



Information Resilience

Seamus Galvin

Senior Market Analyst and
Product Innovation Manager,
BSI_Espion



Introduction....



Seamus Galvin

Innovation and Research Manager

Ireland | Information Technology and Services

Current BSI Espion

Previous Hydric Media, Space Time Research Pty

Education University of Limerick

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<https://ie.linkedin.com/in/seamusgalvin>

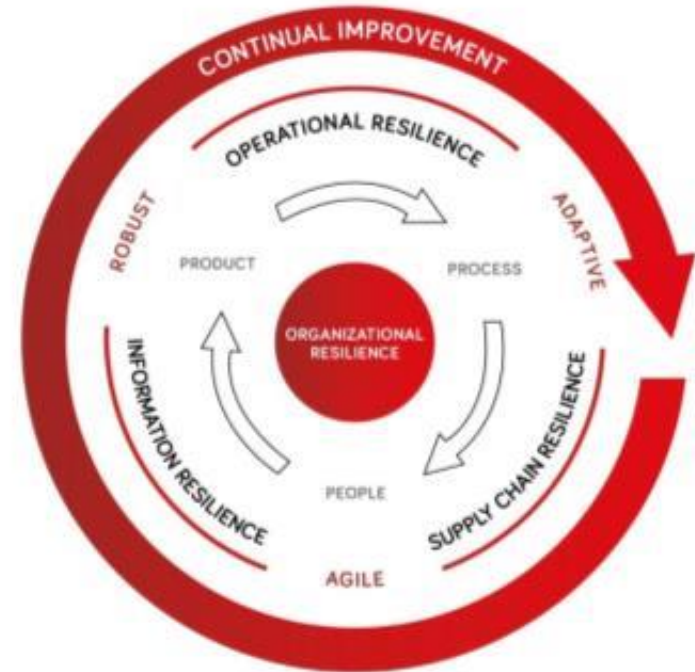


Dublin Office (Irlanda)

- Market/Commercial Analysis
- Innovation
- R&D

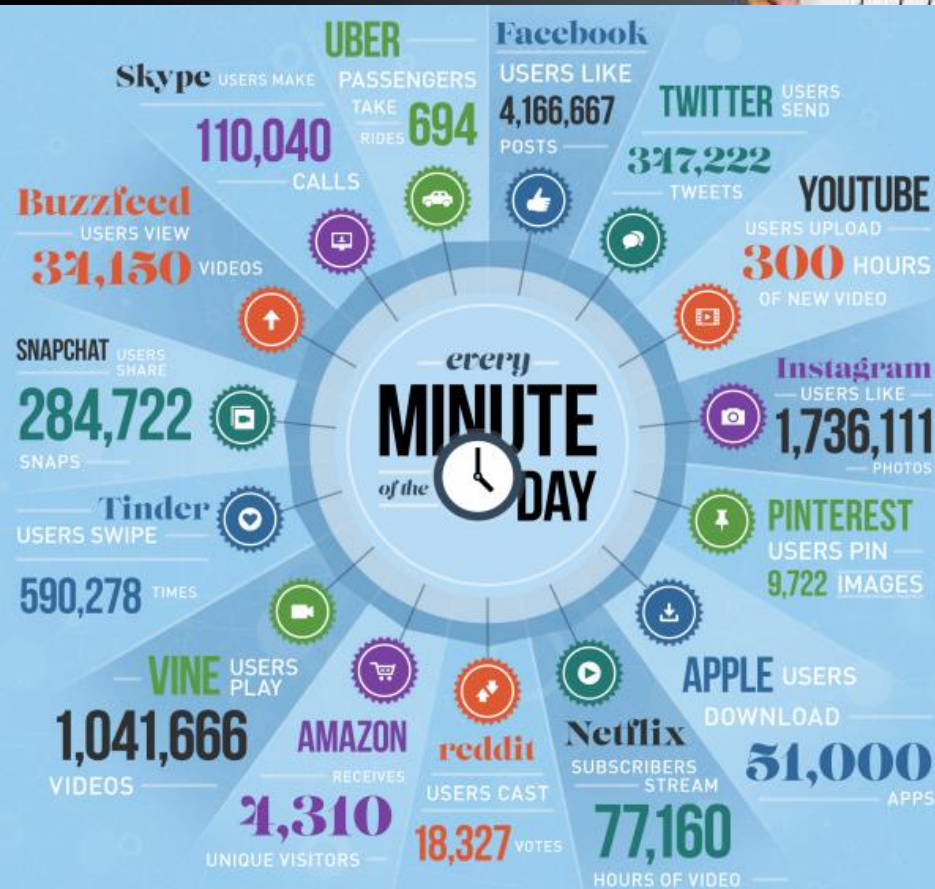
seamus.galvin@espiongroup.com

1. Information and Digital Transformation
2. Defining Information Resilience (IR)
3. IR Trends
4. IR Solutions and BSI's IR Portfolio



Information Overload.....

HELP



40+
"Zettabytes"
by 2020!

Exponential
year on year
growth

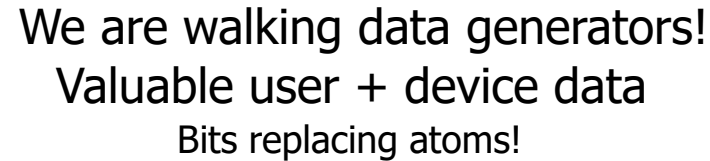
90% of all
global data used,
processed, stored
today was created
in last
2 years

WHAT'S A ZETTABYTE?

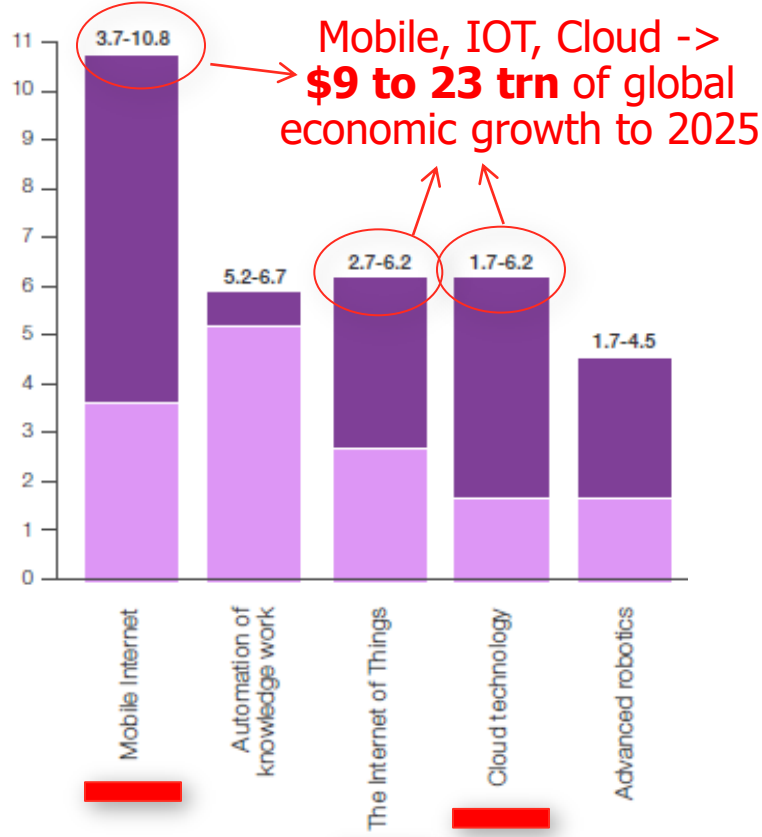
1 kilobyte	1,000 000,000,000,000,000
1 megabyte	1,000,000 000,000,000,000
1 gigabyte	1,000,000,000 000,000,000
1 terabyte	1,000,000,000,000 000,000
1 petabyte	1,000,000,000,000,000 000
1 exabyte	1,000,000,000,000,000,000 000
1 zettabyte	1,000,000,000,000,000,000 000 000



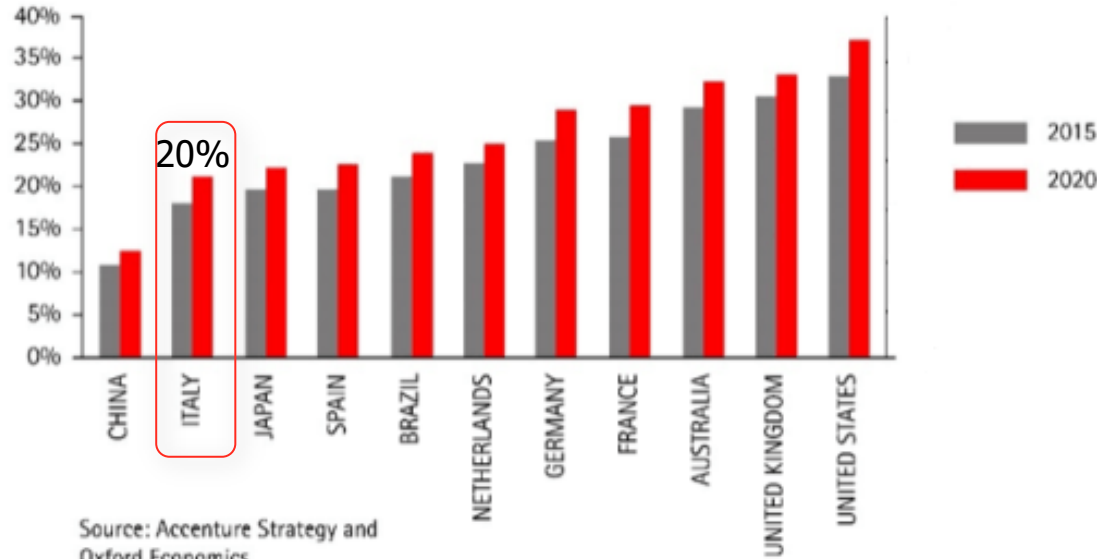
700 trn
Movies!

[illegible]

Growth in Digital Capital....

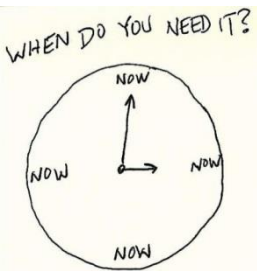


Digital share of gross domestic product (GDP), 2015 and 2020



One-quarter of global GDP by 2020
One-third of global annual GDP growth (i.e. 1/3 of 3% pa)
Information/Digitisation = Huge growth opportunity!

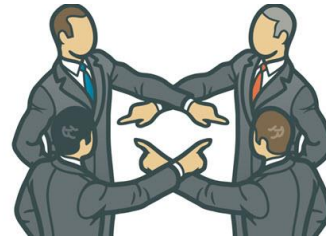
We're all enjoying the benefits...



**Instant Needs/
Desires
vs
Risk tensions**



Accountability, Responsibility, Obligations!



**Protecting
Infrastructure**



**Ensuring
Regulatory
Compliance**



**Enabling
Trust and
Reputation**



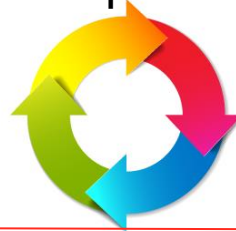
**Safeguarding
People**



Defining Information Resilience...

“....is the management of an organization's information including physical, Intellectual Property and digital, throughout its lifecycle, from source to destruction, allowing stakeholders to store, access and use information securely and effectively”.

Lifecycle Aspect



Creation
Processing
Storage
Dissemination
Destruction
etc

Containment Aspect



“Keeping info in”

Technology
People
Facilities
etc

**Value Generation
Focus**



**Security/Risk
Focus**

Defining Info Resilience

Today...

Digitised Converging Tech-centric



THE WHAT

Info Security/Resilience
=
Focus on
information/data

THE WHERE

Cyber Security/Resilience
=
Focus on the
internet/cloud/ecosystem

Broadening Focus



**SAFETY
PRIVACY
ACCEPTABLE USE
ETC...**



From Security to Resilience



**1990s/
2000s**



**DETECT
PREVENT**



**Earlier Gen
Info/Cyber Security**



TODAY



**RESPOND
IMPROVE**



**Not just the perimeter!
Like real/physical world**
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Rising Priority in Commercial Risk Register...

Allianz Risk Pulse

Allianz Risk Barometer Top Business Risks 2016

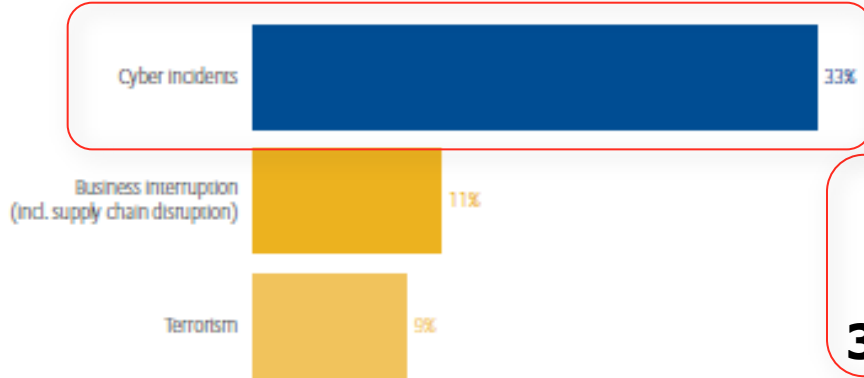
~\$500bn
Annual cost
of
Cybercrime
(source: Allianz)

500m
Personal
Records
stolen or lost
(2015)

Top 3 Business Risks



What are the top emerging risks for the long-term future (10yrs+)



Up from
15th
place
3 years ago

High Profile Incidents....

February 29, 2016

US Gov confirms Ukraine power outages were caused by cyber-attack

Bangladesh Bank official's computer was hacked to carry out \$81 million heist:

Business ▶ Law

Safe Harbour ruled INVALID: Facebook 'n' pals' data slurp at risk

Time to get off the jet ski and get the lawyers on the blower

Fiat recalls over 1.4m vehicles after jeep hacked

Hacking Team hacked: firm sold spying tools to repressive regimes, documents claim

Cybersecurity firm has 400GB of what purport to be its own documents published via its Twitter feed after hack

EU-US Privacy Shield open for sign ups from today

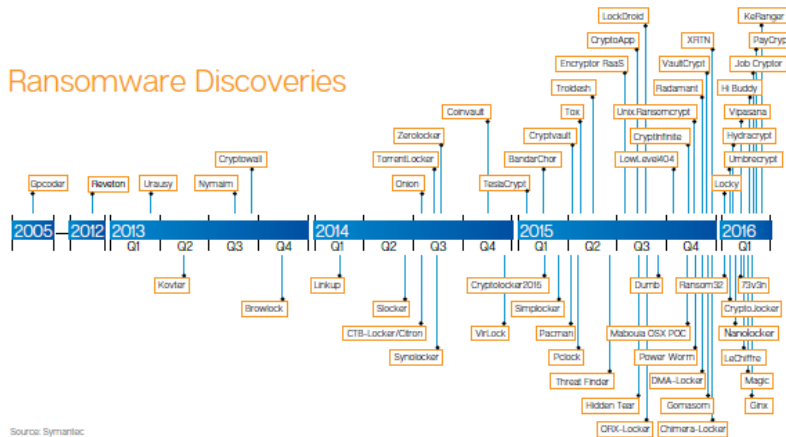
Posted Aug 1, 2016 by [Natasha Lomas \(@riptari\)](#)



ADVERTISEMENT

(Crypto) Ransomware....

Ransomware Discoveries



Source: Symantec



**Encrypt device
on app
download!**

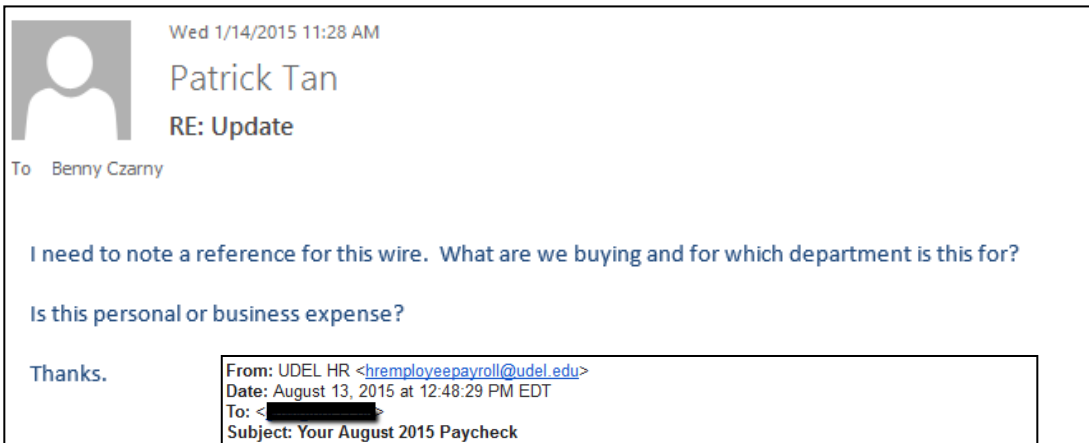
**Cryptowall
strain
€250m+**

(source: Cyber Threat Alliance)



**File level
Entire device!**

Spear-Phishing



Hello,

We assessed the 2015 payment structure as provided for under the terms of employment and discovered that you are due for a salary raise starting August 2015.

Your salary raise documents are enclosed below:

[Access the documents here](#)

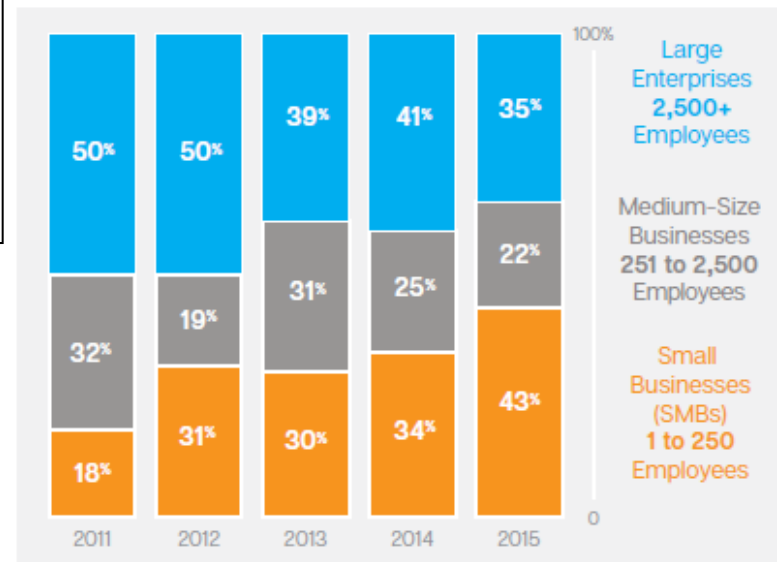
Faithfully

Human Resources

University of Delaware

Spear-Phishing Attacks by Size of Targeted Organization

- Attacks against small businesses continued to grow in 2015, although many of these attacks were directed to fewer organizations, increasing by 9 percentage points.



(Source: Symantec)

Websites/Online....

Web Server Vulnerability



Website is vulnerable



Visitors are vulnerable



Online trust + reputation!

3 in 4

“popular” sites have
vulnerabilities
(15% critical!)



Browser
vulnerabilities

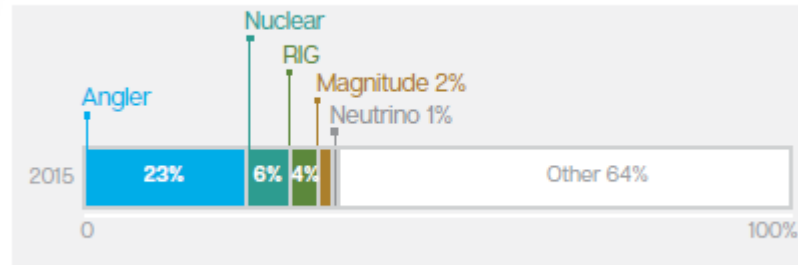
activex



ADOBE FLASH

Plug-in
vulnerabilities

Top Five Web Attack Toolkits



Implementing Info Resilience (within Org Resilience)

ASSETS	<u>Critical</u> Information Categories/Silos/Assets? Profiles of each (CIA, Privacy, Safety, Acceptable Use, etc)
ACCESS	<u>Who</u> has access to what (Employers, Suppliers, Contractors, Partners, Regulators, etc)
STORAGE	<u>Units/Zones</u> upon which information resides (People, Devices, Facilities etc)
PROCESSING	Units upon which info/data <u>is processed</u> (Systems, Applications, Brains)
TRANSFER MECHANISMS	<u>Environment</u> in which info/data is transferred (IT Networks, Transportation Infrastructure, etc)

Appropriate IR Management Systems

Risk-Based

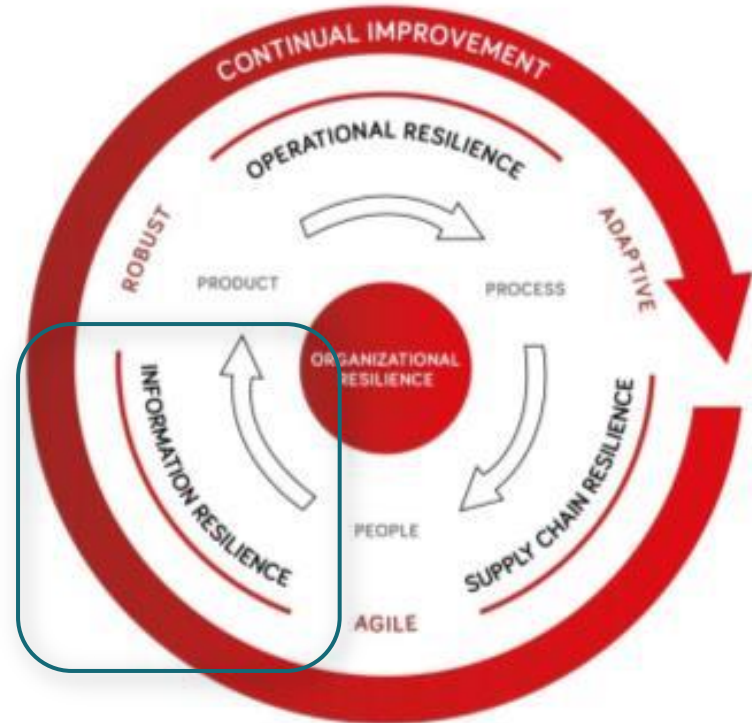
Control Identification and Remediation

BSI's Information Resilience (IR) Portfolio

KNOWLEDGE → RESEARCH → ADVISORY → ASSURANCE → SOLUTIONS → TRAINING

End-to-End Support

6 Key Areas



In summary

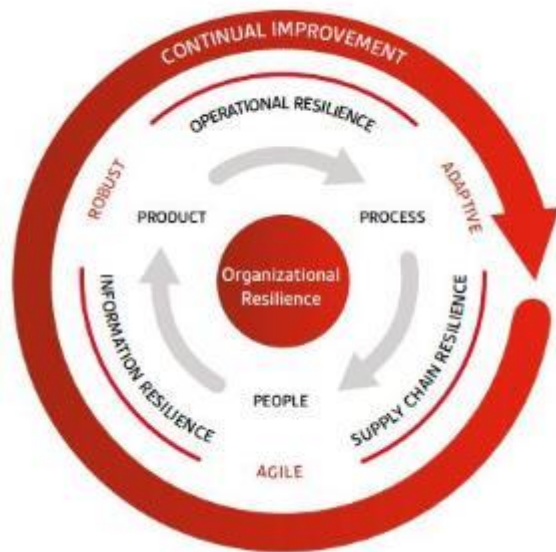
Protecting
Infrastructure



Ensuring
**Regulatory
Compliance**



**Information Resilience (IR) is
a key factor in business
success as digital
transformation and Digital
Capital grow in organisations.**



Enabling
**Trust and
Reputation**



Safeguarding
People



THANK YOU