The Role and Future of Information Management
& Technology in the Environmental Industry

Sustainable
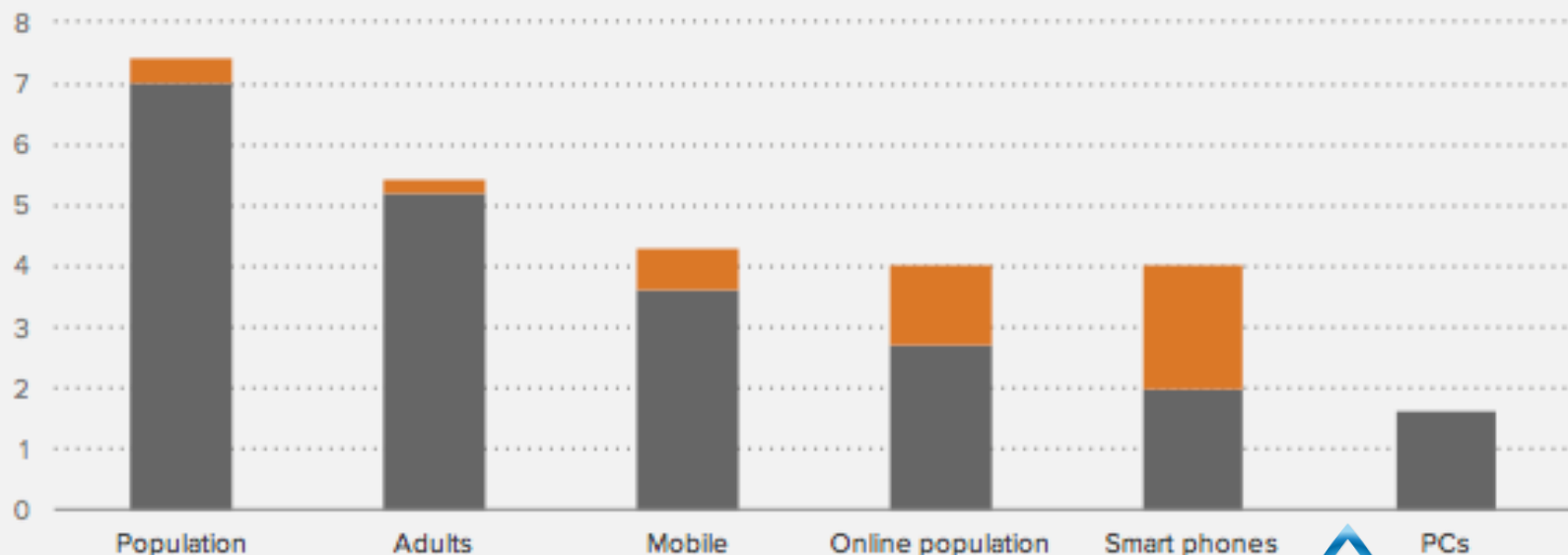Elements

The Program

- The Connected World

- Redefining Data

- Modern Tech

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The world in 2020

By 2020 80% of adults on earth will have a smartphone

Global population (bn)

Worldwide Smart Connected Device Forecast*
Market Share by Product Category, 2012-2017

20%
productivity

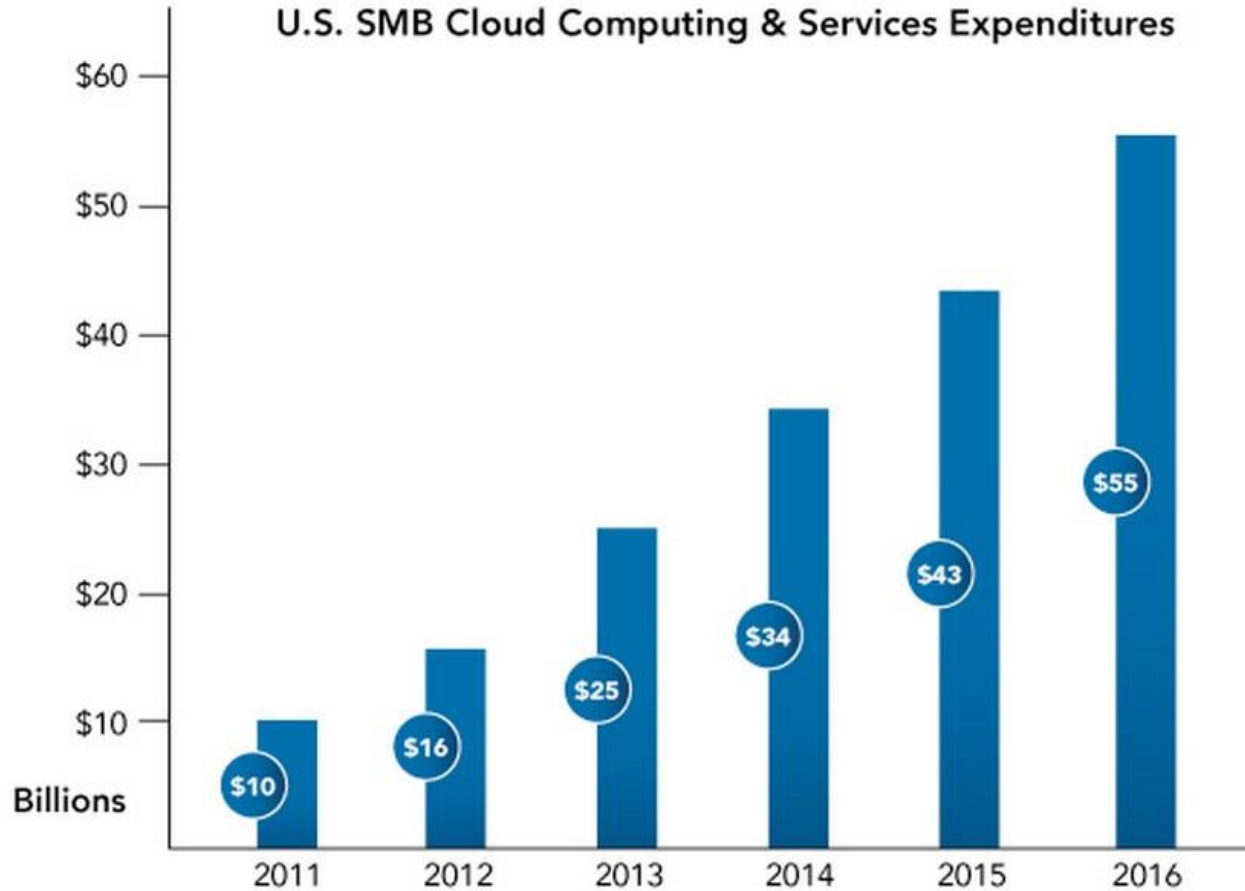Sustainable
Elements
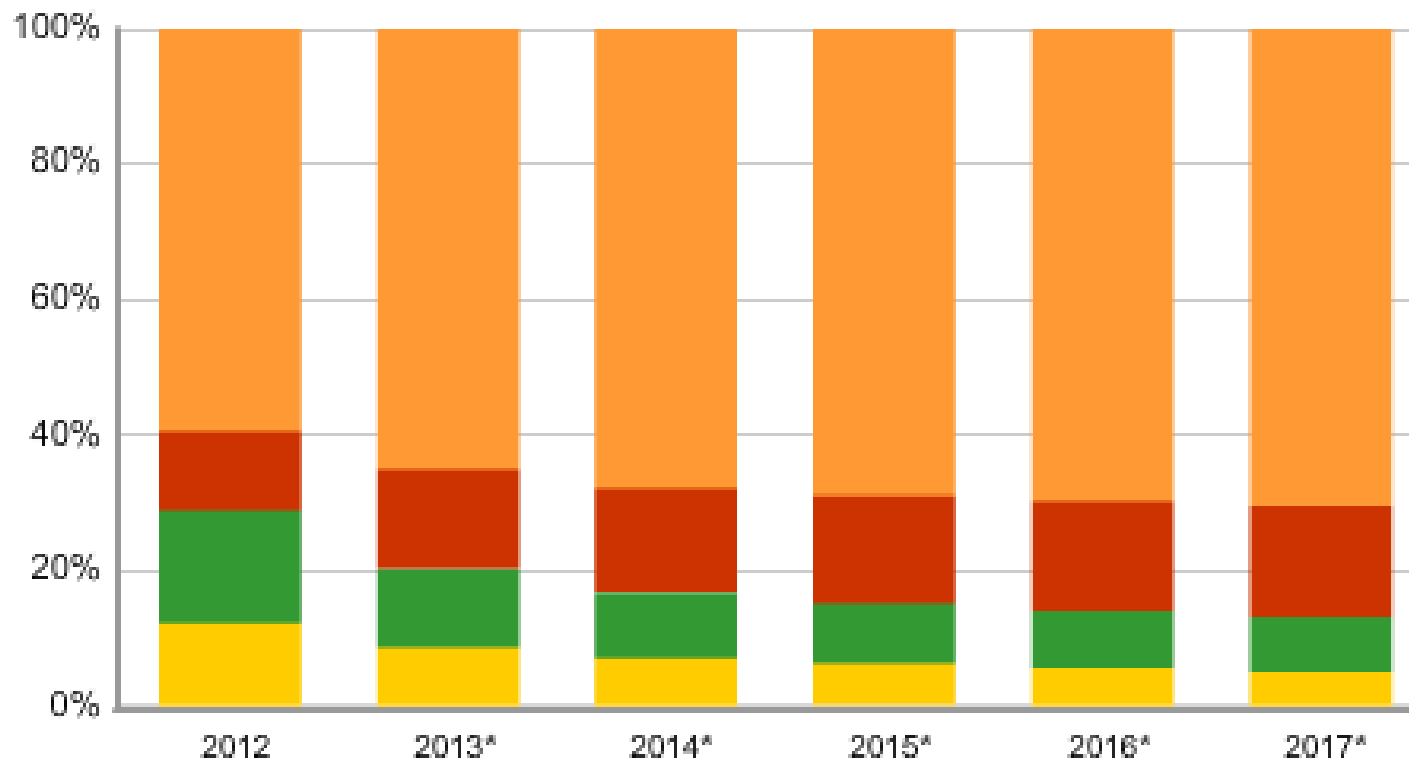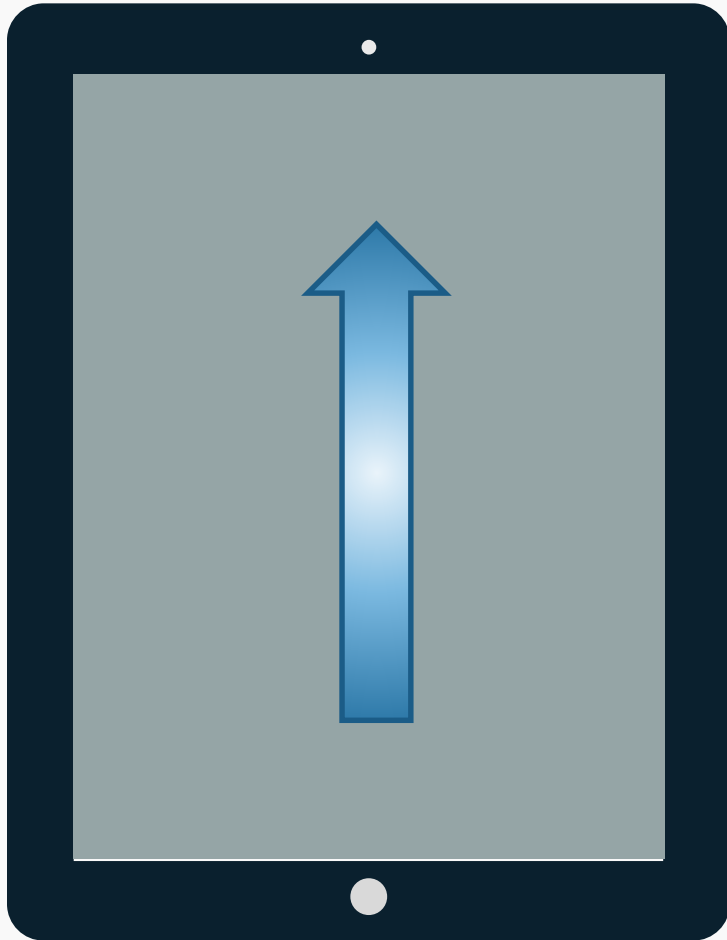
U.S. SMB Cloud Computing & Services Expenditures

Source: Compass Intelligence

Are you using the Cloud ?

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How is your business evolving?

Innovation is Accelerating in IT

Timeline of New Technologies Introduction and Inventive Activity in the ICT Industry.

Number of Patents Filed

400k

300k

200k

100k

AutoCAD - 1982
Excel - 1987
Visual MODFLOW - 1989
GIS - 1990

EDMS - 1994

Cloud CRMs - 2001
Google Earth - 2001
Quantum GIS - 2002
Augmented Reality - 2004

Web imagery services - 2009

Mobile Applications 2004 - present

1990 - 1994: 2G, MP3, Tele-Presence, 3.1 mln transistors, Voice over IP, Internet search, 1st web browser, 1st ENGINE, World Wide Web

1995 - 1999: 42 mln transistors, e-commerce, SIP, v6, 1st smartphone, online encryption, 1st virtual operating SYSTEM, Network Storage, Flash, PDA, DVD/ MPEG-2/4, P2P FILE SHARING, 3G, webmail, 1st Wi-fi

2000 - 2004: 1st mobile GPS, chip, Online, Video, communication, Videoconferencing, Wikipedia, Digital Media Store, e-books, Machine-to-Machine communication, general, 55 min, Gbit Ethernet, DSL STANDARD, wi-fi location, HTML 5, LBS

2005 - 2009: 4th generation, wi-fi, 3.5G, 3D TV, Silicon photonics, MUSIC streaming, CLOUD, Self-Organizing Network, Mobile App Stores, Operating Systems, 1.16 bln transistors, entreprise, social networks, online, NoSQL, VoD, VP8, FLUID COOLING, BIG DATA, infrastructure, 100 Gbit Ethernet standard, 1st netbook, MUL, tablets, NetPositioning, CLOUD STORAGE, Cloud Computing

2010 - 2014: 400Gbps, 1.4 bln, Dash7, 4TB HDD, Quantum computing, Connected Car, Operating Systems, Network function virtualization, VISIBLE LIGHT, Cloud, LAN, Centric Networking, SILICON photonics, WIFI, 4M, 4G, SEMANTIC WEB, cognitive chips, communication, information, Wi-Fi, WEARABLE COMPUTING, H.265, VP9, DAALA, HOMO-MORPHIC ENCRYPTION, 1st smart watch, 5th generation

Year Range

1990 - 1994   1995 - 1999   2000 - 2004   2005- 2009   2010- 2014

Computing | Consumer | Storage | Mobility | Networking | Internet

Note: The information is merely a general characterization for illustrative purposes

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DATA
of all Types

Start with Storage

5 Questions

Cost

Productivity

Security & Uptime

Access

Competitive Advantage

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On Premise

Sustainable Elements
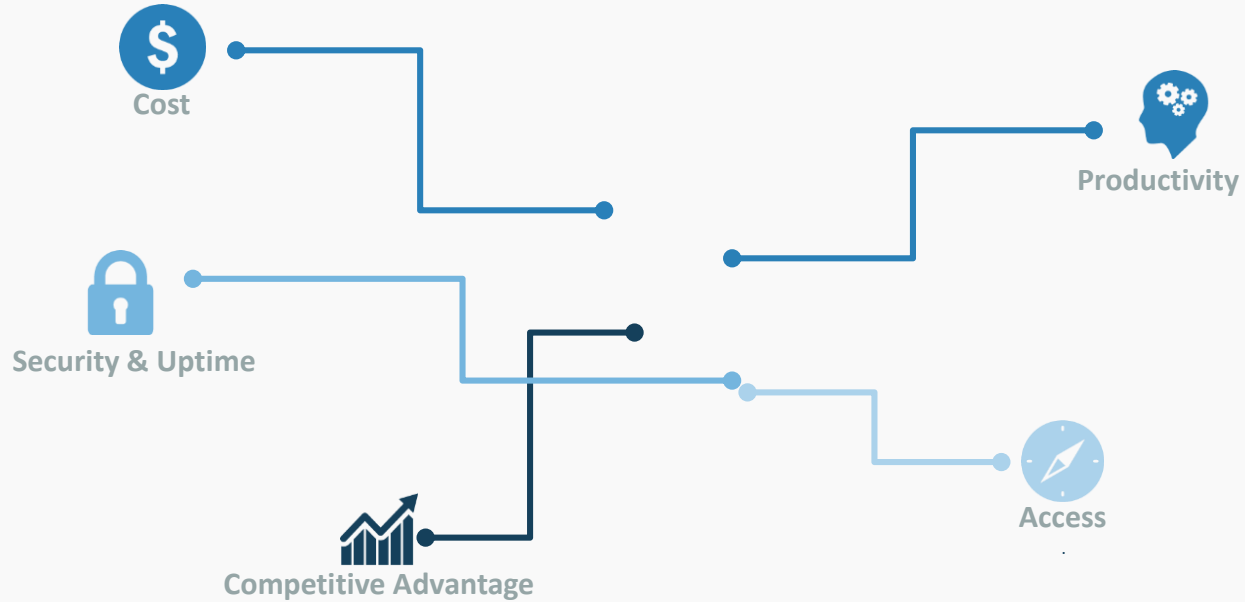
What's your recovery time?

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THE
CLOUD

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Elements

Does My Company Need the Cloud

5 Answers

Cap – Ex Free

No capital expenditure

Increased Productivity

Investments in cloud collaboration technology have a **significant ROI**

Security & Uptime

No hardware to steal or replace. Nearly **guaranteed** uptime, with **4x faster recovery** compared to in house IT.

Competitiveness

SMEs now have access to **enterprise class technology** gaining them a strategic advantage over LARGE companies

Anytime, Everywhere

42% of working adults would take a **pay cut** if they could telecommute

.

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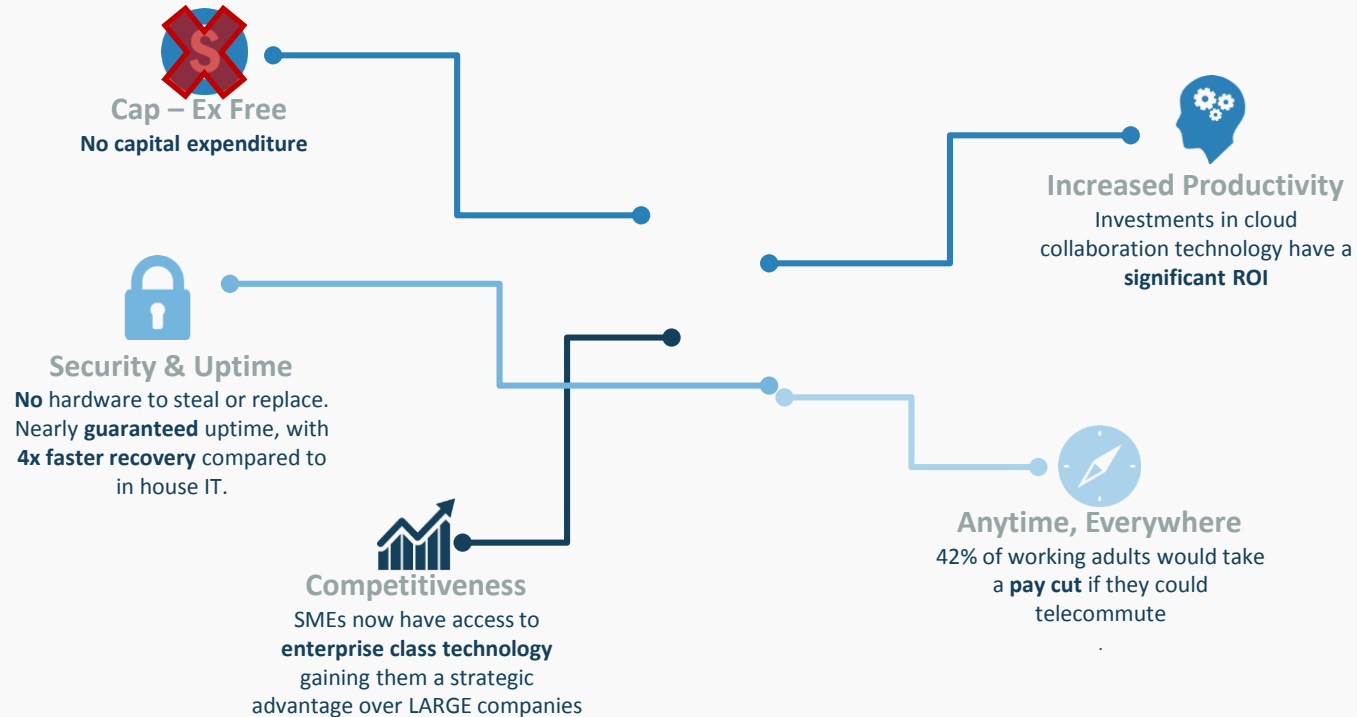
Still not convinced

They are...

As well as 47 of the top 50 Fortune 500 companies
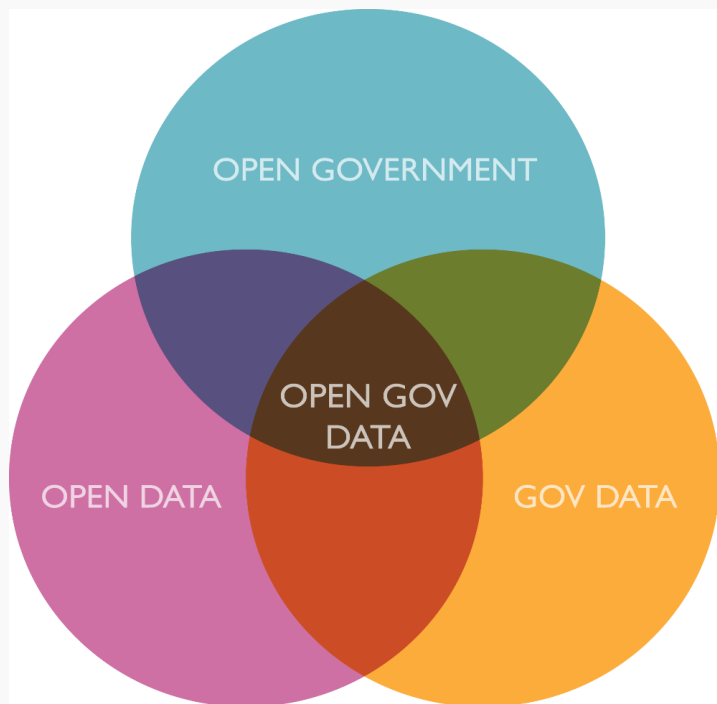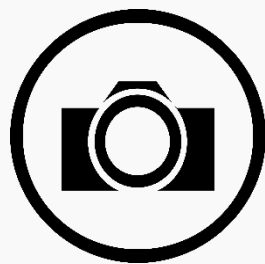
Imagery

Google Earth

Web Imagery Services

© 2015 Cnes/Spot Image
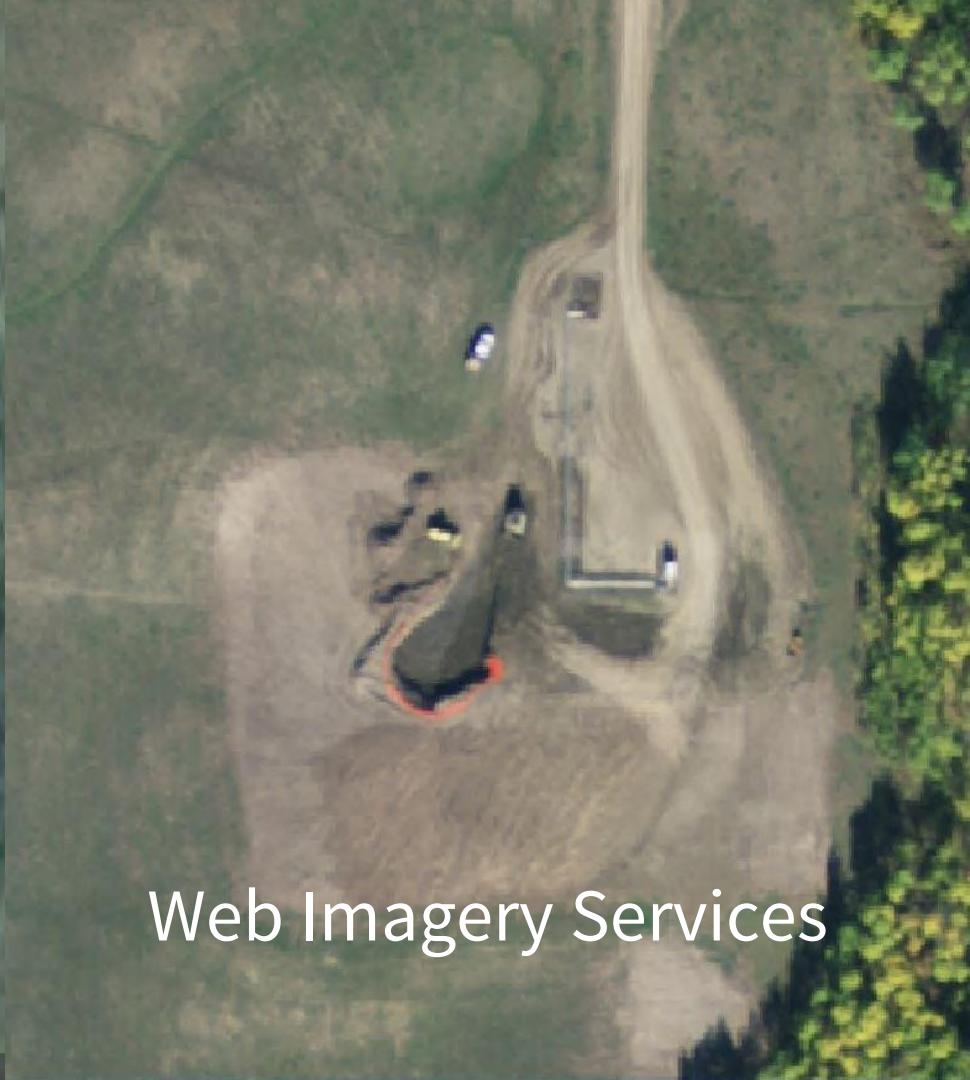
Drones

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Taken at
300ft
&
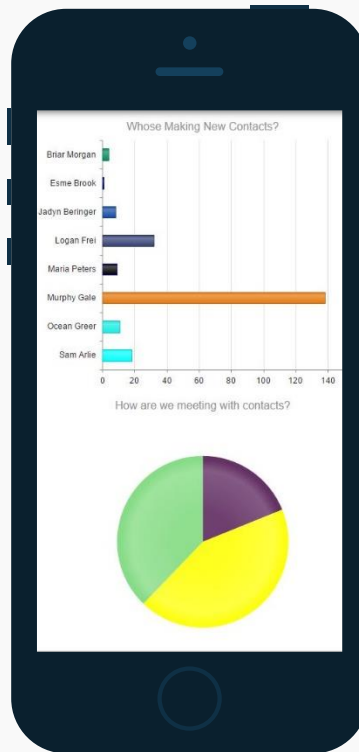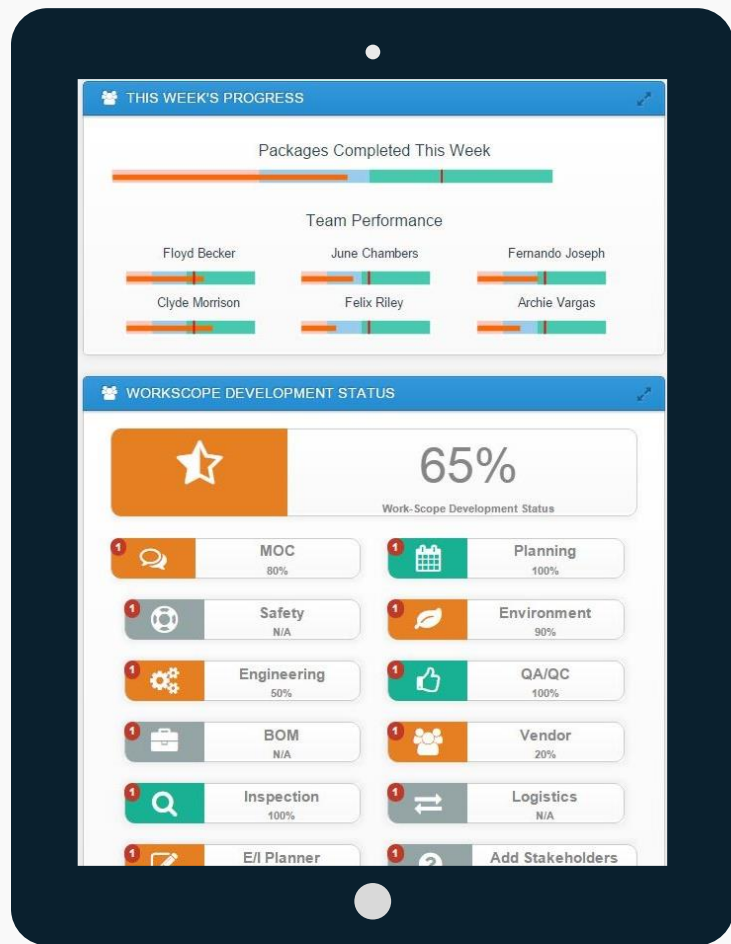Up to 2km
Away

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Elements

Nixie – a wearable drone

Winner of 2014 Intel award.

So my data is in the Cloud what can I do with it?

Analytical Results

SOPs & POPs

Client Management

Documents

Project Information

Spatial Information

THIS WEEK'S PROGRESS

Packages Completed This Week

Team Performance

Floyd Becker　June Chambers　Fernando Joseph

Clyde Morrison　Felix Riley　Archie Vargas

WORKSCOPE DEVELOPMENT STATUS

65%
Work-Scope Development Status

MOC 80%	Planning 100%
Safety N/A	Environment 90%
Engineering 50%	QA/QC 100%
BOM N/A	Vendor 20%
Inspection 100%	Logistics N/A
E/I Planner	Add Stakeholders

Whose Making New Contacts?

Briar Morgan
Esme Brook
Jadyn Beringer
Logan Frei
Maria Peters
Murphy Gale
Ocean Greer
Sam Arlie

0　20　40　60　80　100　140

How are we meeting with contacts?

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Only possible with the Cloud

Augmented Reality

BC Oil and Gas Commission Summary

Oil and Gas Facility Summary

Search Summary	
Oil and Gas Facilities Within 500m: 1	Oil and Gas Facilities Within 1km: 7

Facility	Class	Authorized	Terminated	Distance (m)
GROUNDBIRCH 04-02-079-19	TF	12/7/2006	2/3/2007	195
GROUNDBIRCH 13-34-078-19	TF	11/9/2006	2/3/2007	591
GROUNDBIRCH 16-33-078-19	TF	10/1/2007	10/17/2007	668
GROUNDBIRCH 02-03-079-19	TF	3/1/2006	3/4/2006	751
SHELL GROUNDBIRCH 02-03-079-19	TF	1/1/2006	4/30/2006	751
SHELL GROUNDBIRCH 15-33-078-19	TF	11/22/2005	6/14/2011	937
SHELL GROUNDBIRCH 10-03-079-19	TF	10/24/2005	1/13/2006	970
GROUNDBIRCH 06-03-079-19	TF	12/5/2008	12/8/2008	1,163
GROUNDBIRCH 06-03-079-19	TF	11/22/2008	11/28/2008	1,163
SHELL GROUNDBIRCH 11-03-079-19	B	11/19/2002	10/9/2003	1,306
SHELL GROUNDBIRCH 11-03-079-19	TF	3/19/2007	6/14/2011	1,306
SHELL GROUNDBIRCH 08-33-078-19	TF	9/27/2006	2/27/2011	1,444
GROUNDBIRCH 08-33-078-19	TF	4/7/2008	4/30/2008	1,444
SHELL GROUNDBIRCH 04-11-079-19	TF	12/8/2003	1/17/2004	1,454
SHELL GROUNDBIRCH 06-34-078-19	TF	8/13/2004	10/7/2004	1,487
SHELL GROUNDBIRCH 02-10-079-19	TF	12/28/2007	6/14/2011	1,624
SHELL GROUNDBIRCH 13-33-078-19	TF	7/18/2003	10/1/2003	1,653
GROUNDBIRCH 13-33-078-19	TF	12/6/2007	12/23/2007	1,653
SHELL GROUNDBIRCH 07-34-078-19	TF	2/23/2006	5/17/2006	1,663
SHELL GROUNDBIRCH 03-10-079-19	TF	3/8/2004	6/14/2011	1,845
GROUNDBIRCH 13-03-079-19	TF	3/8/2008	4/25/2008	1,868
GROUNDBIRCH 03-34-078-19	TF	2/26/2006	3/1/2006	1,880
SHELL GROUNDBIRCH 07-10-079-19	B	3/1/1994	9/1/2002	1,994
SHELL GROUNDBIRCH 16-32-078-19	B2	10/19/1999	No Information Available	2,036
SHELL GROUNDBIRCH 16-32-078-19	TF	1/12/2005	2/11/2005	2,036
SHELL GROUNDBIRCH 16-32-078-19	TF	7/15/2005	6/14/2011	2,036
SHELL GROUNDBIRCH 05-33-078-19	TF	2/27/2002	6/14/2011	2,089
SHELL GROUNDBIRCH 16-04-079-19	TF	8/20/2004	11/4/2004	2,219
SHELL GROUNDBIRCH 13-27-078-19	TF	3/26/2004	7/5/2004	2,223
GROUNDBIRCH 16-28-078-19	TF	2/25/2005	4/11/2005	2,245
GROUNDBIRCH 15-27-078-19	TF	8/16/2006	9/4/2006	2,393

Focus

BC Oil & Gas Pipelines and Incidents

SHELL - 04-02-079-19

55.8140376786226, -120.869288125935

Search Date: 10/9/2015   Scale: 1:10,000

Data compiled using Focus

Data Source: BCOGC, BC Data Distribution Service, IHS Superpipes (demo data)

Legend
- ★ Site
- ▲ Pipeline Incidents (BC OGC)

Pipelines (BC OGC)
- ++ Abandoned
- ++ Active
- ++ Discontinued
- ++ Inactive
- ++ Not Approved
- ++ Operating
- ++ Registered
- ++ Removed
- ++ To Be Constructed
- ++ Unknown
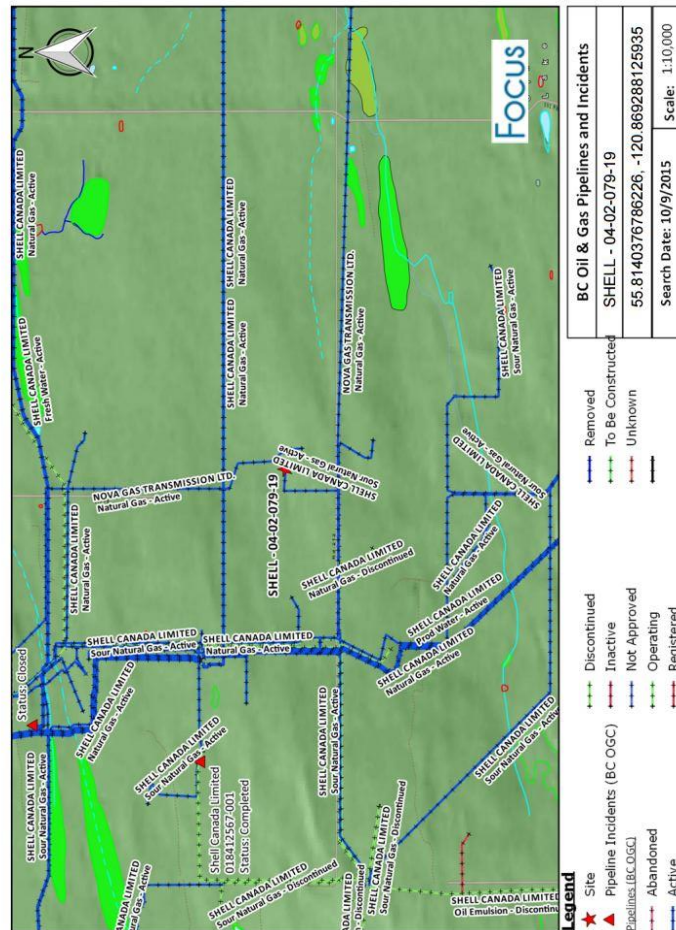
Treaty Lands
0
Results Found
N/A
Distance to Nearest Result

Treaty Related Lands
0
Results Found
N/A
Distance to Nearest Result

Reserves
0
Results Found
N/A
Distance to Nearest Result

Electoral Districts (2014)
1
Results Found
Within Boundary
Distance to Nearest Result

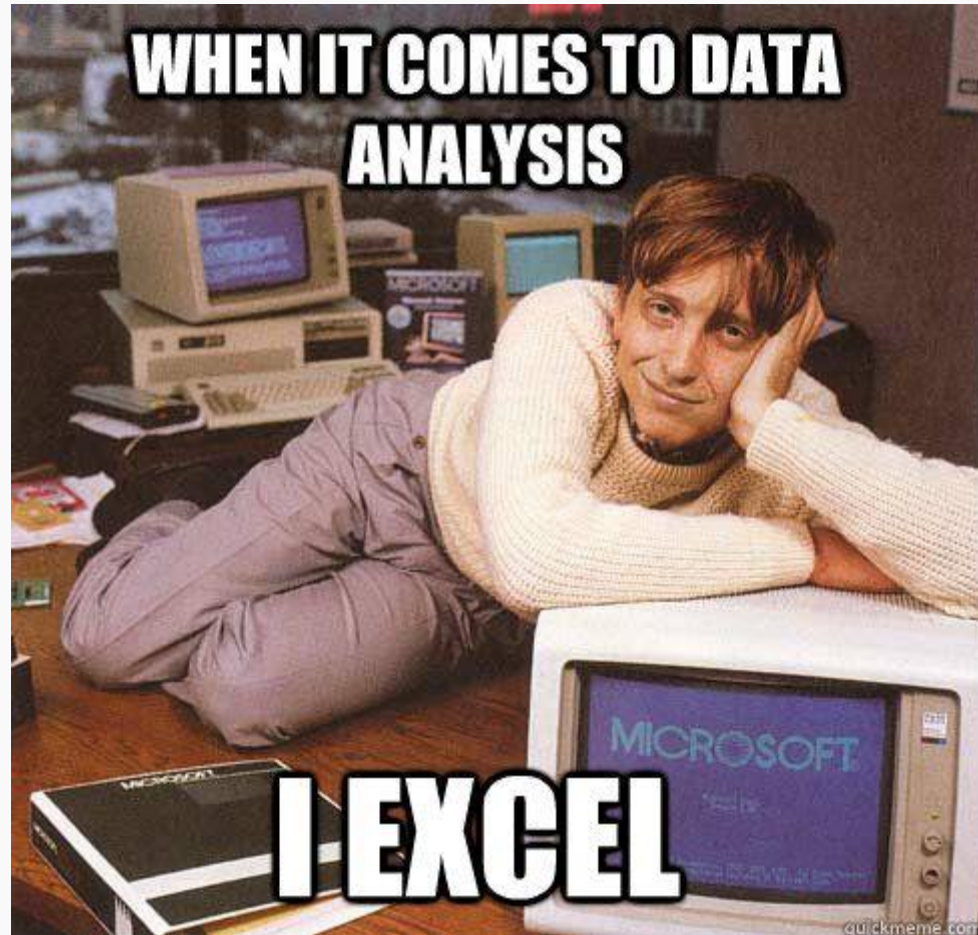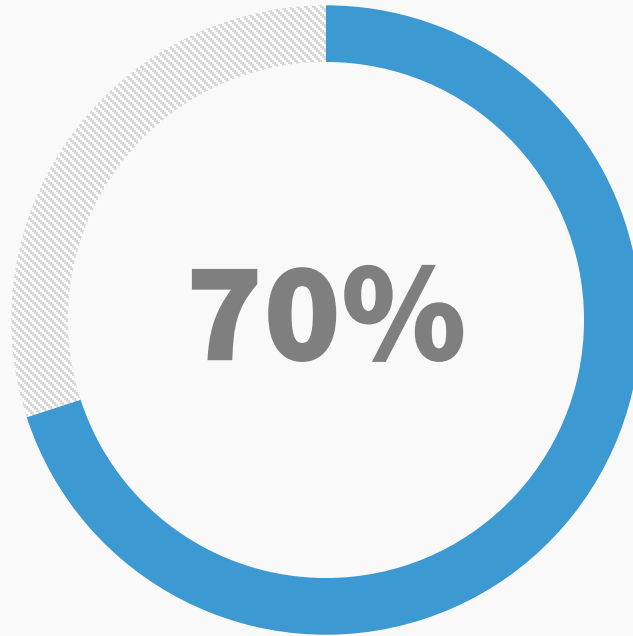Sustainable Elements

We can use Excel to manipulate the data, right?

… "if it is your goal to maintain data integrity in a format that can be accessed by multiple users"…Don't use Excel!

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Vulnerable to mistakes

Sorting = Data Corruption

Cannot be shared safely

Time consuming to manage

Slow searching

No relationships

No reliable automation

Intelligent Systems

Systems that bridge areas of your business in meaningful ways

01
Free data bound in reports

02
Bridge silos with
one data entry point

03
Eliminate monkey jobs

04
Increase Responsiveness

05
Total Quality

06
Historians in a time of change

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Intelligent Systems

Manage | Plan | Analyze | Visualize | Map
Deliver| Collaborate | Predict

How is your business evolving?

Don't be the last to know

Sustainable Elements

Carlos da Ponte MEM|EP – Director & CEO

cdaponte@sustainableelements.ca

FishPond

Client Management

Elements

Business Processes & Lab Data Management

Focus

Spatial Risk Analysis

Innovative Ideas + Technology = Your Business Optimized

www.sustainableelements.ca