



Daniel Soriano – Telindus
David Foy – Post Luxembourg
Jérôme Grandidier – Telecom Luxembourg Private Operator
Torsten Woywod – EBRC
Romain Fouarge – Ministry of the Economy
Jungwook Lim - Moderator

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@luxembourg
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CENTRAL EUROPEAN LOCAL DATA CENTER, TIER-4 INTERNET EXCHANGE, DATA PROCESSING, TRAINING, SUPPORT
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Panel Discussion: Luxembourg, your trusted hub for e-business in Europe



A STRATEGIC EUROPEAN LOCATION:



LUXEMBOURG IS LOCATED AT THE HEART OF EUROPE'S INTERNET GOLDEN CIRCLE

- Area: 2,586 km² (999 mi²)
- Population: 525,000 of which 42 % are foreigners

COMMERCIAL NEUTRALITY AS A CLEAR ADVANTAGE

ACCESS TO 60 % OF EU GDP IN LESS THAN ONE HOUR'S FLIGHT

GLOBAL BRANDS OPERATING OUT OF LUXEMBOURG

Satellite connectivity



Financial services



Media



Communication



Online gaming & publishing



e-commerce



Domain names and registrars



Institutional

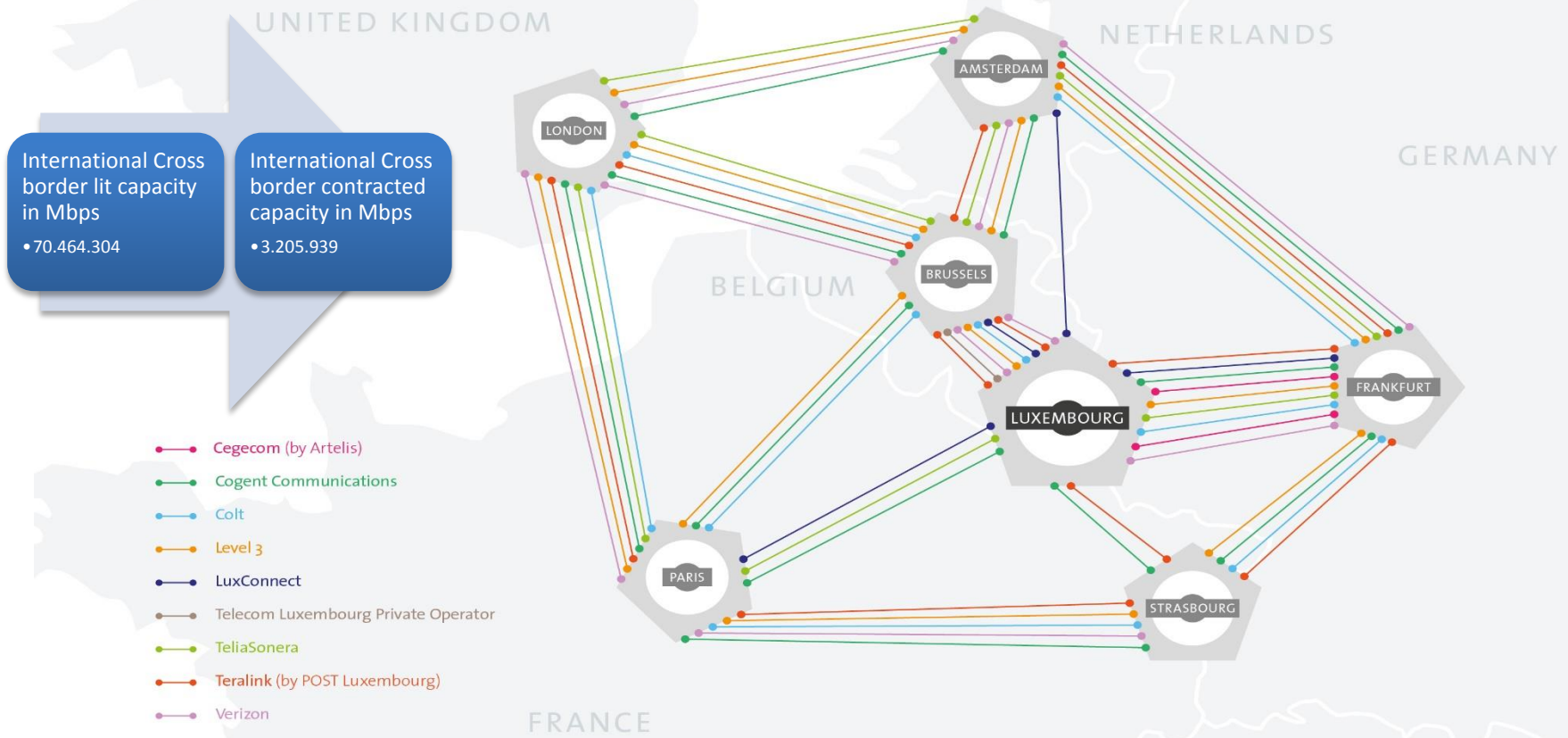
Network

Cloud storage



23 different fiber routes TO LUXEMBOURG

I.R.U. Fiber optical networks in 2014



Source : Luxembourg Ministry of State, Media and communications dept.

WIDE CHOICE OF INTERNATIONAL CARRIERS

Tier 1 networks



International carriers



Luxembourg carriers



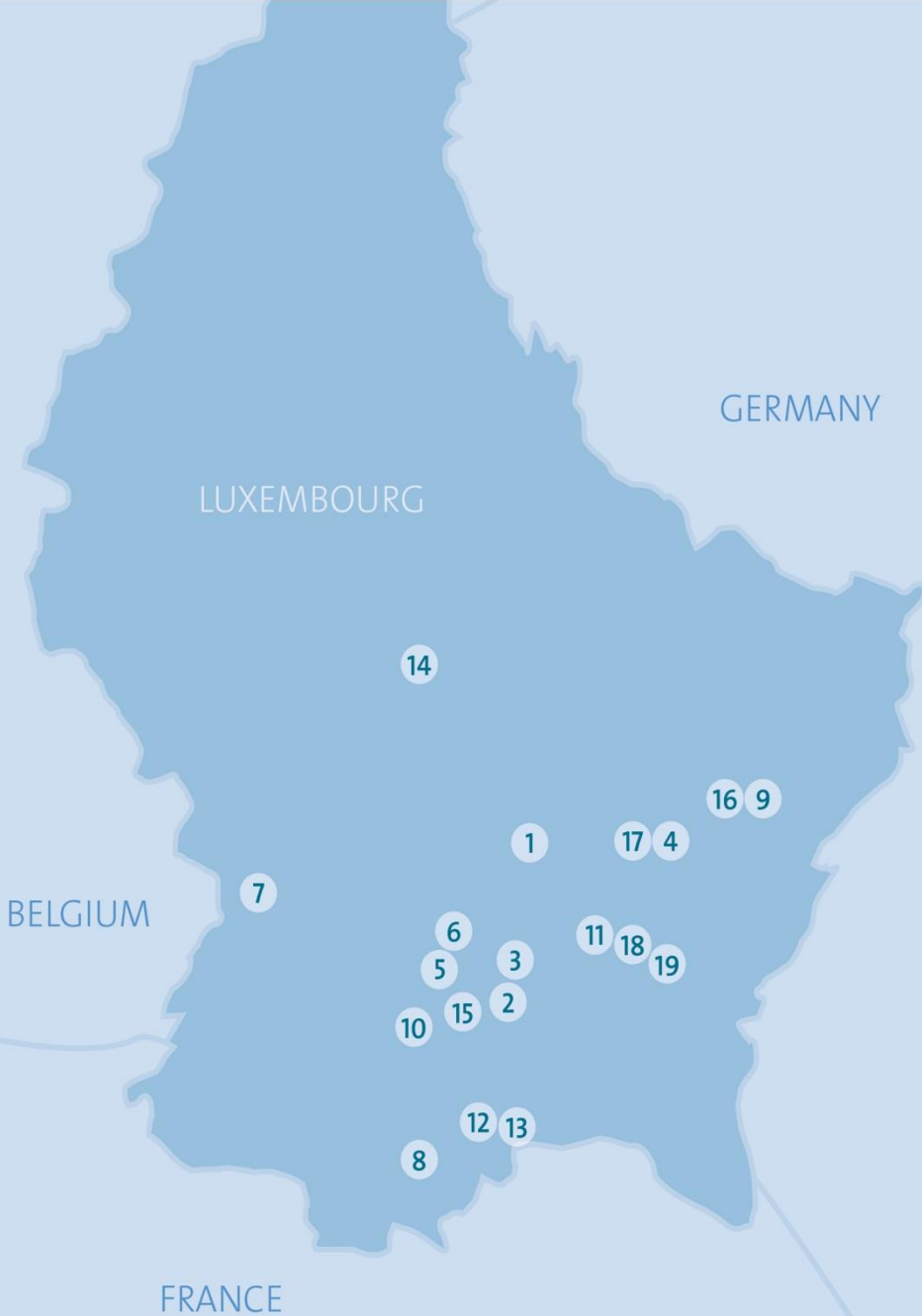
ULTRA LOW LATENCY HUB



LUXEMBOURG DATA CENTRES :

OPERATIONAL 2013

- 1 BCE (Broadcasting Center Europe)
- 2 BT
- 3 CEGECOM - Artelis
- 4 CETREL
- 5 ebrc Resilience Centre Luxembourg City 1
- 6 ebrc Resilience Centre Luxembourg City 2
- 7 ebrc Resilience Centre Luxembourg West
- 8 ebrc Resilience Centre Luxembourg South
- 9 ebrc European Reliance Centre East
- 10 EDH (European Data Hub - run by CSC)
- 11 LAB DataVault PSF
- 12 LuxConnect DC 1.1
- 13 LuxConnect DC 1.2
- 14 LuxConnect DC 2
- 15 DATA4 Luxembourg (formerly known as SecureIT)
- 16 SES
- 17 Sungard
- 18 Verizon
- 19 Visual Online

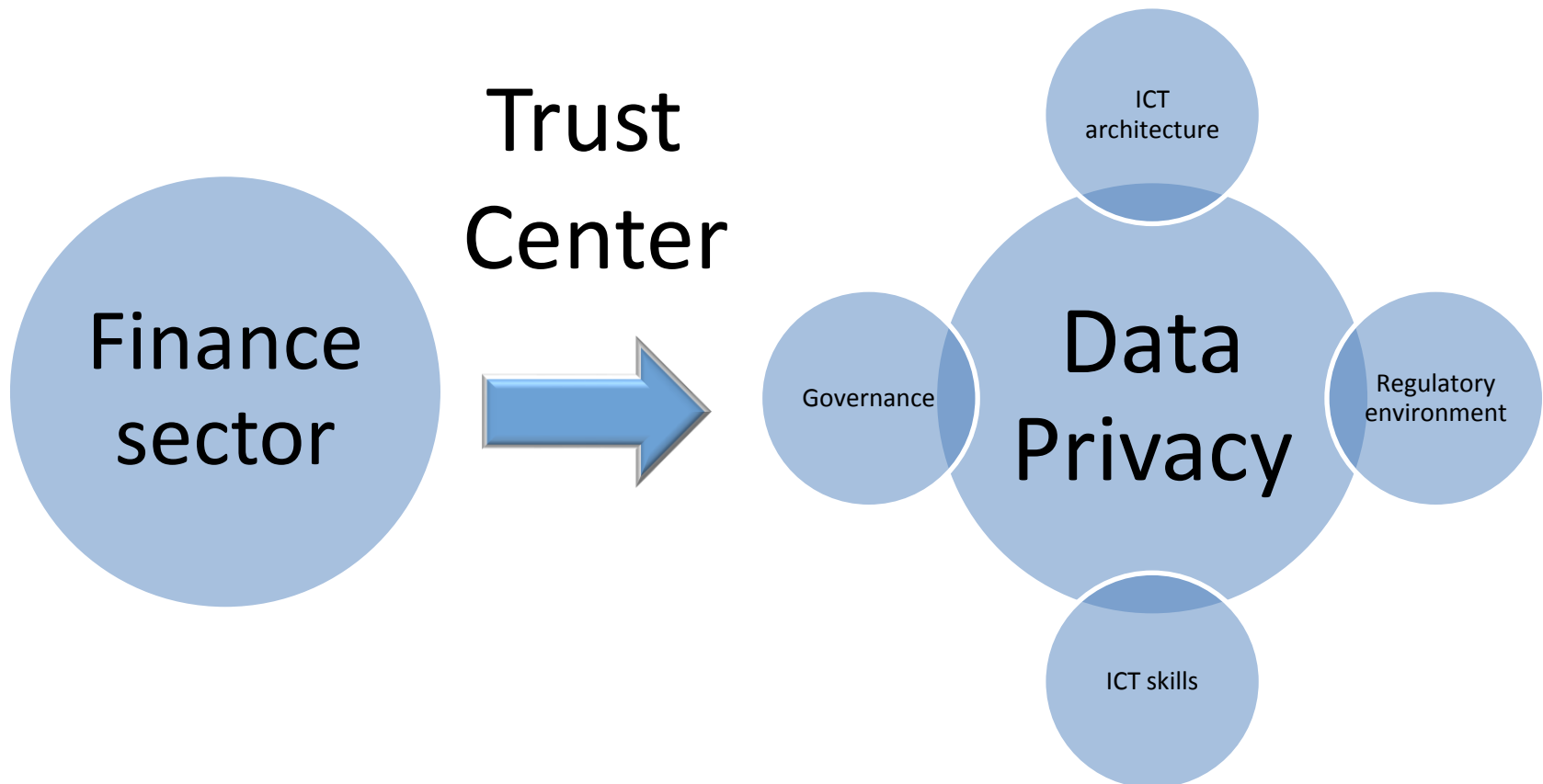


Uptime Institute Certification map – Tier IV IDCs

Tier IV Data Centers by location in Europe

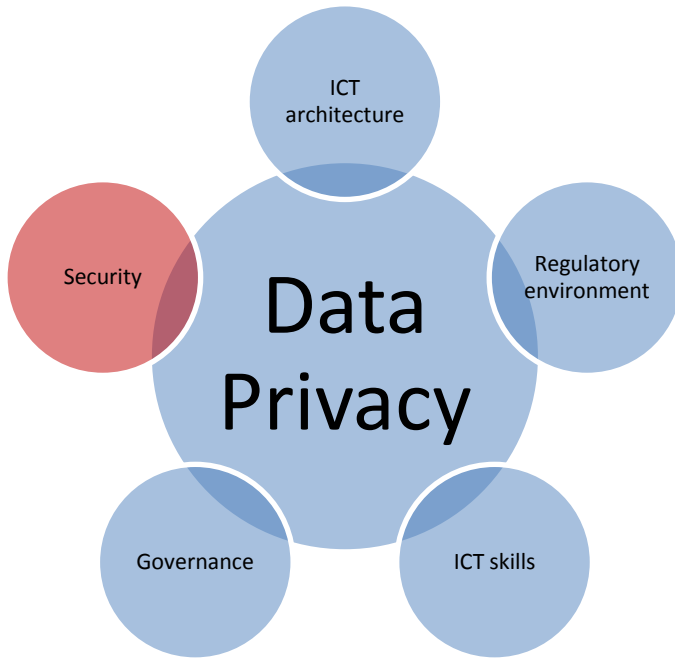


The ICT community of the financial sector has over the years developed strong competencies and inspired a new ICT community

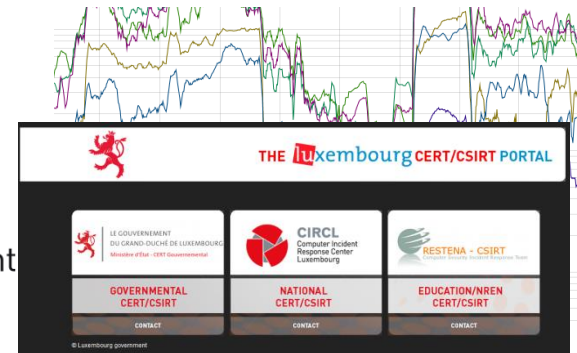


Security Services provided by Government - security as an infrastructure

- Incident response and early warning (BGP ranking)
- Exchange of Indicators of Compromise (MISP)



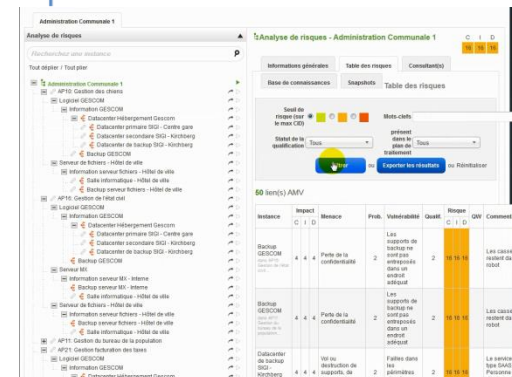
CIRCL
Computer Incident
Response Center
Luxembourg



- Governance based on risk assessment
- Contextualized risk assessment tools saving 80% of effort
- DDOS mitigation also for small companies

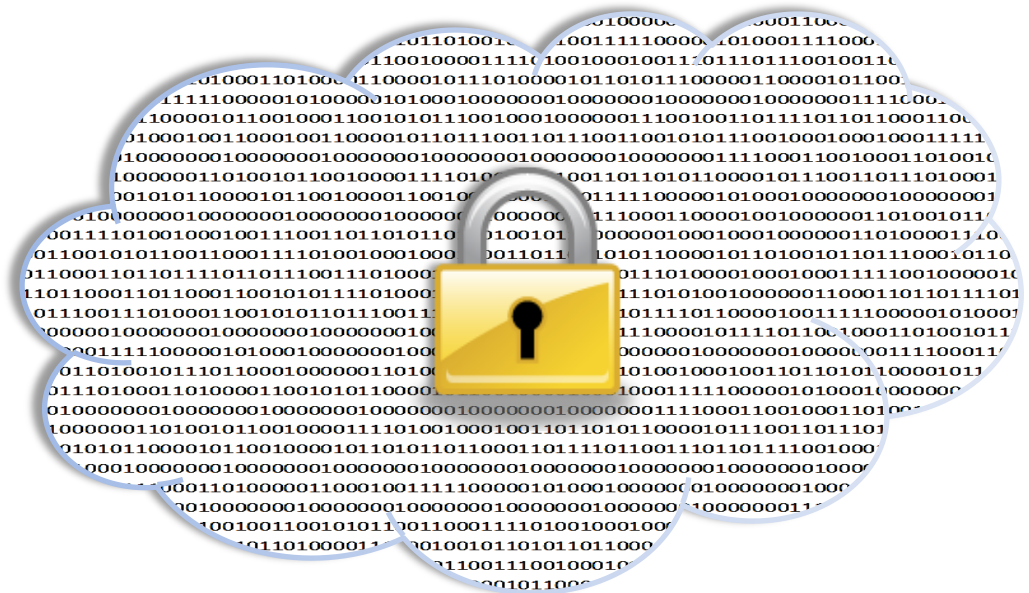
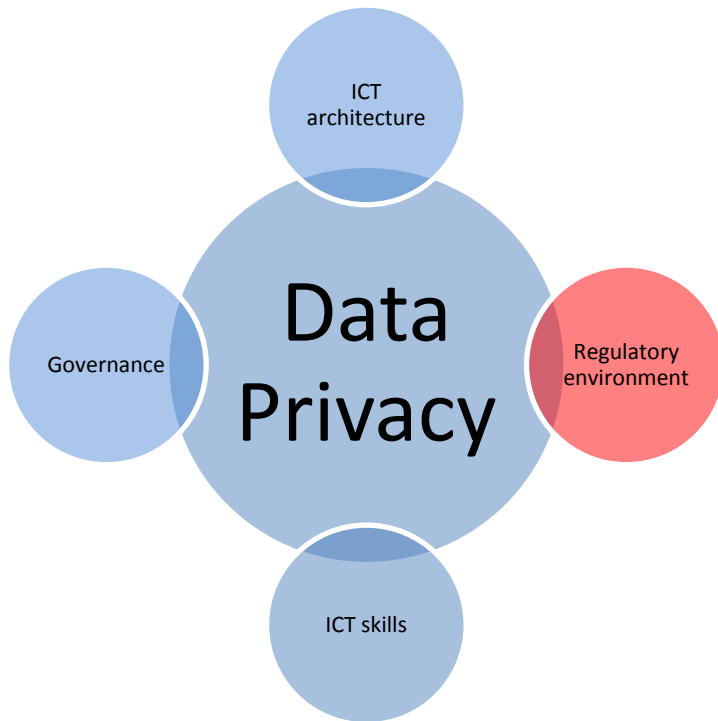


CASES
LUXEMBOURG



Instance	Impact	Menace	Prob.	Vulnérabilité	Qualité	Risque	OWI	Comment
Backup GEISCOM	4	4	4	Partie de la confidentialité	2	16	16	Les données de backup ne sont pas sauvegardées dans un endroit sécurisé
Backup GEISCOM	4	4	4	Partie de la confidentialité	2	16	16	Les données de backup ne sont pas sauvegardées dans un endroit sécurisé
Dispositif de backup SSI - Interne	4	4	4	Partie de la confidentialité	2	16	16	Les données de backup ne sont pas sauvegardées dans un endroit sécurisé
Dispositif de backup SSI - Interne	4	4	4	Partie de la confidentialité	2	16	16	Les données de backup ne sont pas sauvegardées dans un endroit sécurisé

DATA PRIVACY: REGULATORY ENVIRONMENT

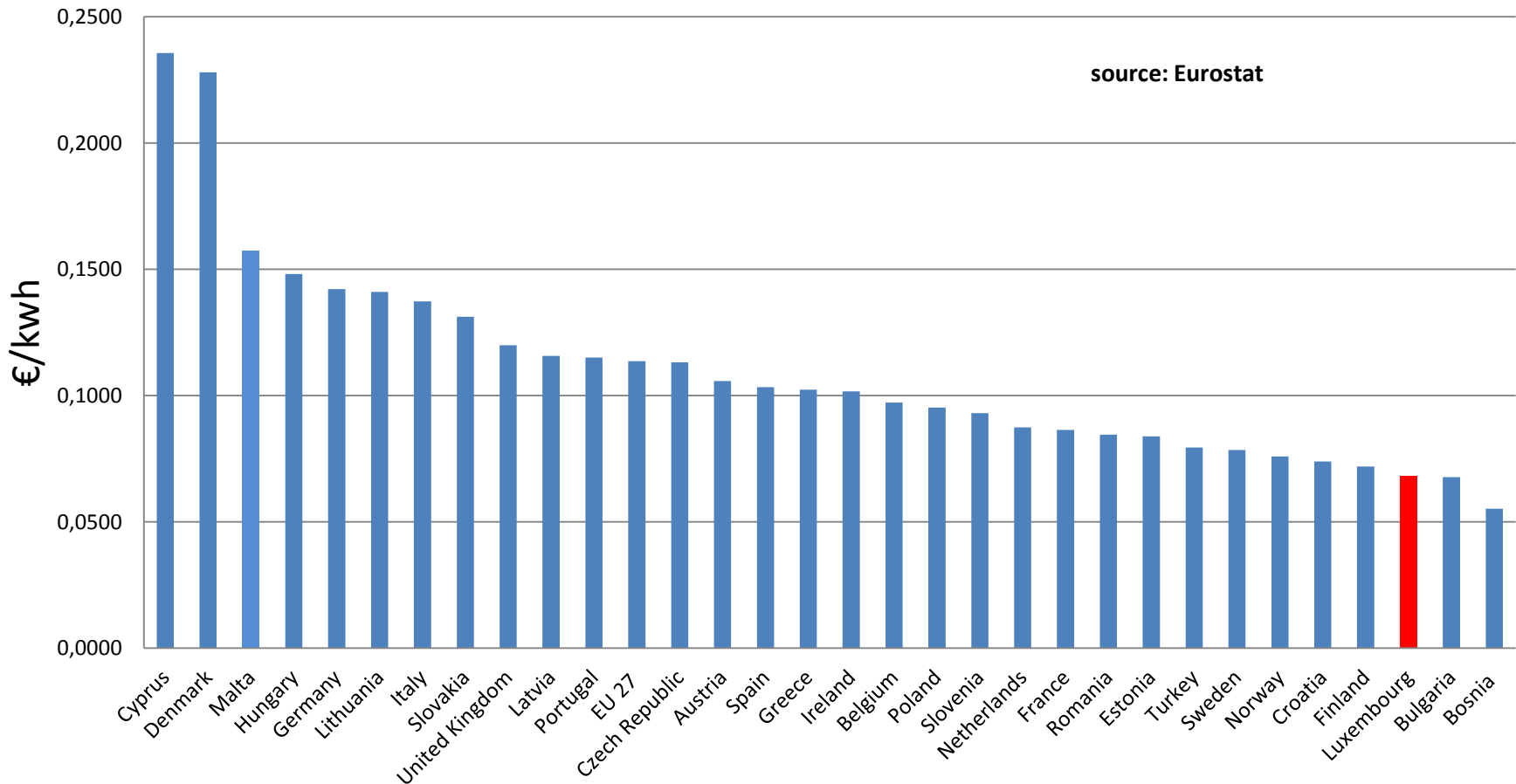


**Cloud-friendly
legislation**

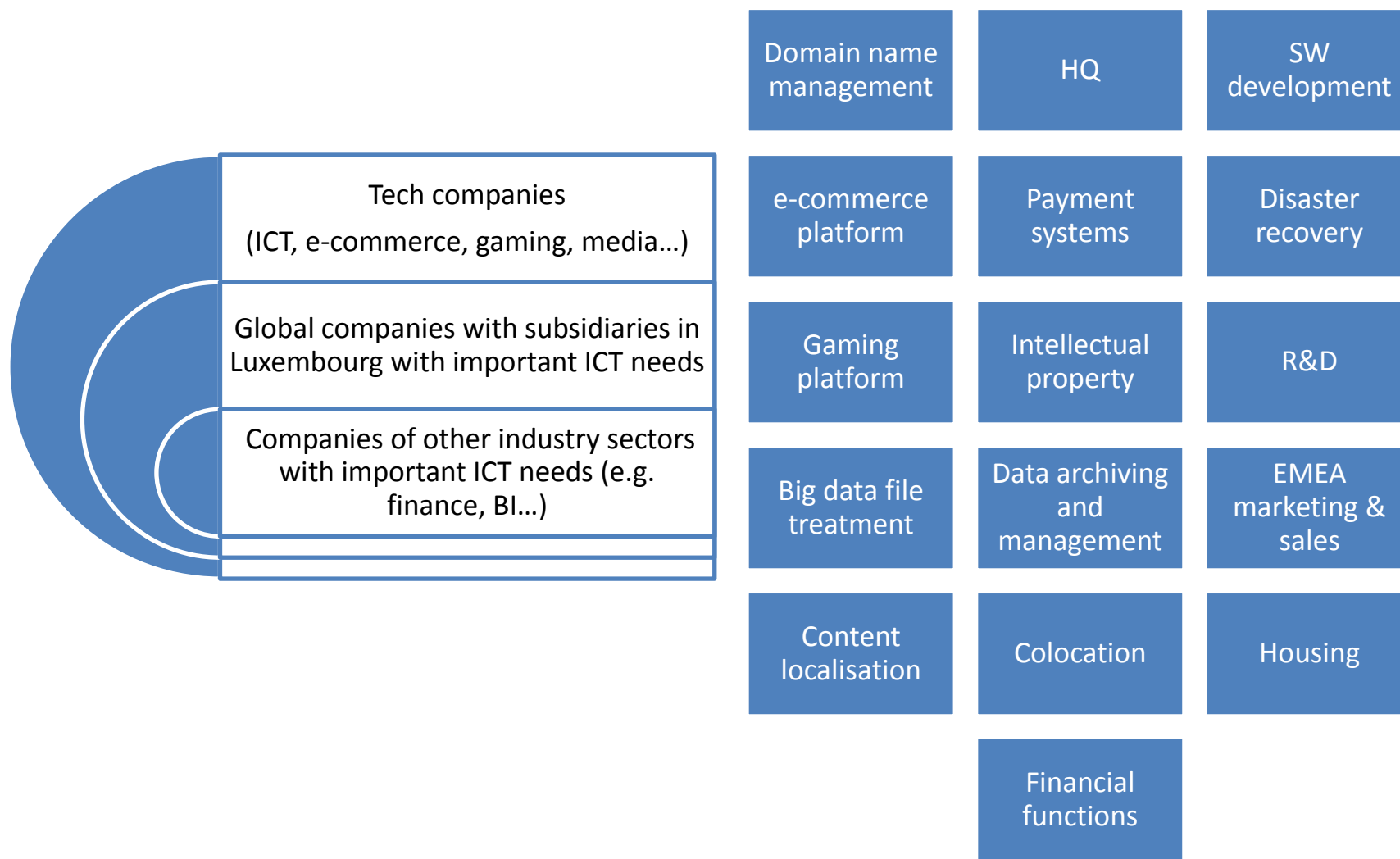
**Protection of
electronic
transactions
(LuxTrust)**

**Secure electronic
archiving
procedures**

Electrical energy prices for industrial customers with an annual consumption >20 000 MWh and < 70 000 MWh 1st semester 2012 - all taxes included



TARGET COMPANIES AND ACTIVITIES



EASY AND STRAIGHTFORWARD COMPANY INCORPORATION

Incorporation and registration can be completed in a couple of days

Acquires legal personality immediately

No restrictions relating to the nationality, residence or status of shareholders, directors and managers

Articles may be drafted in English (with a French/German translation)

Any currency may be used for accounting/reporting

Easy work permit procedure for qualified personnel

Project funding

- Venture capital schemes, private investment funds and banks
- Medium- and long-term loans and equity stakes by a public bank
- Innovation loan

Public incentives

- SME, research development & innovation, environmental protection and renewable energies, regional areas, innovative start-ups and established players
- General aid scheme to support innovative companies by co-financing their R&D activities
- Special aid scheme for young innovative enterprises to support their financial needs
- Rewarding tax environment

Safe

Practical:

Green:

Enjoyable

Cultured:

Educational:

10 REASONS TO GO FOR LUXEMBOURG

**1) Active
Government
support**

**2) Most central
location**

**3) Multiple high-
capacity
connections**

**4) Lowest
latency**

**5) Major Tier 1
and Tier 2**

6) Dark fibre

7) Data centres

**8) Low and
reliable
electricity prices**

**9) Advanced
green thinking**

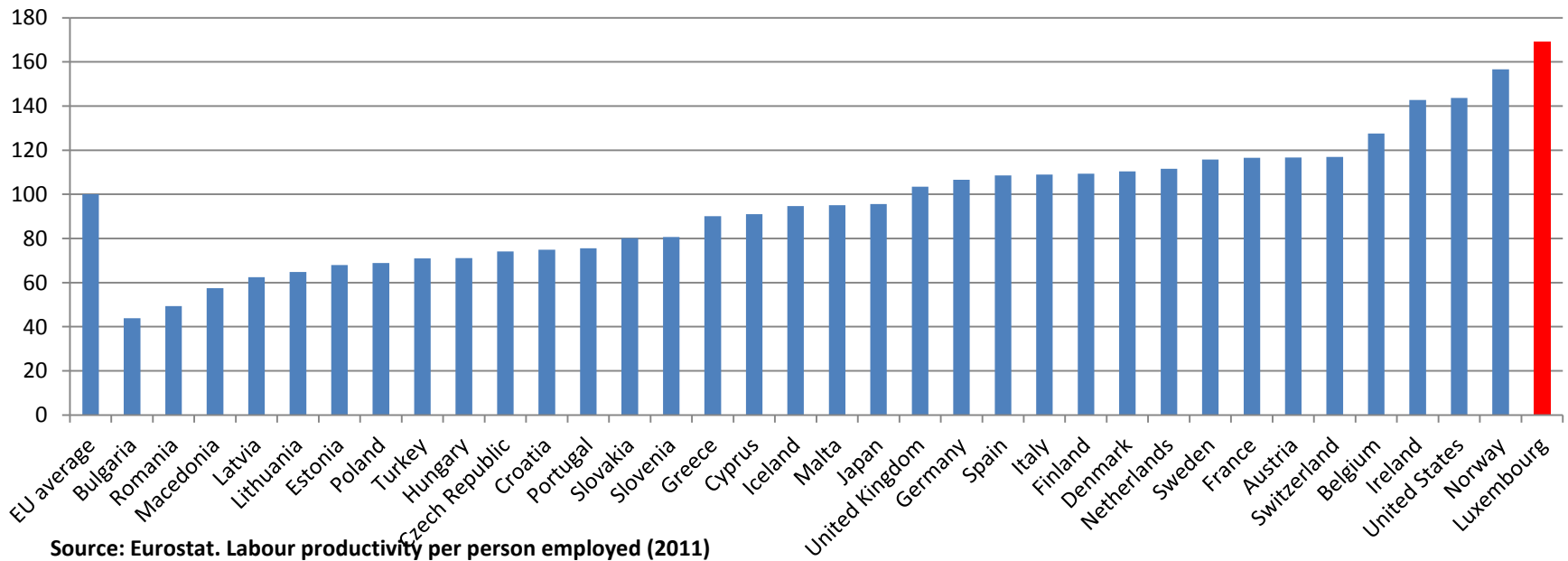
10) Data Privacy

OPTIMISING LABOUR COSTS AND PRODUCTIVITY

2013 figures in euro	Germany	France	Belgium	Luxembourg
Cost for companies	3580	4290	4050	3408
Employers contribution	-580	-1290	-1050	-408
Gross salary	3000	3000	3000	3000
Employees contribution	-613	-657	-392	-367
Taxes on income	-492	-195	-781	-304
Special social security contribution			-27	
Universal social charge				
Personal tax credits				
Net salary	1895	2148	1798	2329

Source salary figures: KPMG - simulation figures based upon single person without children

HIGHEST PRODUCTIVITY IN EU



Source: Eurostat. Labour productivity per person employed (2011)

LUXEMBOURG: CENTRE OF THE “GREATER REGION”

A geopolitical region within Europe, promoting economic, cultural, touristic and social development

- An industrial core area with many urban agglomerations
- Extensive transport network

Key data “Greater Region”

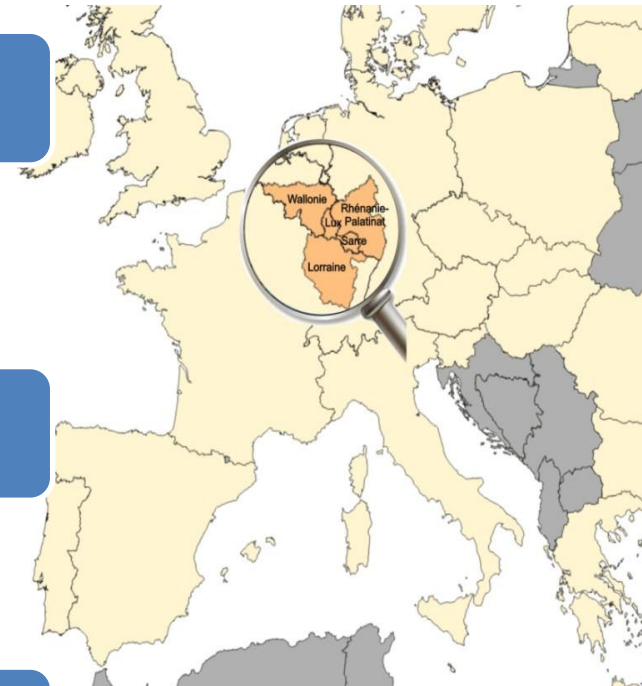
- 11.4 million people in the Greater Region (65,401 km² - 25,251 mi²)
- Consisting of
 - Luxembourg as its centre and adjacent regions of Germany (Saarland and Rhineland-Palatinate), Belgium (Wallonia, French- and German-speaking communities of Belgium) and France (Lorraine)

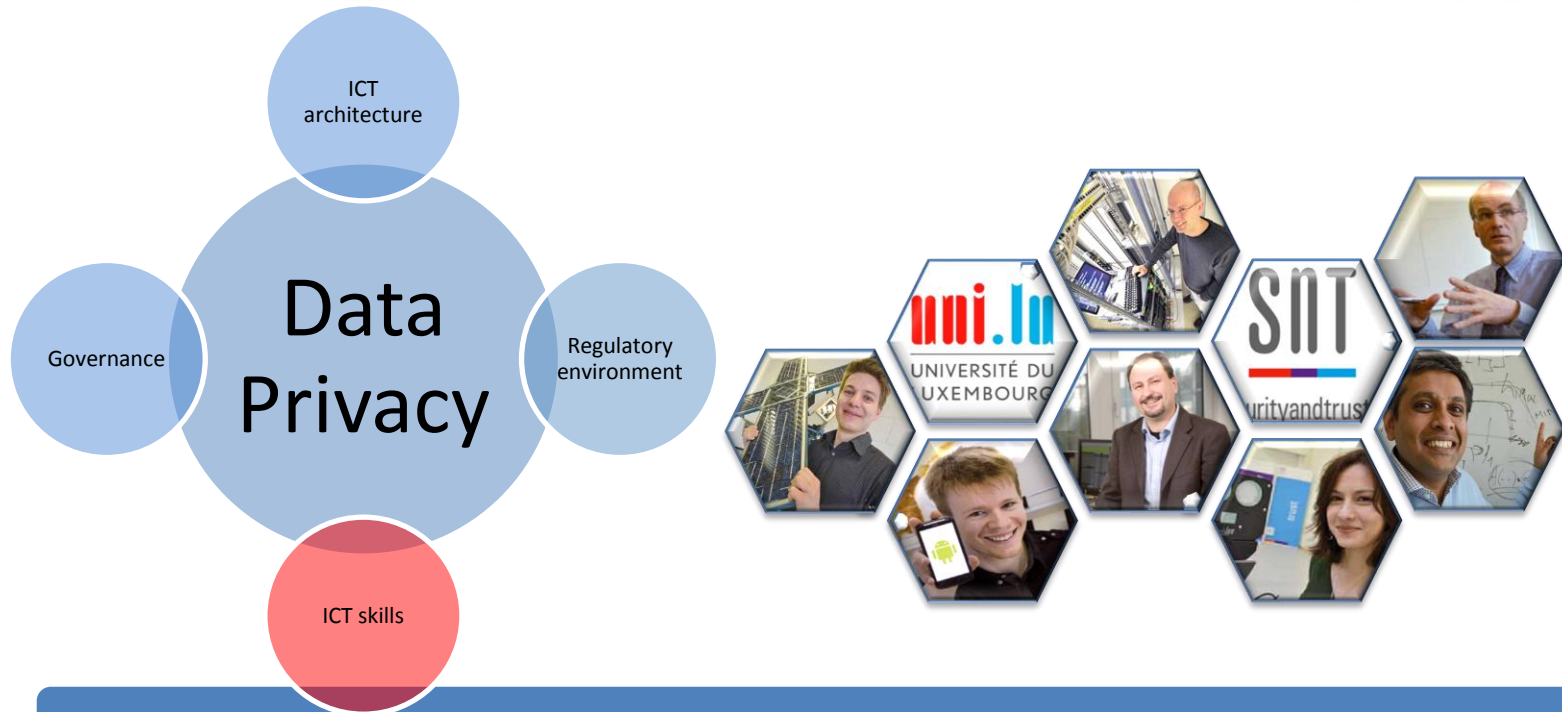
Outcome

- Luxembourg tapping into international and multilingual workforce
- Characterised by a very high number of daily commuters into Luxembourg: 156,000
- Combining most favourable legislations of three countries with a Luxembourg structure

Six universities

- 115,000 students, 6,000 teachers and researchers
- University of Luxembourg – Saarland University – University of Liège – University of Lorraine – University of Kaiserslautern – University of Trier



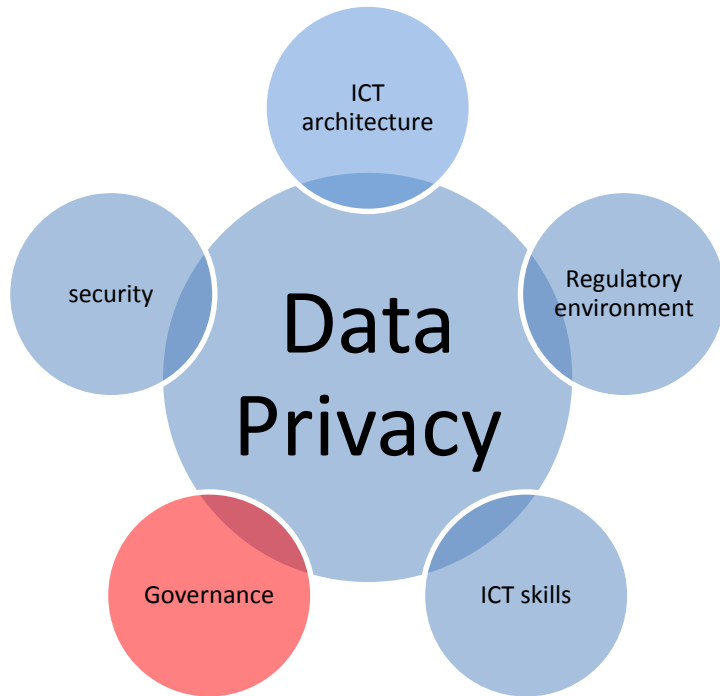


Luxembourg's Interdisciplinary Centre for Security, Reliability and Trust (SnT)

- The Centre brings together university researchers from different faculties to carry out interdisciplinary research and PhD education in Security, Reliability and Trust. The Centre also serves as an interface for external partners such as industries, government bodies, institutions, and international partners with an interest in this research field
- IPv6; Internet of Things, secure location-based services; privacy design
- Security and Trust is one of four priorities of Luxembourg University (SnT)
- March 2013: Google grant for SnT: Spying on spy apps

DATA PRIVACY: GOVERNANCE

Certified procedures, best practices, confidentiality



Uptime Institute

- 5 datacenters are Tier IV design certified
- 1 datacenter is Tier IV construction facility certified



Green Data Center Alliance

the green grid[™] member

PCI DSS COMPLIANT CERTIFIED

CODE OF CONDUCT DATA CENTRES Participant

BROADGROUP DATA CENTRES EUROPE

Datacenter Star Award Certificate

eco Mitglied

SAS 70

ISO/IEC 27001:2005 Certificate N°10-0019

HOSTING™ SAP PARTNER

ITIL

ISO

ENTREPRISE SOCIALEMENT RESPONSABLE

ISO 9001, 14001, 20000, 27001

ISO 14001 BUREAU VERITAS Certification

ISO 20000 BUREAU VERITAS Certification

SAP Pinnacle Awards 2009 WINNER

UKAS QUALITY MANAGEMENT 001