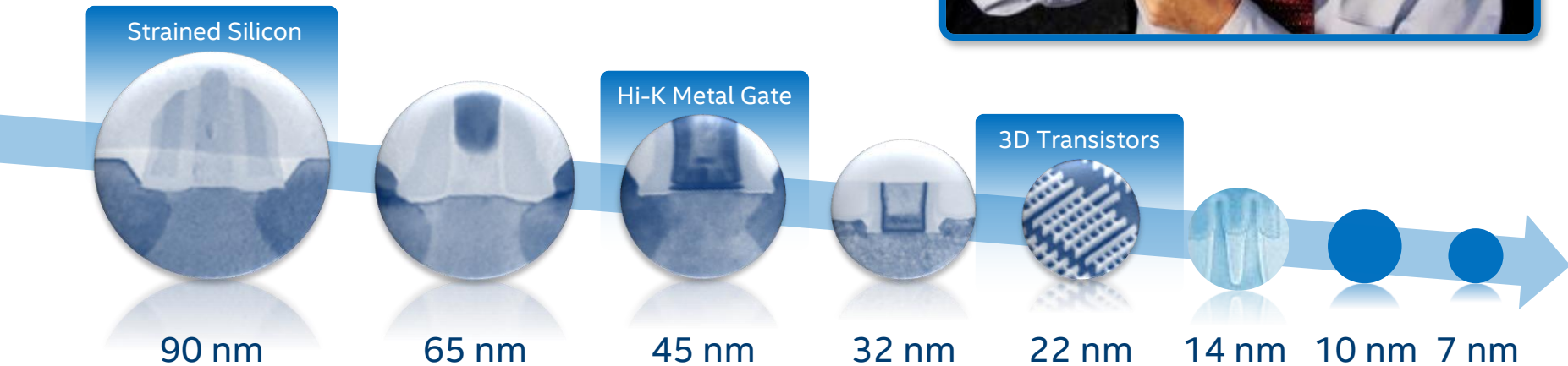
# BIG DATA MADE EASIER INNOVATION @INTEL

**Peter Gleissner**

Vice President, Sales and Marketing Group  
General Manager, European Union Region

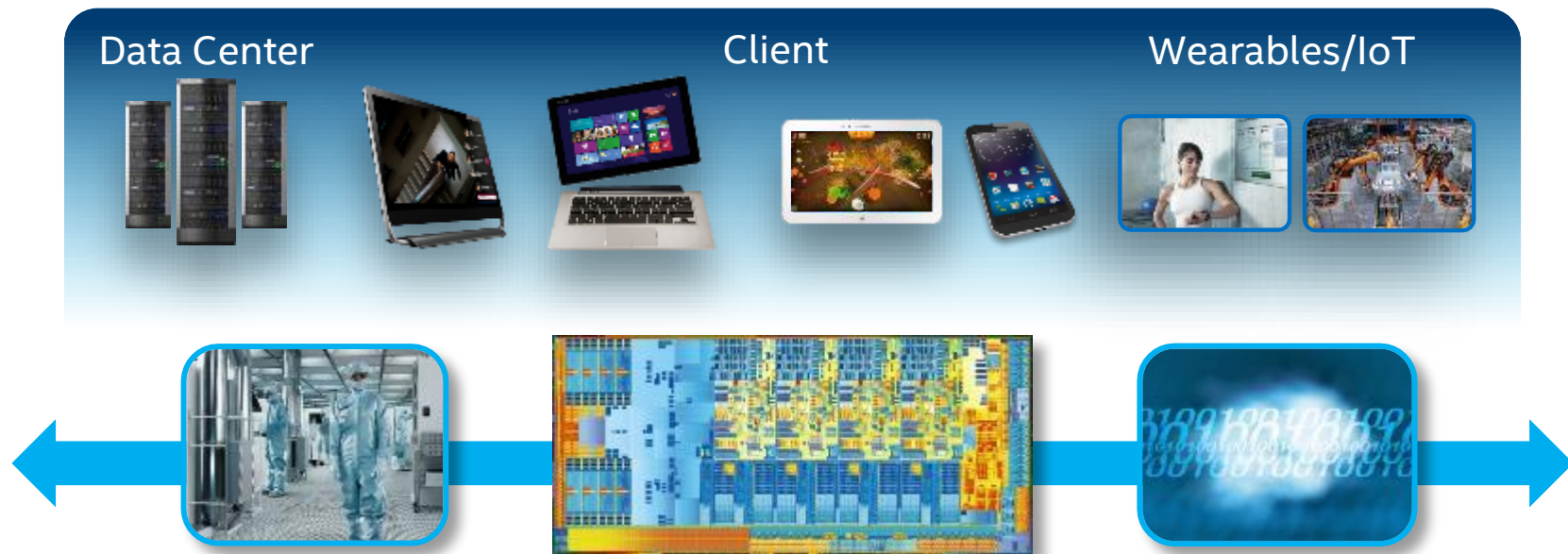
# Predictable Silicon Track Record Executing to Moore's Law **50TH ANNIVERSARY 2015**

*Enabling new devices with higher  
functionality and complexity while  
controlling power, cost, and size*

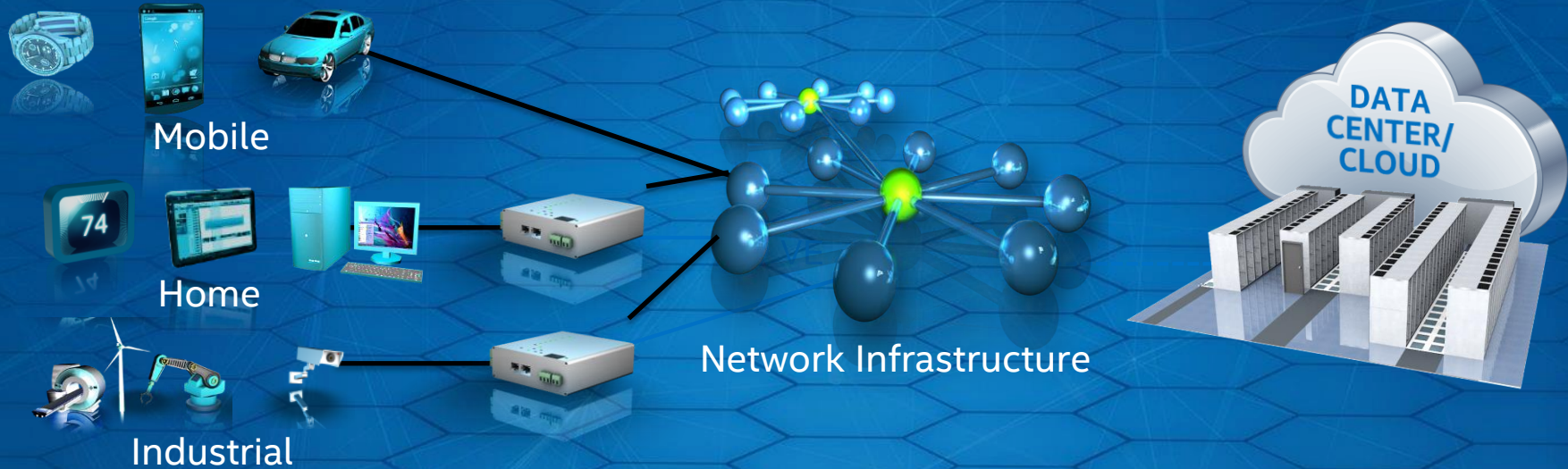


# INTEL'S VISION

*If it is smart and connected, it is best with Intel.*



# The *INTERNET* of *THINGS* will Energize the European Digital Economy



**PERVASIVE  
COMPUTE**

**UBIQUITOUS  
CONNECTIVITY**

**BIG DATA AND  
ANALYTICS**







Energy Needs



Manage Natural  
Resources



Secure Cyberspace  
& Internet



Population movement to  
Cities



Engineer Better  
Medicines



Advance Health  
Informatics



Resilient Urban  
Environment



Rise of the  
Machines



Advance Personalized  
Learning



Advance Virtual  
Reality



Reverse Engineer  
the Brain



Rapidly Aging Global  
Population

# HOW DO WE GET MORE INSIGHT?



Predictive Analytics:  
*e.g. Forecast demand for products  
and services*

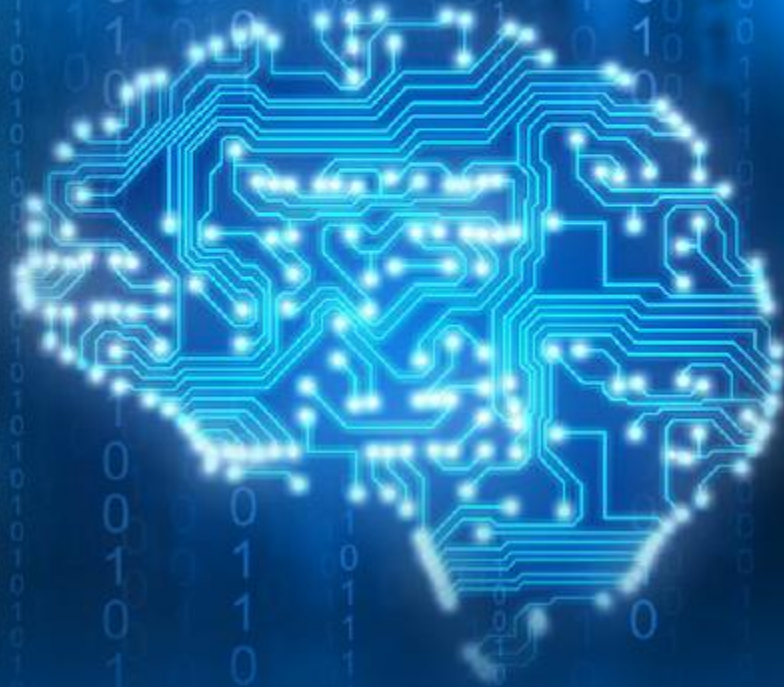


Simulation:  
*e.g. Improve and accelerate product  
design, better finance risk modeling*



In-Memory Analytics:  
*e.g. Real Time inventory/financial  
decisions*





Together We Are on  
the Path to Achieving  
Breakthroughs

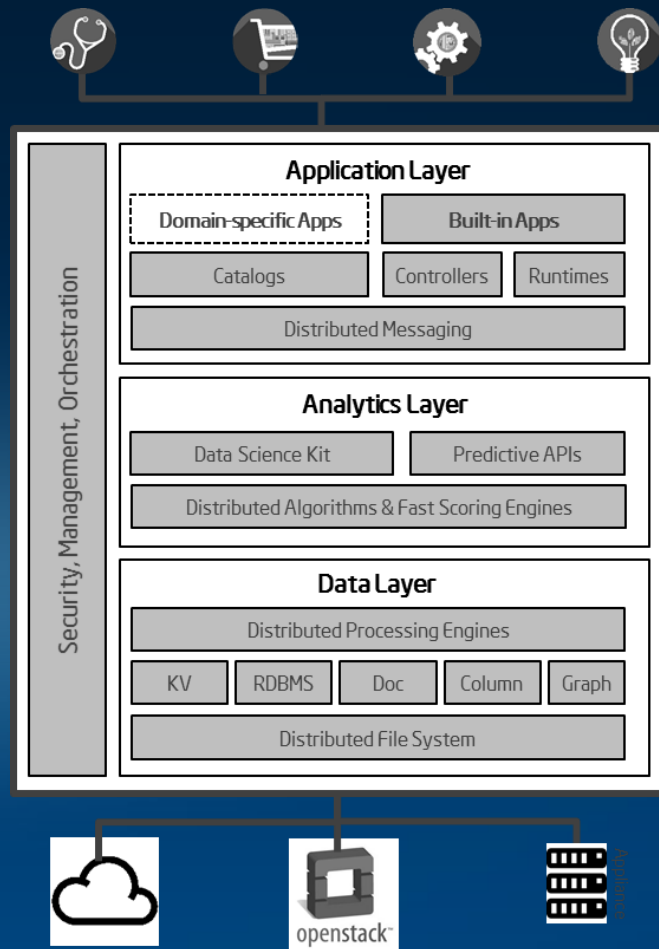
# TRUSTED ANALYTICS PLATFORM

Open source software project that accelerates creation of **cloud native apps** driven by **big data analytics**.



TAP makes it easier for **developers** to **collaborate** with **data scientists** by providing a shared environment for advanced analytics on big data.

[trustedanalytics.org](https://trustedanalytics.org)





# DELIVERING REAL WORLD BIG DATA DEPLOYMENTS



Established a big data lab in Europe to deliver real-world trials at the Teratec science and technology park near Paris.

Incorporating innovative capabilities together with partners to unlock intelligence from big data.

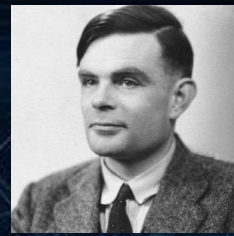


# Pathfinding: Aligned Research



Bringing together researchers and developers to jointly mature technologies for inclusion in a product intercept

# THE ALAN TURING INSTITUTE & INTEL JOIN FORCES ON BIG DATA



THE ALAN  
TURING  
INSTITUTE

*"It looks like a winner all round; as well as all the big data stuff, the duo will also take on a number of students and lead them through the Alan Turing Institute's doctoral programme"*

**EPSRC**  
Engineering and Physical Sciences  
Research Council

 **THE UNIVERSITY  
of EDINBURGH**

  
**WARWICK**  
THE UNIVERSITY OF WARWICK

 **UNIVERSITY OF  
CAMBRIDGE**

 **UNIVERSITY OF  
OXFORD**

 **UCL**



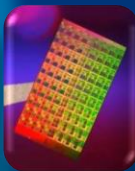
# Invention to Innovation

*10 Years of Measurable Intel Product Roadmap Impact*

## INVENTED@INTEL LABS



Light Peak



Polaris & Single-chip  
Cloud Computer



Platform Power



Platform Power  
Management



**See All Ten  
Hall of Fame Technologies  
at**

**[www.intel.com/research](http://www.intel.com/research)**



**INTEL PRODUCT INNOVATIONS**



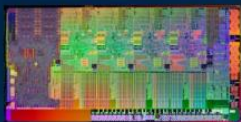
# LOOKING FORWARD: MEMORY TECHNOLOGY AS KEY ENABLER

## 3D XPoint™ TECHNOLOGY *Breaks The Memory Storage Barrier*

### STORAGE

#### SRAM

Latency: 1X  
Size of Data: 1X



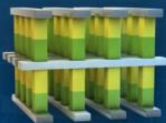
#### DRAM

Latency: ~10X  
Size of Data: ~100X



#### 3D XPoint™

Latency: ~100X  
Size of Data: ~1,000X



#### NAND SSD

Latency: ~100,000X  
Size of Data: ~1,000X



#### HDD

Latency: ~10 MillionX  
Size of Data: ~10,000X



### MEMORY

DATA CENTER DAY

Technology claims are based on comparisons of latency, density and write cycling metrics amongst memory technologies recorded on published specifications of in-market memory products against internal Intel specifications.

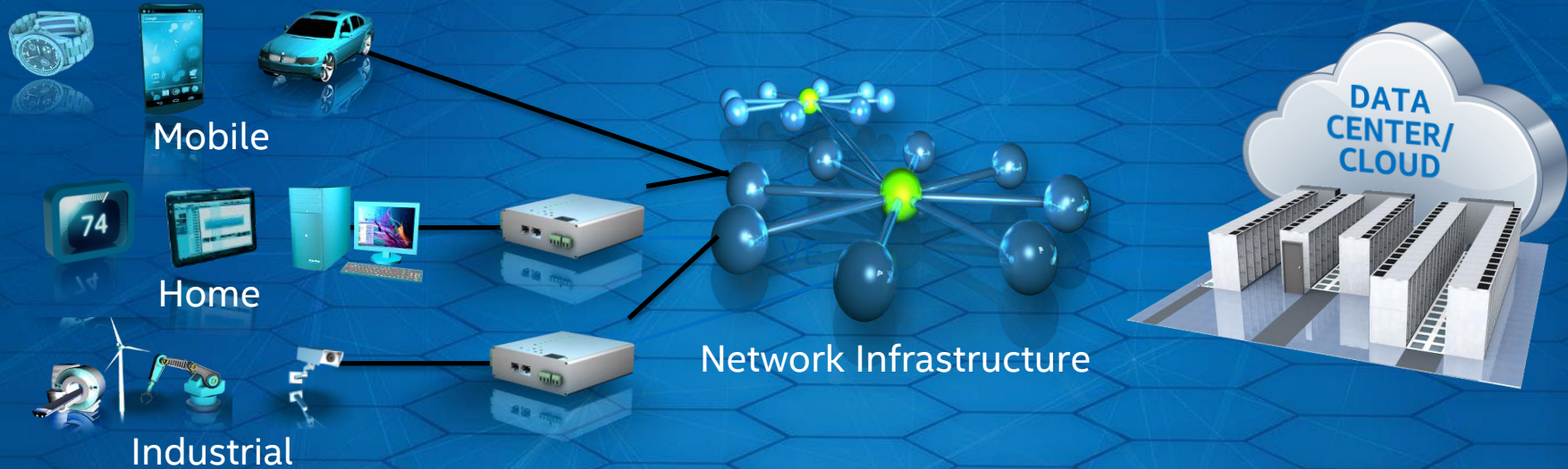


3D XPoint Technology is a transistor less cross point Architecture that is non-volatile which enables big memory

\* Results have been estimated or simulated using internal analysis or architecture simulation or modeling, and provided to you for informational purposes. Any differences in your system hardware, software or configuration may affect your actual performance



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**PERVASIVE  
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experience  
what's inside™