Global Knowledge ®

Impact of the Digital Revolution
Presented by Andrew Ford

WHAT IS THE DIGITAL ECONOMY

The new normal

By 2020, every company will be an IT company and every leader will be a digital leader..."digital is the business; the business is digital.

Peter Sondergaard,

SVP and Head of Research - Gartner

Andrew Ford
Client Solutions Specialist

Microsoft Technical Trainer

Learning Consultant

Senior Support Technician

Computer Forensic Investigator

Robotics Technician

Support Analyst

Non traditional competitors

Change moves at high speed

Netflix

- Est. 1997
- July 2015, Netflix reported its subscriber count reached 65.55 million, with 42.3 million in the U.S. and 23.35 million internationally
- Currently developing original content to compete with the major studios

BlockBuster

- First Blockbuster store opened October 19, 1985
- Viacom purchased Blockbuster for $8.4 billion
- 2000, the company turned down a chance to purchase the still fledgling Netflix for $50 million
- Bankrupt September 23, 2010

Netflix

Disrupting

- **Traditional TV viewing habits**
- **Home Movie distribution**
- **Motion Picture and Television Studios**

Competitors

- **ABC, Acorn TV, Amazon Video, CBS, Crackle, Disney, Epix, FeeIn, FilmOn, Fox on Demand, HBO GO, Hulu, NBC Direct, NimbleTV, OVGuide, Popcornflix, PBS, Roku, Sling TV, Vudu, YouTube**
- **More and more arriving everyday**

Disrupter or disrupted

- **What is the future for you company?**
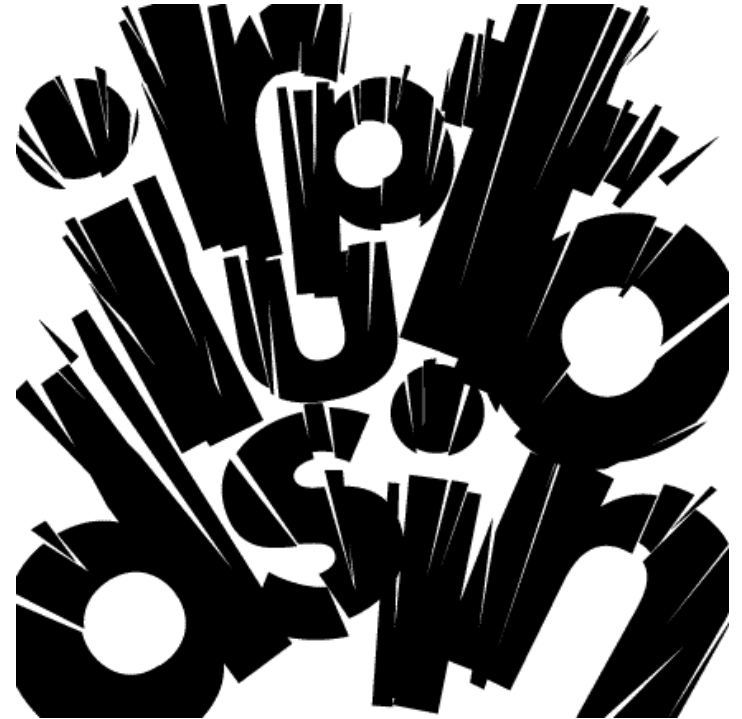
Disruption doesn't mean destruction

- **Evolve and adapt**
- **Disruption can be good and should be encouraged**
- **Be careful technology and society don't evolve faster than your company's ability to adapt.**

Is your industry being disrupted?

- **Recognizing disruption is the first challenge**
- **Sometimes the competition isn't clear**
- **Sometime the impact isn't recognized until too late**

"If the rate of change on the outside exceeds the rate of change on the inside, the end is near."
— Jack Welch

Considerations for digital projects

- **Applications**
- **Big Data**
- **Security**
- **Privacy**

Applications Drive Digital Businesses

87 per cent (global IT Leaders) said mobile apps are important to realizing the full benefits of Digital. – Accenture, October, 2015

More Stats on Apps

45 % of Canadian consumers are using apps to make at least one financial transaction every day

94 % of executives say they're facing increased pressure to release apps more quickly

85 % of Canadian companies say that mobile apps will be the dominant interface of the future – Accenture, October 2015
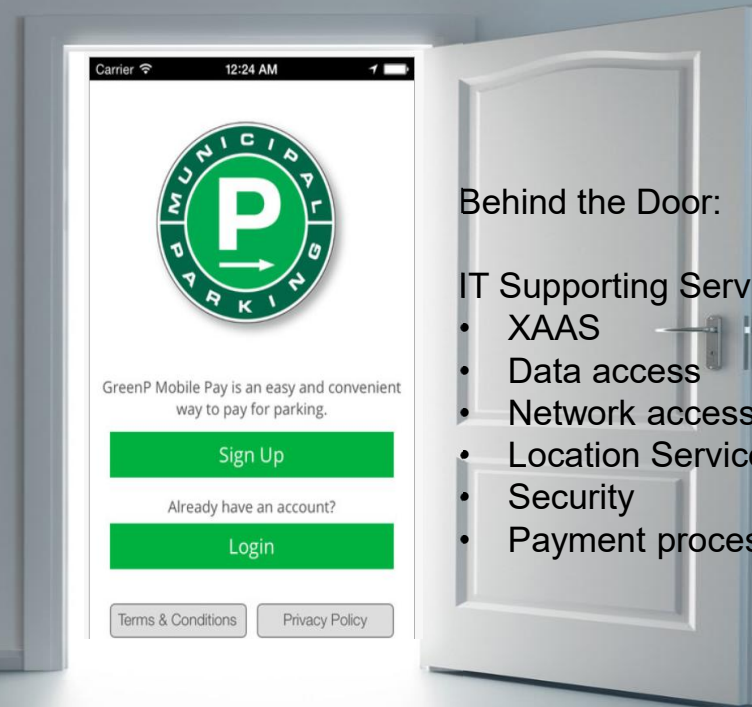
87 % (global IT Leaders) said mobile apps are important to realizing the full benefits of Digital. – Accenture, October, 2015

The average enterprise has now deployed between 8 and 15 mobile apps to employees alone, Gartner, Sept 2015

What's in front and What's behind an App

What you see:

Customer experience
Usability
Marketing
Value

Behind the Door:

IT Supporting Services
- XAAS
- Data access
- Network access (SIM card)
- Location Services (GPS)
- Security
- Payment processing

App delivery is another IT project – with a strong customer experience focus

"It's important to have IT systems able to track requirements, whether it's an agile waterfall or SDLC process.

This needs to be run like <u>any other IT project</u> with these phases: Planning, Analysis, Design, Build, Test."

Bhattacharya, Accenture Canada 2015

From the dawn of civilization until 2003, humankind generated five Exabyte of data.

Now we produce five Exabyte every two days...and the pace is accelerating.

Eric Schmidt, Executive Chairman, Google

What is Big Data?

Big data is a broad term for data sets so large or complex that traditional data processing applications are inadequate.

- Wikipedia

Structured Data

● **Data that resides in a fixed field within a rational database or spreadsheet**

Unstructured Data

- **Information that doesn't reside within a structured field or record (database)**
  - **Emails**
  - **Documents**
  - **Video**
  - **Photos**
  - **Audio**
  - **Webpages**
  - **PowerPoint Presentations**
- **Experts estimate that up to 90% of the average organization's data is unstructured.**

Where does the data come from

Datafication is a modern technological trend turning many aspects of our life into computerised data and transforming this information into new forms of value.
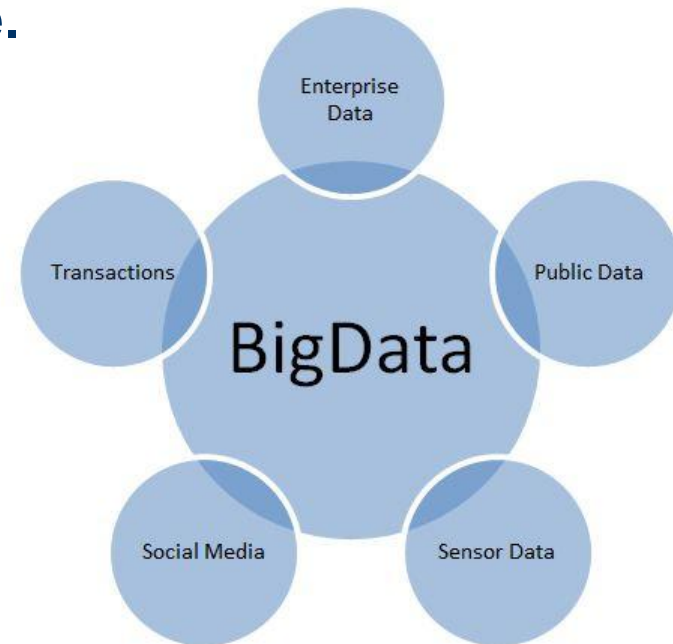
You create data about yourself every day:

- Email
- Internet Browser
- Facebook
- Twitter
- Instagram
- Visa transactions
- Text message
- Smart watches
- Photos and videos updated
- CCTV
- Apps
- WIFI connections

- Cell tower connections
- Internet of Things
- Cable service
- Purchase history
- Loyalty programs
- Selling data for se...
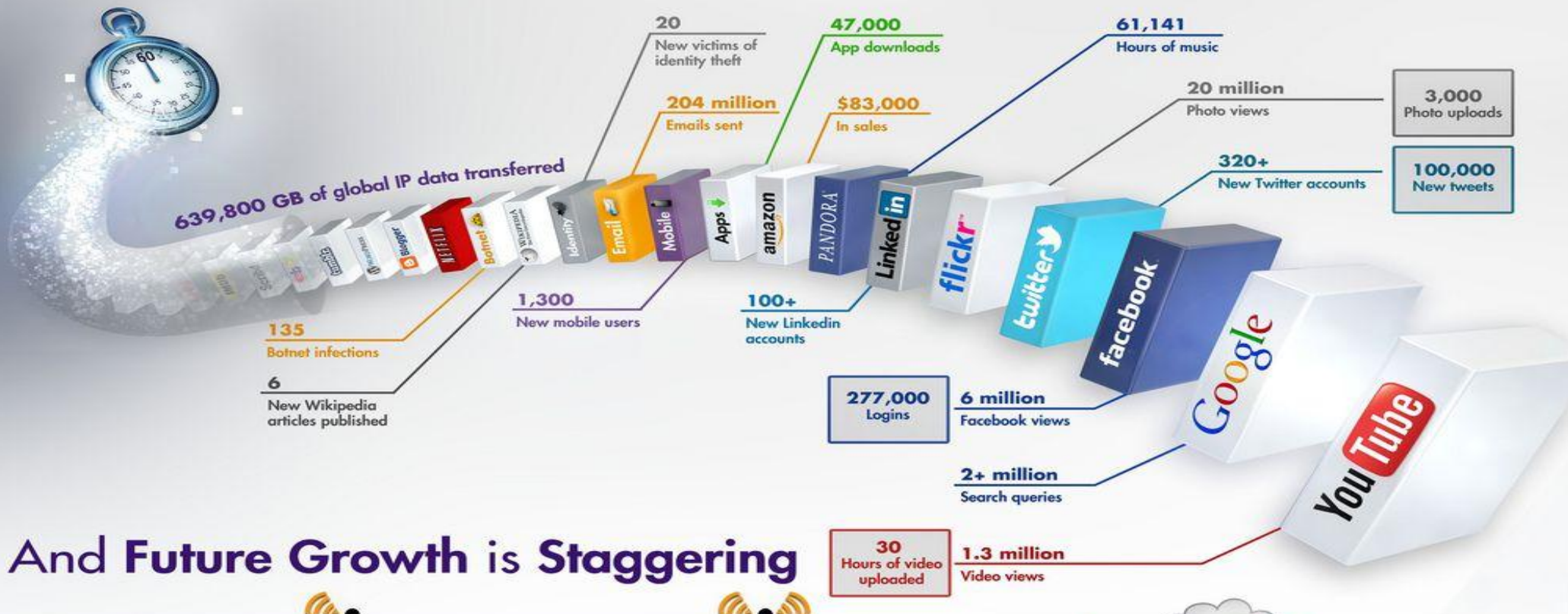
Data Data Everywhere

- **Twitter receives 500 million tweets per day**
- **20 hours of YouTube video is uploaded every minute**
- **700 Billion minutes are spent on Facebook each month**
- **73 items are ordered from Amazon every second**

What Happens in an **Internet Minute?**

20
New victims of identity theft

47,000
App downloads

61,141
Hours of music

20 million
Photo views

3,000
Photo uploads

204 million
Emails sent

$83,000
In sales

320+
New Twitter accounts

100,000
New tweets

639,800 GB of global IP data transferred

1,300
New mobile users

100+
New Linkedin accounts

135
Botnet infections

6
New Wikipedia articles published

277,000
Logins

6 million
Facebook views

2+ million
Search queries

And **Future Growth** is **Staggering**

30
Hours of video uploaded

1.3 million
Video views

Today, the number of networked devices = the global population

By **2015**, the number of networked devices = **2x** the global population

In **2015**, it would take you **5 years**

IP

to view all video crossing IP networks each **second**

The Challenge

- **Capturing the data**
- **Storing the data**
- **Analysing the data**
- **Validating the data**
- **Presenting the data**

…. And

- **Privacy laws**

Securing assets in Digital Businesses

Physical Business

Assets are contained
Limited entry points
Goal: Protect the perimeter
Be ready when attacked

Digital Business

Data and assets are everywhere
Unlimited entry points
Goal: Protect the data and individual privacy
Be hyper-ready, be hyper-responsive

As the volume of data increases, so does the need for security

Data Growth = Security Growth

Compliance
Trust and reputation
Good business practice
Data volumes
Data complexities

Security Skills: Surprising Statistics

- **44 percent** of organizations are short on staff with strong cyber security and networking knowledge ESG, *"Network Security Trends in the Era of Cloud and Mobile Computing"*

- **35 percent** of organizations are unable to fill open security jobs, despite the fact that 82 percent expect to be attacked this year —ISACA and RSA, *"State of Cybersecurity: Implications for 2015"*

- **90 percent** of all companies have had a breach, of 583 US companies surveyed. *Juniper Networks, 2012*

- **4 of the top 10** the top paying certifications were security-related, according to the Global Knowledge Salary Survey

Managing Risks

Cyber Criminals

Physical Criminals

Corporate Espionage

Equipment failure

Human error or negligence

Natural Disasters

Fire

Terrorism

Pandemic

What is Privacy?

"The right to control access to one's person and information about oneself."

Only people who have something to hide worry about privacy

- **Normally, we present ourselves in a favourable light.**
- **When information about us is no longer within our control it can be used to paint an unfavourable picture of us to the outside world or at least an incomplete one.**

PIPEDA

- **Legislation implemented by the federal government to protect the privacy of Canadians in the private sector**
- **Sets out ground rules for the collection, use and disclosure of personal information in the course of commercial activities**

Personal Information

- **Personal information includes any factual or subjective information, recorded or not, about an identifiable individual. This includes information in <u>any form</u>.**
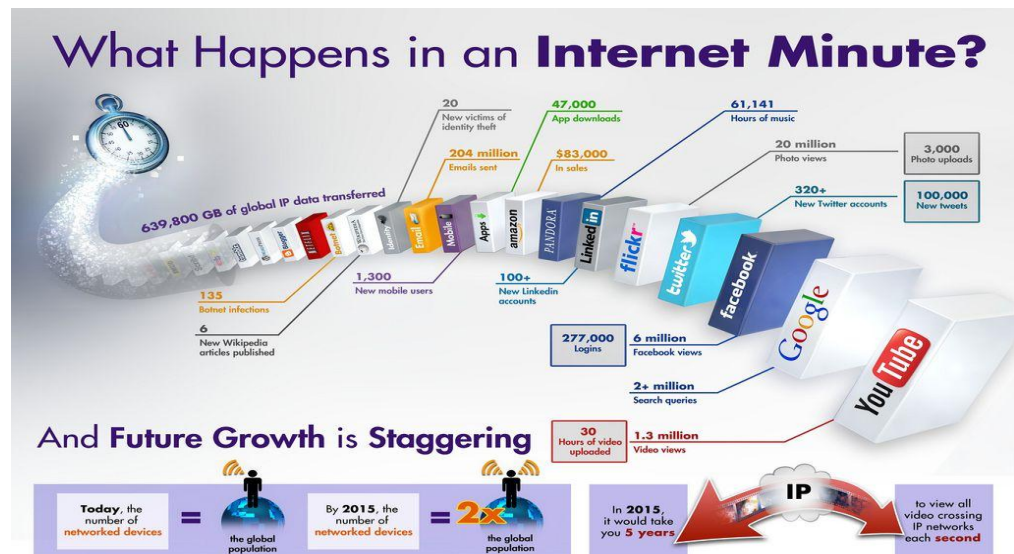
What can you tell me about this customer?

- **Purchases**
  - **Vitamin Supplements**
  - **Lotion**
  - **Hand Sanitizer**
  - **Large Purse**

What does your profile say about you?

- **Race**
- **Occupation**
- **Relationship status**
- **Age**
- **Credit history**
- **Purchase history**

Do targeted ads reduce your choices?

- **Automated printing can produce selective flyers specific to customer profiles**
- **Ads are selected and arranged based on your specific profile**