7 Kasım 2012 - Çırağan Palace Kempinski

IBM Connected 2012 Istanbul

Learn. Collaborate. Innovate.

Intel Data Center Vision

Burak Unuvar
Data Center Account Manager
burak.unuvar@intel.com

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Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

Intel does not control or audit the design or implementation of third party benchmarks or Web sites referenced in this document. Intel encourages all of its customers to visit the referenced Web sites or others where similar performance benchmarks are reported and confirm whether the referenced benchmarks are accurate and reflect performance of systems available for purchase.

Relative performance is calculated by assigning a baseline value of 1.0 to one benchmark result, and then dividing the actual benchmark result for the baseline platform into each of the specific benchmark results of each of the other platforms, and assigning them a relative performance number that correlates with the performance improvements reported.

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Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see here

Intel® Turbo Boost Technology requires a Platform with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software and overall system configuration. Check with your platform manufacturer on whether your system delivers Intel Turbo Boost Technology. For more information, see http://www.intel.com/technology/turboboost

No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer system with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit http://www.intel.com/technology/security. In addition, Intel TXT requires that the original equipment manufacturer provides TPM functionality, which requires a TPM-supported BIOS. TPM functionality must be initialized and may not be available in all countries.

Intel ® AES-NI requires a computer system with an AES-NI enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on Intel® Core™ i5-600 Desktop Processor Series, Intel® Core™ i7-600 Mobile Processor Series, and Intel® Core™ i5-500 Mobile Processor Series. For availability, consult your reseller or system manufacturer. For more information, see http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni/

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor series, not across different processor sequences. See http://www.intel.com/products/processor_number for details. Intel products are not intended for use in medical, life saving, life sustaining, critical control or safety systems, or in nuclear facility applications. All dates and products specified are for planning purposes only and are subject to change without notice

Intel Corporation:

The World's Largest Semiconductor Manufacturer

- Leading Manufacturer of Computer, Networking & Communications Products
- 166 Sites and 579 Buildings in 63 Countries
- $54B in Annual Revenues from Customers in Over 120 Countries
- 25 Consecutive Years of Positive Net Income
- Over 100,000 Employees
- 80,000 technical roles, 10,400 Masters in Science, 5,200 PhD's, 4,000 MBA's
- One of the Top Ten Most Valuable Brands in the World for 11 Consecutive Years
- Ranked #46 on Fortune's 100 Best Companies to Work For List
- Invests $100 Million Each Year in Education Across More than 70 Countries
- The Single-Largest Voluntary Purchaser of Green Power in the United States
- More than One Million Hours of Volunteer Service in Our Communities in 2011

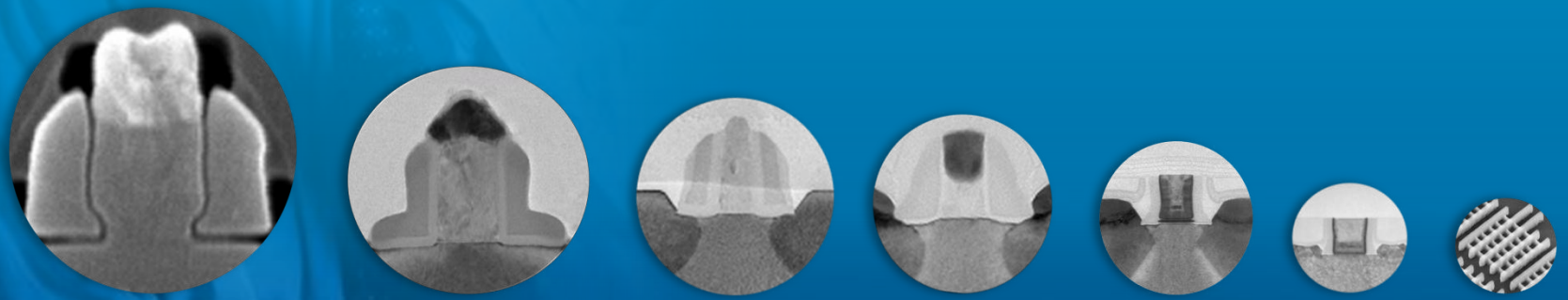
Intel's Vision

This decade we will create and extend computing technology to connect and enrich the lives of every person on earth

Predictable Silicon Track Record

Executing to
MOORE's LAW

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



180 nm
1999

130 nm
2001

90 nm
2003

65 nm
2005

45 nm
2007

32 nm
2009

22 nm
2011

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Intel's Investment in Manufacturing

22nm Fab Upgrades

D1D/D1C
Oregon

Fab 32/12
Arizona

Fab 28
Israel

New Capacity for 14nm and Beyond

D1X
Oregon

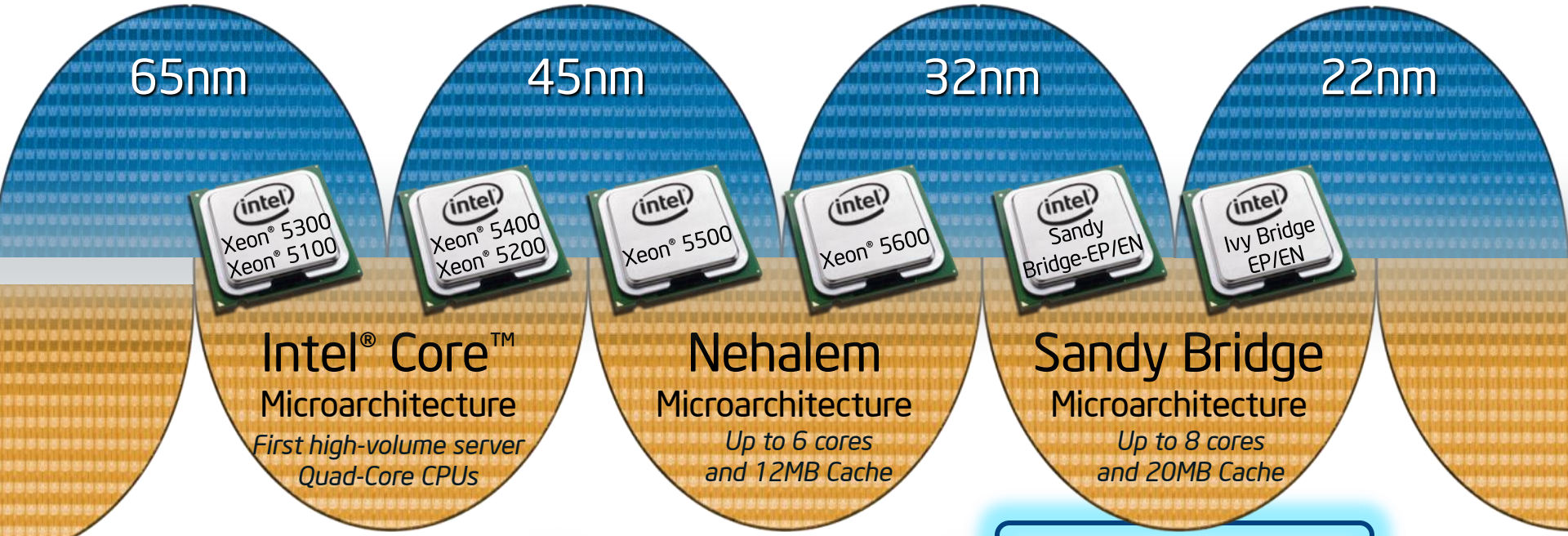
Fab 42
Arizona

Fab 24
Ireland

Tick-Tock Development Model

Sustained Xeon® Microprocessor Leadership

Tick *Tock* *Tick* *Tock* *Tick* *Tock* *Tick* *Tock*



Dedicated high-speed bus per CPU

HW-assisted virtualization (VT-x)

Integrated memory controller with DDR3 support

Turbo Boost, Intel HT, AES-NI[1]

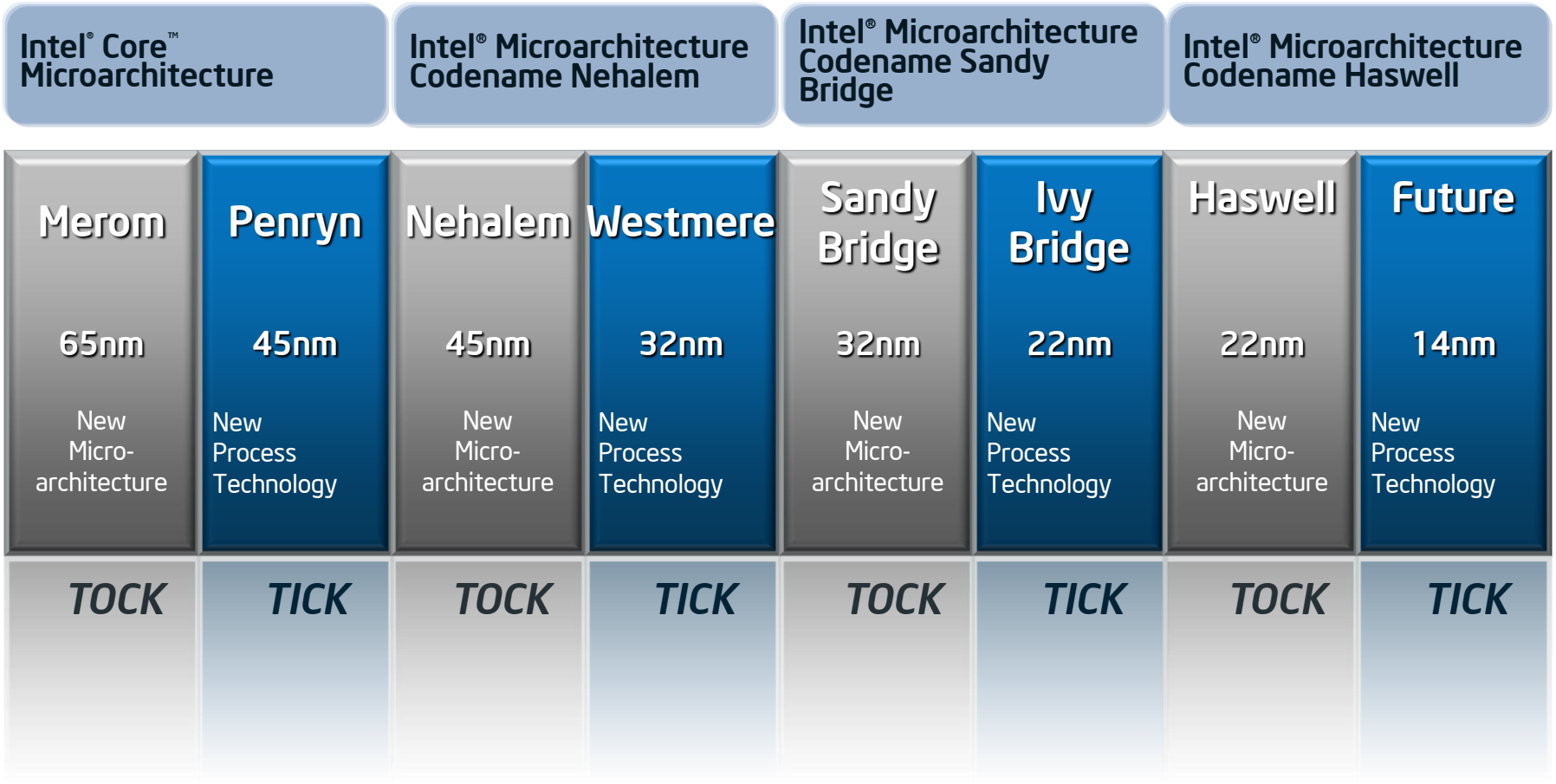
End-to-end HW-assisted virtualization (VT-x, -d, -c)

Integrated PCI Express

Turbo Boost 2.0

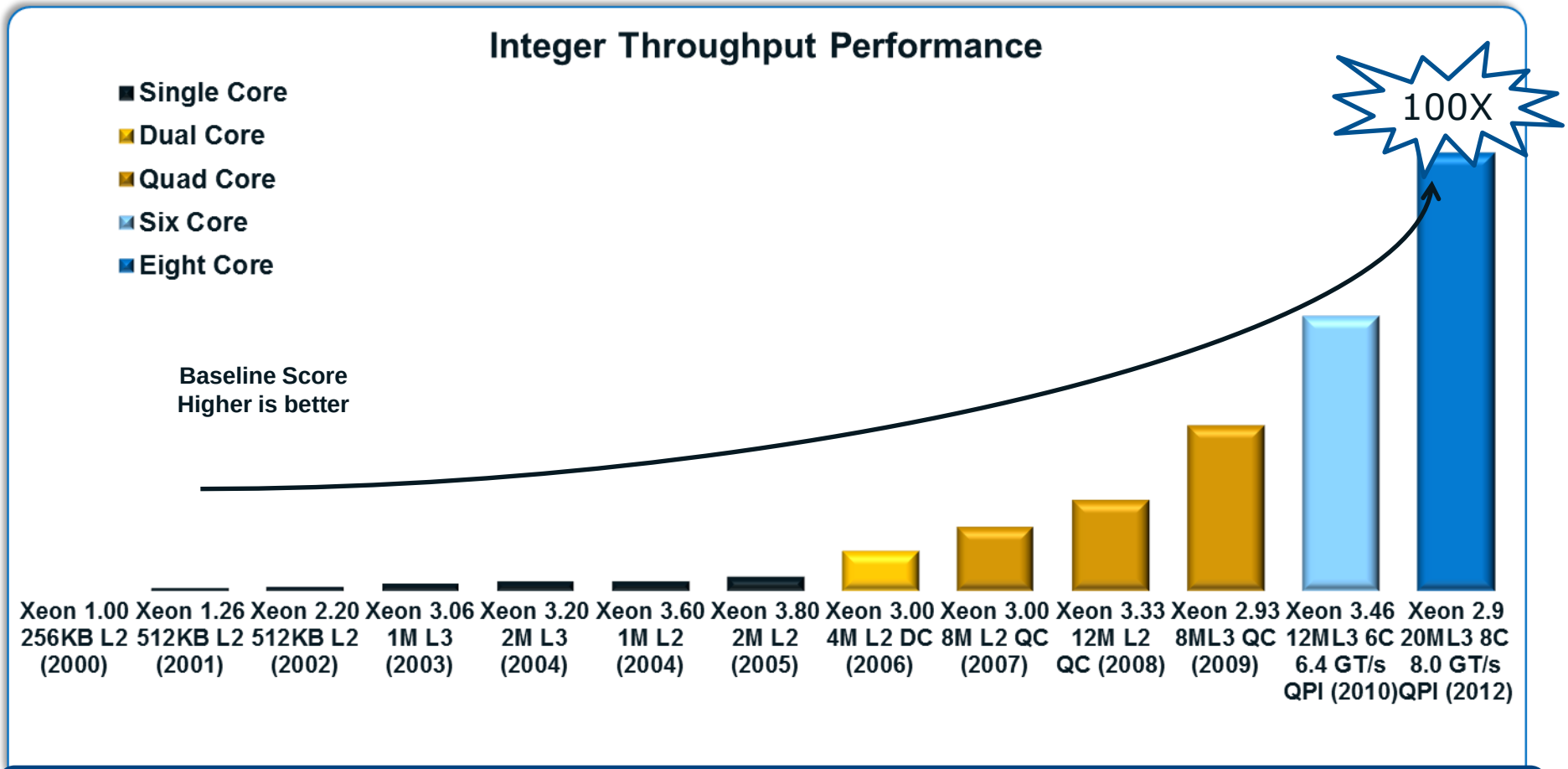
Intel Advanced Vector Extensions (AVX)

Tick-Tock Development Model:
Sustained Microprocessor Leadership



Intel® Xeon® Processor E5-2600 Product Family

Historical 2S Integer Throughput Performance



Intel® Xeon® Delivers 100X Boost in 2S Integer Throughput Performance since 2000
Exponential growth in compute performance creates new possibilities

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For more information go to http://www.intel.com/performance

Key Industry Trends

Increasing requirements meet fixed budget realities

Escalating Demands

By 2015…

More Users

>1 billion more netizen's[1]

More Devices

15 billion connected devices[2]

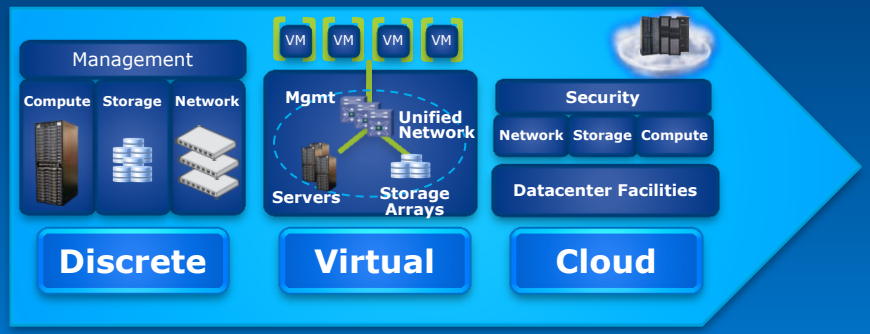
More Data

>1,000 exabytes Internet traffic[3]

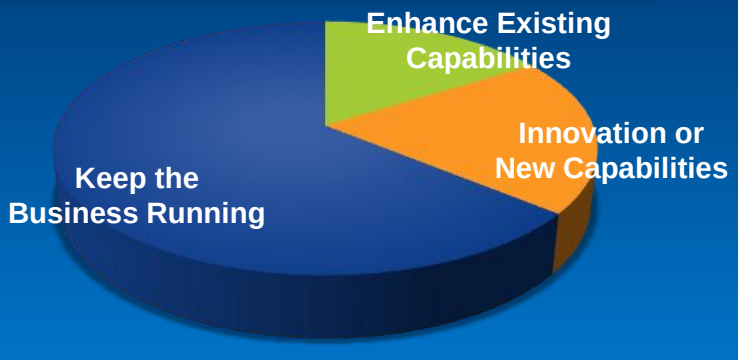
Compounding Challenges

- Security
- Storage
- Mission Critical Availability
- Networking
- Power & Space Limitations

Diverse Environments



IT Spending Pressures[4]



IT Industry is at a Great Inflection Point

1. IDC "Server Workloads Forecast" 2009. 2.IDC "The Internet Reaches Late Adolescence" Dec 2009, extrapolation by Intel for 2015
2. ECG "Worldwide Device Estimates Year 2020 - Intel One Smart Network Work" forecast
3. Source: http://www.cisco.com/assets/cdc_content_elements/networking_solutions/service_provider/visual_networking_ip_traffic_chart.html extrapolated to 2015
4. Source: Gartner IT Key Metrics Data 2010

We are targeting 4 main topics …

1- Cloud Computing

2- Big Data

3-Manageability & Security

4-Consumerization of technology

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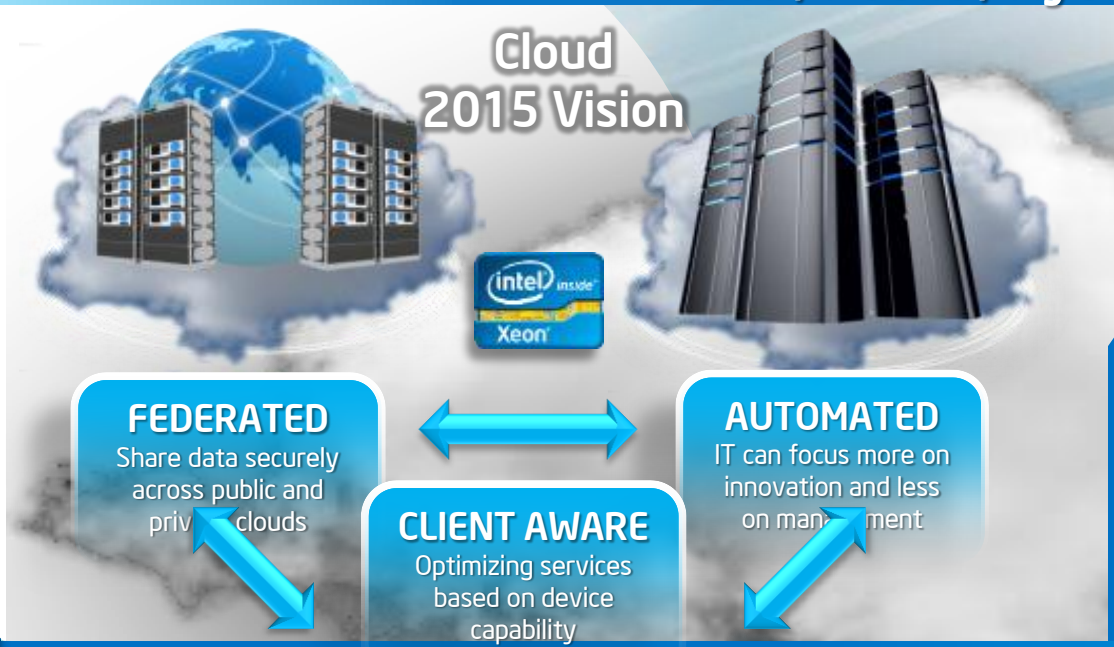
1. Cloud Computing

providing service to billions of connected devices through Private , Public , Hybrid Cloud



Managing the growth of internet

by 2015 we'll need more:

8X	Network
16X	Storage
20x	Compute

Intel's Versatile Building Blocks for the Open Cloud

Scalable Resource Pools

Servers

Storage

Networking

Intel® Xeon E5 Processor Family

intel inside™ Xeon®

Leadership performance

- *Density/Performance*
- *Performance/Watt*

VMM

Key Xeon Value Added Features:

- ✓ Embedded Security:
  - TXT, AES-NI
- ✓ Efficient Data Center:
  - Node Manager / DCM

Intel® SSD 710 Series

- ✓ Highest write perf & endurance
- ✓ Server & storage apps

Intel® Ethernet X540

✓1st Integrated 10GBASE-T

✓Advanced I/O Virtualization & Unified Networking

2. Big Data : Volume, Velocity, Variety, Value

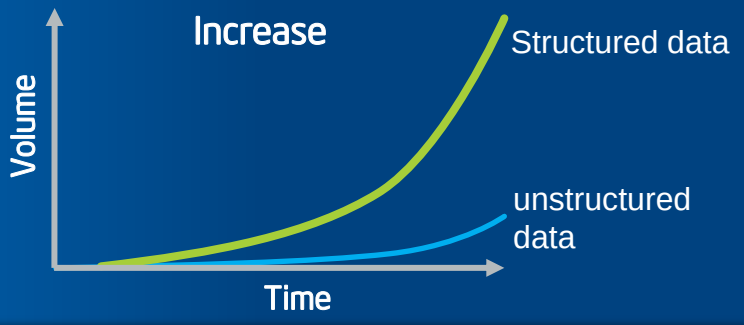
Big Corporate Data + Big Web Data + Big Sensor Data
=
Potential gold mine of value currently "locked"

20 PB = HDD capacity in **1995**

39,000 PB = Structured data in **2011**

226,000 PB = Unstructured data in **2015**

Corporations will have to deal with 50x more data by 2020



Business Analytics will be a
COMPETITIVE DIFFERENTIATOR

Intel Role in Big Data

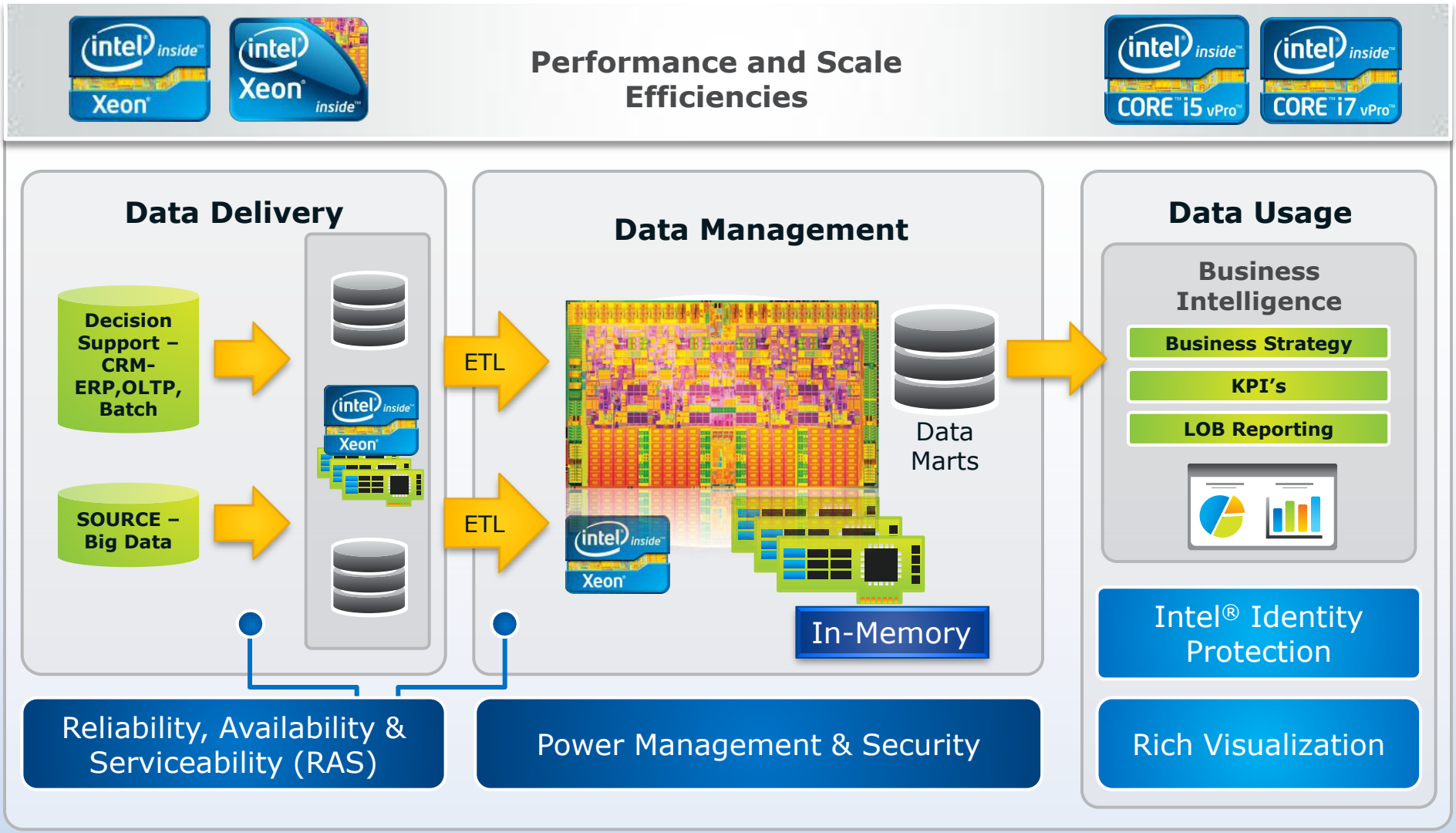
Accelerating insight and responsiveness on data delivery, management and visualization

Driving innovation with all provisioning models:
Embedded, Cloud, Dedicated, HPC

Investing in Solution Research and Services for Big Data

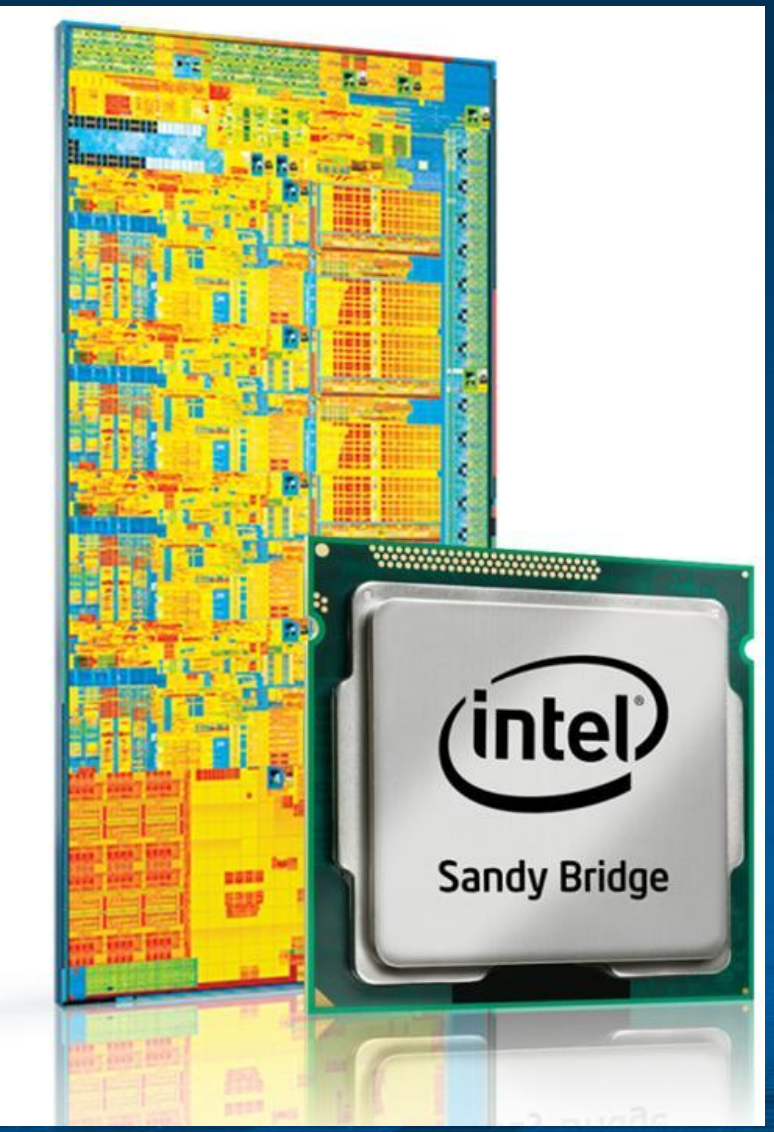
Data of any type, under any provisioning method, is analyzed to find insights that drive business, social, and ecological value.

Intel and Big Data Methods



3. Manageability and Security

Intel® Xeon® Processor: E5



- 32nm next gen microarchitecture
- Up to 8 cores and 16 threads per processor
- Next generation Intel® Turbo Boost technology
- Integrated PCI Express* I/O
- Integrated platform serial attached SCSI (SAS)
- Intel® Advanced Vector Extensions (AVX) instructions

4. Consumerisation of technology

Building a Continuum of Personal Computing Experiences

Desktops | Laptops | Ultrabook™ | Tablets | Smartphones | Intelligent Systems

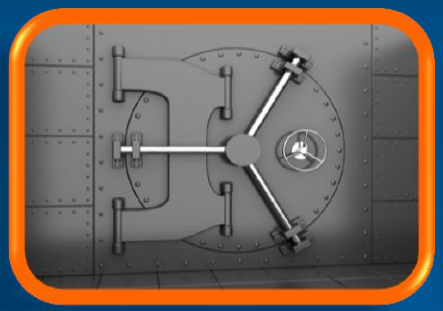
Ultrabook™

Transforming from This....

To this

HIGH PERFORMANCE

AGILE



SECURE

Long BATTERY LIFE

Thank you very much

☺

Q & A