LIGHTNING TALK
CLOUD & DATA CENTERS & IRISH TECH HUB

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< AGENDA >

Data centers

Benefits of using cloud

Irish tech HUB

< DATA CENTER>

"A data center is a facility composed of networked computers and storage that businesses or other organizations use to organize, process, store and disseminate large amounts of data. A business typically relies heavily upon the applications, services and data contained within a data center, making it a focal point and critical asset for everyday operations."

< DATA CENTER ELEMENTS>

IT equipment:

- servers,
- storage subsystems,
- networking switches,
- routers,
- firewalls,
- cabling,
- physical racks

Infrastructure:

- supplemental power subsystems,
- electrical switching,
- uninterruptable power supplies,
- backup generators,
- ventilation,
- data center cooling systems,
- network carrier (telco) connectivity

Other:

- **Facility** – the location and the usable space
- **Physical Security Systems** – biometrics and video surveillance systems.
- **Operations staff** – to monitor operations and maintain IT and infrastructural equipment around the clock.

< CRTITICAL FACTORS>

1. Environmental factors

- (temperature, humidity, fire suppression, air flow, seismic and meteorological stability, access to roads and airports)

2. Security

3. Accountability

4. Policies & Monitoring

5. Scalability

6. Documentation

7. Organization

< ORGANIZATION >

< COST OF OWNERSHIP >

- Hardware
- Networking and bandwidth expenditures
- Cost of power (including redundant systems and their maintenance)
- Cooling costs
- Physical security
- Ongoing maintenance
- Software Investment
- Resource Management
- Utilization

initial capital expenditures vs. ongoing expenses

< TYPES OF DATA CENTERS >

enterprise (or "internal") vs. internet-facing data centers

or HYBRID CLOUD APPROACH

Benefits

Start small and expand as needed seamlessly and transparently

Providing dynamic environment

< VIRTUALIZATION >

"Virtualization is adding a level of automation, user self-service and billing/chargeback to data center administration. The goal is to allow individual users to provision workloads and other computing resources on-demand, without IT administrative intervention."

< CLOUD COMPUTING >

Delivery of hosted services over the internet.

Cloud computing enables companies to consume a compute resource, such as a virtual machine (VM), storage or an application, as a utility -- just like electricity -- through a network connection rather than having to build and maintain computing infrastructures in house.

< ADVANTAGES OF CLOUD COMPUTING>

- Regulatory compliant

- Access to additional functionality

- Reduced Downtime

- Advanced Security

- Disaster Recovery

- 'Accident' Proof

< ADVANTAGES OF CLOUD COMPUTING>

- Cost savings

- Security

- Flexibility

- Mobility

- Insight

- Increased collaboration

< ADVANTAGES OF CLOUD COMPUTING>

- Quality control

- Disaster recovery

- Loss prevention

- Automatic software updates

- Competitive edge

- Sustainability

< Google DATA CENTERS >

Americas
1. Berkeley County, South Carolina
2. Council Bluffs, Iowa
3. Douglas County, Georgia
4. Jackson County, Alabama
5. Lenoir, North Carolina
6. Mayes County, Oklahoma
7. Montgomery County, Tennessee
8. Quilicura, Chile
9. The Dalles, Oregon

Asia
1. Changhua County, Taiwan
2. Singapore

Europe
1. Dublin, Ireland
2. Eemshaven, Netherlands
3. Hamina, Finland
4. St Ghislain, Belgium

< WHAT IS A TECH HUB?>

"A unique environment, a type of utopia where everything happens faster, people are smarter and meeting investors is easier. A geographical location that encourages people from different areas of the IT landscape to gather from web designers to digital marketers, developers to angel investors. It is getting the right people together in a close environment, where ideas are given the space to germinate and fantastic things will happen."

< IS IRELAND EUROPE'S DATA CENTRE HUB? >

- **Ireland's location, Connectivity**
- **The Irish economy**
  - Low corporate taxes (12.5%)
  - Foreign direct investment (FDI) has been Ireland's primary market driver
  - Flexible labour laws, the technology infrastructure, transparent regulation
- **Highly skilled, educated, young workforce**
- **Growing network of incubators**
- **Bodies like Enterprise Ireland and IDA Ireland provide permanent support to startups**
- **Benefitted from investment by U.S. firms**
- **Renewable energy**

THANK YOU!

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