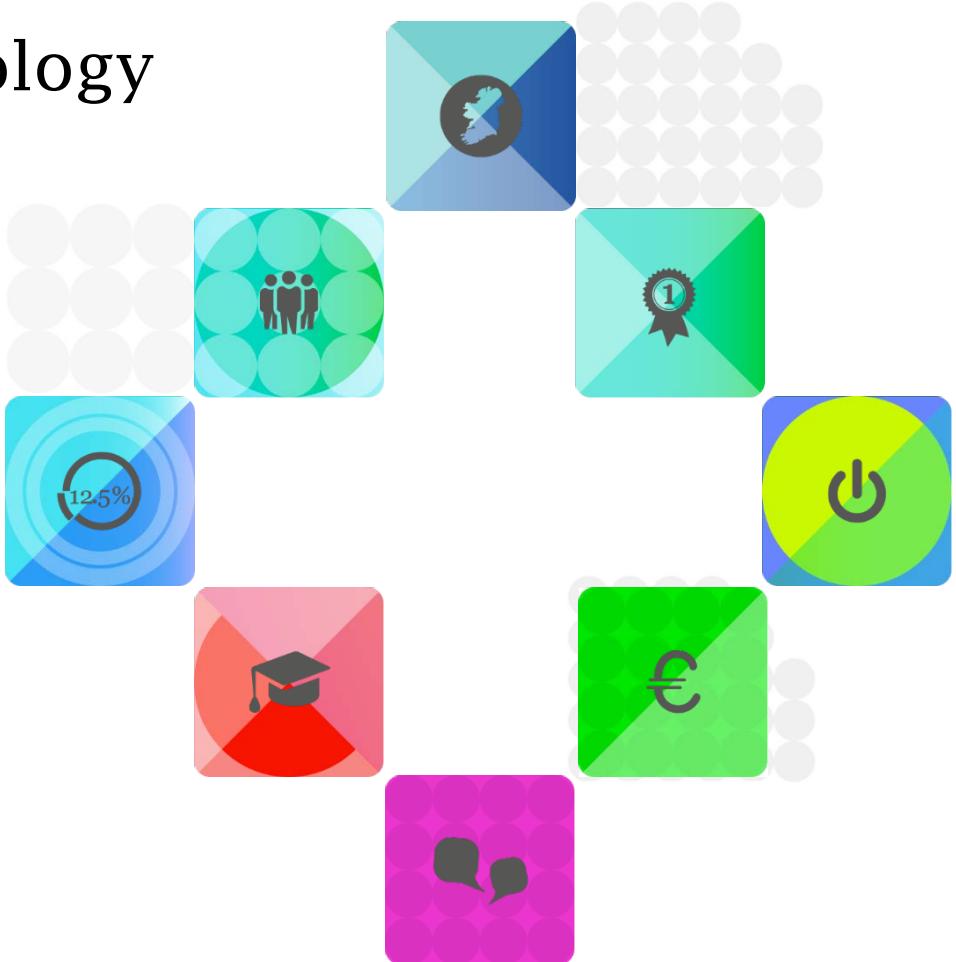


International Technology Investment & HPC



Leo Clancy, 28th May 2015

The Ireland Advantage

Over 1,200 leading international companies have chosen Ireland as a strategic base.

Why?



Ireland's FDI Landscape

KEY FDI IMPACTS ON THE IRISH ECONOMY

- €124.5bn of exports
- €2.8bn of corporation tax
- €1.4bn expenditure on R&D
- 175,000 directly employed
- €22.4bn spend in the Irish economy comprising:
 - €8.5bn payroll,
 - €2.5bn Irish materials, and
 - €11.4bn Irish services.

WORLD LEADERS CHOOSE IRELAND

- 9 of the top 10 US companies in ICT
- 9 of the top 10 global Software companies
- 9 of the top 10 companies in Pharmaceuticals
- 9 of the Top 15 Internet Estates
- 17 of the top 25 Medical Device companies
- All top 10 “Born on the Internet” companies
- 3 of the top 5 Games companies
- More than 50% of the world’s leading Financial Services firms

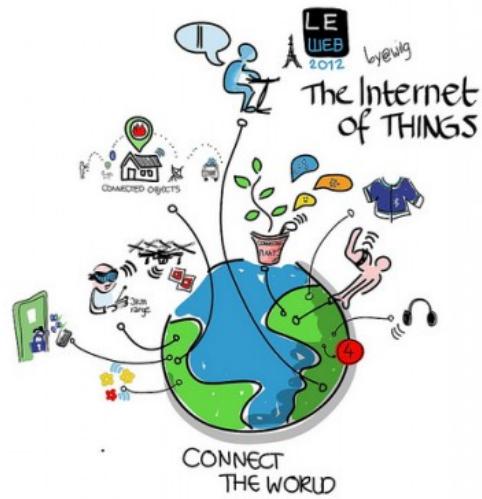
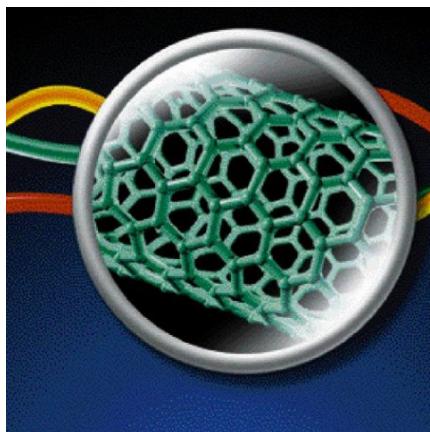
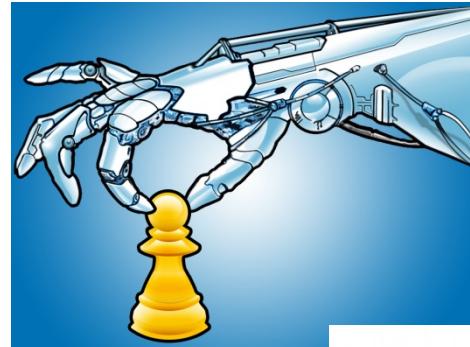


Key Drivers for HPC

- Increasing complexity – social, scientific, environmental etc.
- Industry adoption – HPC as a competitive advantage
- Becoming mainstream – technical computing, cloud delivery models



Applications of HPC



The Exascale Effect: the Benefits of Supercomputing Investment for U.S. Industry

1. More than one-third of U.S. industry representatives surveyed claim their most demanding high performance computing (HPC) applications could utilize 1,000-fold increases in computing capability over the next five years;
2. Software scalability is the #1 most significant limiting factor to achieve the next 10-fold improvement in performance, and it is the #2 most significant limiting factor to reach a 1,000-fold improvement;
3. Industry respondents recognize that government investment in leading-edge HPC benefits their companies and industries. An overwhelming majority of respondents believe HPC is a matter of competitive survival and is critical to the future direction of their businesses. However, many respondents also note that the links between government and industry need to be strengthened.

Ireland's HPC Infrastructure



- Fionn is our national supercomputer
- Operated by the Irish Centre for High End Computing (ICHEC)
- SGI & DDN infrastructure
- Provides a national service for R&D and public bodies



Industry Successes

Training

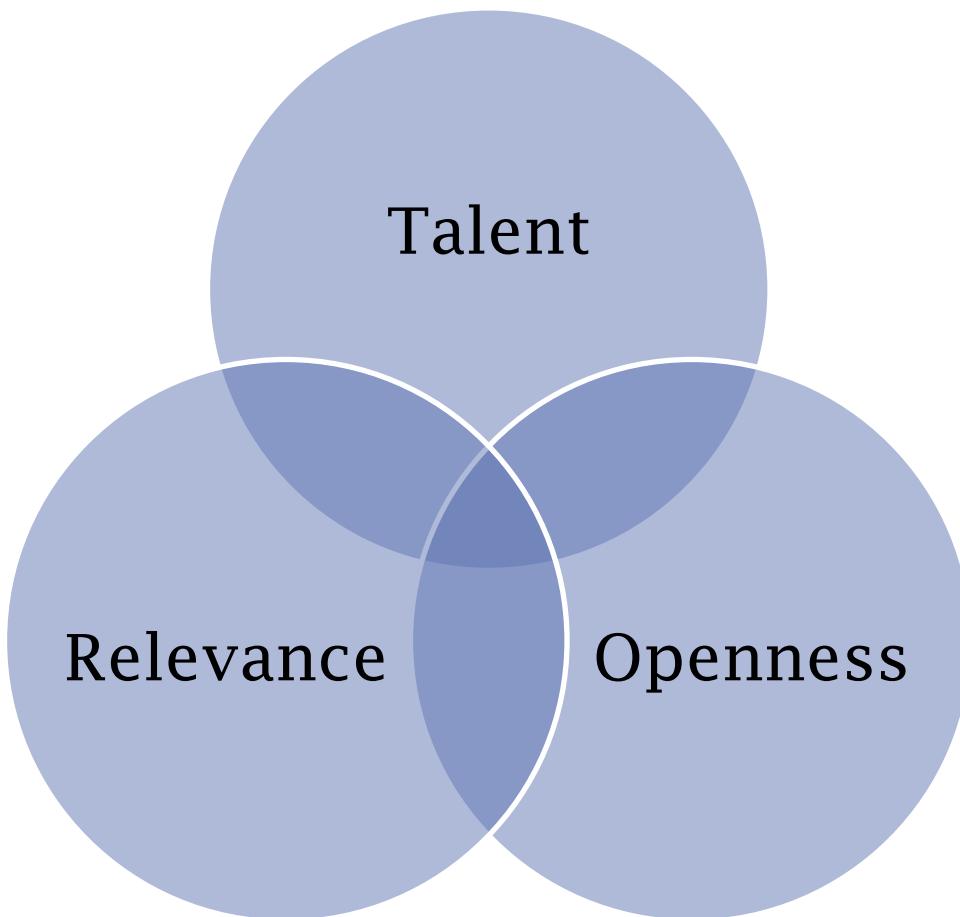
- Introductory & advanced courses run by ICHEC
- Diploma in Applied Sciences developed with ICHEC based on GM requirements

Applied Research

- Intel & ICHEC collaboration on many core technology for HPC & big data analytics
- Nsilico, ICHEC, PRACE and SHAPE collaboration - DNA sequencing
- ICHEC named as SDAccel design service member by Xilinx (this week!)



Key Factors for Success with Industry



To learn more log on to idaireland.com

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