



# Technology That Your Future Employer Wants You To Know

Date: November 16, 2016

Presented by: Jesse Dahir-Kanehl, Willie Spindler, Fred Spademan

# Agenda

- Introductions
- Who Is Inland?
- Why are we here?
- What Skills & Technologies Today?
- What Skills & Technologies Tomorrow?
- Q&A

# Introductions

- Jesse Dahir-Kanehl
- Willie Spindler
- Fred Spademan

# Who Is Inland?

- **We power great packaging**
  - We team up with industry partners and take the lead in developing total, end-to-end packaging solutions that deliver exactly what brand owners want.
- **But what powers us?**
  - Job Satisfaction – People stay at Inland.
  - We collaborate with customers, strategic partners and each other, because it's great to accomplish things together.
    - We are inquisitive, eager to address old problems in new ways. We value creativity.
    - We all value earning our customers' trust. Hearing "thanks" is a powerful motivator.
    - We respect the contribution of each team member and create opportunities for everyone to grow.
    - We're connected to our communities in meaningful ways, enthusiastically investing in what's important to us.



# Who Is Inland?

[InlandPackaging.com](http://InlandPackaging.com)

The screenshot shows the Inland Packaging website homepage. The header features the Inland logo with the tagline "We power great packaging" and navigation links for HOME, CAREERS, UPLOAD FILE, and CONTACT US. Below the header is a search bar and social media icons. The main navigation menu includes WHO WE ARE, HOW WE WORK, PRODUCTS, MARKETS, and SOLUTIONS. The hero section displays a close-up of Coors Light beer bottles with the text "Quality cut and stack" and a play button icon. Below this, a section titled "Need some serious experience for your next product packaging solution?" provides information about the company's capabilities. To the right, an "Upcoming Events" section highlights the IMLCON & IMDCON 2016 conference. At the bottom left, a "New at Inland" section features a photo of Amy Jungerberg and text about her receiving the Service Member Patriot Award.

**Inland**  
We power great packaging

HOME CAREERS UPLOAD FILE CONTACT US

WHO WE ARE HOW WE WORK PRODUCTS MARKETS SOLUTIONS

Quality cut and stack

**Need some serious experience for your next product packaging solution?**

Your product packaging matters. Whether you're a leading consumer brand or an up-and-coming private label, the aspirations you have for your brand go beyond an expectation of quality.

We help your packaging cut through the clutter and clearly communicate your brand story, with production-tested, end-to-end label and container solutions. We are the go-to partner for beverage, beer, food, household, dairy, pet product packaging and more—and we're with you through ideation, development, transition and production.

**New at Inland**

**Amy Jungerberg Honored with Service Member Patriot Award**

Inland employee receives award for support of National Guard and Reserve La Crosse, Wis. — Amy Jungerberg, Pre-Press Production Manager at Inland, has been nominated and selected as a Service Member Patriot Award recipient. Jungerberg was nominated by her

**Upcoming Events**

**IMLCON & IMDCON 2016**

Inland will again be sponsoring and attending AWA's In-Mold Labeling & Decorating Conference, IMLCON & IMDCON 2016, in Chicago, IL, November 16th through 18th.

[InlandPackaging.com/inland-careers](http://InlandPackaging.com/inland-careers)

The screenshot shows the Inland Packaging website careers page. The header is identical to the homepage. The main navigation menu is the same. The hero section features a photo of a worker in a factory setting. Below this, a section titled "JOIN THE PERFORMANCE TEAM" lists job openings in La Crosse, WI; Downingtown, PA; and Neenah, WI. To the right, an "Inland Careers" section provides information about the company's commitment to quality and innovation. At the bottom, a "Connect" section offers links to request samples, a blog, and an email newsletter. A "Resources" section provides links to white papers, webinars, and case studies. The Inland logo and tagline are displayed in the bottom right corner.

**Inland**  
We power great packaging

HOME CAREERS UPLOAD FILE CONTACT US

WHO WE ARE HOW WE WORK PRODUCTS MARKETS SOLUTIONS

**JOIN THE PERFORMANCE TEAM**

**Job Openings in La Crosse, WI**

**Job Openings in Downingtown, PA**

**Job Openings in Neenah, WI**

**Inland Careers**

We power great packaging...

At Inland, our passion is creating great packaging—from the color-changing blue mountains we developed for Coors Light to barrier technology that keeps food fresh longer. Teaming up with industry partners, we take the lead in developing total, end-to-end packaging solutions that deliver visual impact and new functionality. Inland produces 26 billion labels annually for customers like MillerCoors, Procter & Gamble, Arizona and Nestlé. Inland is a growing, family-owned company with a global reach.

**But what powers us?**

Knowing our contributions are valued keeps us motivated and eager to embrace what's next. Because we are an innovative company, there are many opportunities to learn new skills and work with new technologies. The pace at Inland is energizing.

**In the Loop**

News  
Blog  
Inland Informer Newsletter  
Sign up for our email newsletter

**Connect**

Request Samples  
800.733.5800  
Email Us

**Resources**

White Papers  
Webinars  
Case Studies  
Events

**Inland**  
We power great packaging

# Why Are We Here This Afternoon?

- We see talented, smart students with energy and drive, *but* missing specific key skills and competencies that are common in the working world
- Business projects are different than school projects
- If you combine your passion and drive with technologies that businesses are using, you get a leg up on your career

# Our Premise

- Passion and projects outside of the classroom are differentiators
- You should learn some key technologies & skills that aren't taught at UWL, particularly including Microsoft application development products
  - They are widely used but we don't see those skills in most recent graduates
  - Includes especially Visual Studio, .NET, MS SQL

# What do I need to know, right now, today?



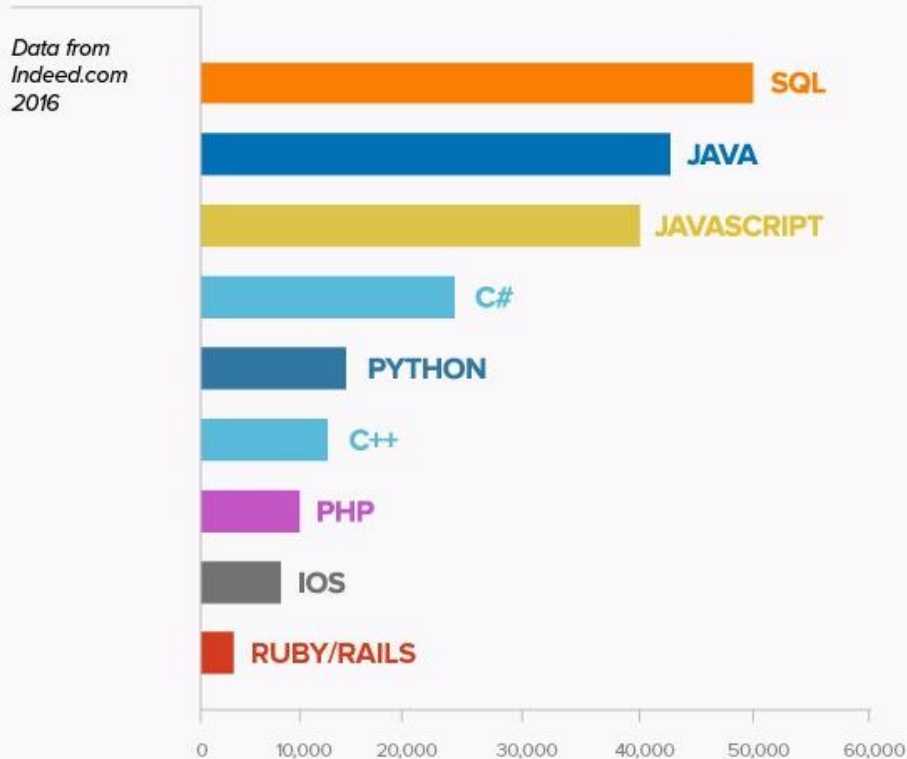


# Business Realities

- Trend is mobile and browser based, not desktop client based
- Much development is on existing systems – maintenance and extension
  - You live with the work you've done
- Most software is not the end product, it supports the end product
- Knowing MS products like Visual Studio and MS SQL is valuable

# Programming Jobs by Languages (Indeed.com)

Languages ranked by number of programming jobs



- MS SQL #1
- Javascript #3
- C# #4

# Top IDE Index <http://pypl.github.io/IDE.html>

RANK	CHANGE	IDE	SHARE	TREND
1	↑	Visual Studio	22.17 %	-0.9 %
2	↓	Eclipse	21.26 %	-5.4 %
3		Android Studio	10.19 %	+2.2 %
4		Vim	8.21 %	+0.6 %
5		NetBeans	5.5 %	-0.2 %
6		Xcode	5.45 %	-0.5 %
7		Sublime Text	4.34 %	+0.2 %
8	↑	IntelliJ	4.22 %	+1.2 %
9	↓	Komodo	3.6 %	+0.5 %
10	↑	Xamarin	3.55 %	+2.4 %
11	↓	Code::Blocks	2.1 %	-0.3 %
12		Emacs	1.93 %	+0.2 %
13	↑	pyCharm	1.68 %	+0.4 %
14	↓	PhpStorm	1.54 %	+0.2 %
15	↑	Light Table	1.1 %	-0.1 %
16	↓	Cloud9	0.88 %	-0.2 %
17	↑	Qt Creator	0.38 %	+0.0 %
18	↓	Aptana	0.31 %	-0.1 %
19		JDeveloper	0.29 %	+0.0 %
20		geany	0.28 %	+0.0 %
21		MonoDevelop	0.22 %	+0.0 %

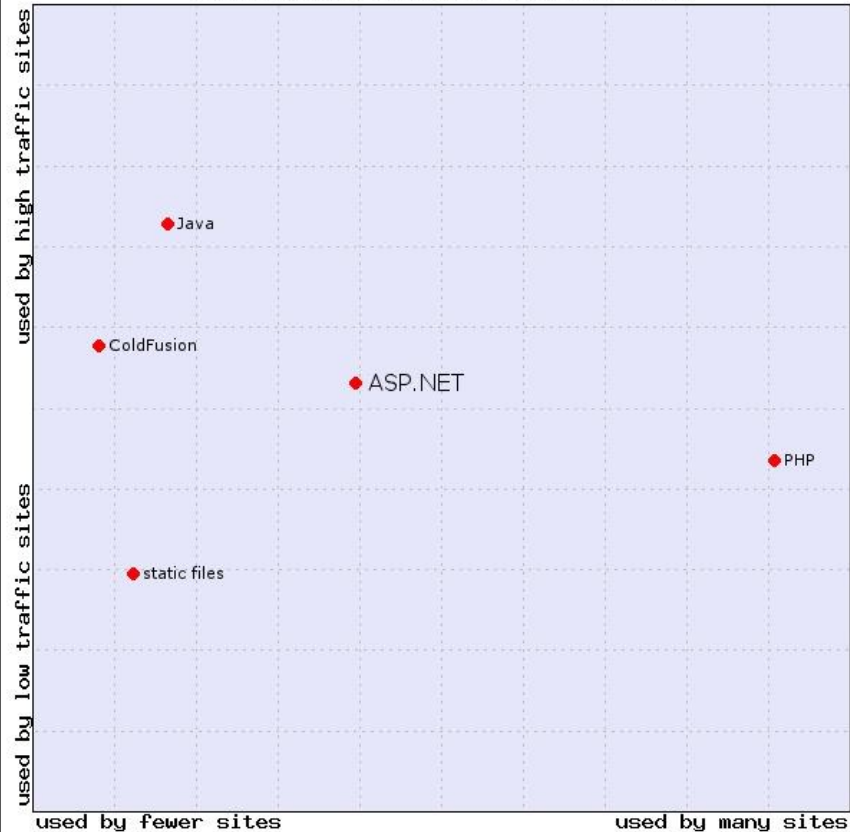
- Most used is MS Visual Studio
- Xamarin is #10 and rising

# ASP.NET (W3Techs.com)

## Market position

This diagram shows the market position of ASP.NET in terms of popularity and traffic compared to the most popular server-side programming languages. Our dedicated market survey shows more [server-side languages market data](#).

ASP.NET Market Position, 1 Nov 2016, W3Techs.com



- This is an eye test
- MS's ASP.NET is used by more total sites than Java
- Supports more high volume sites than PHP

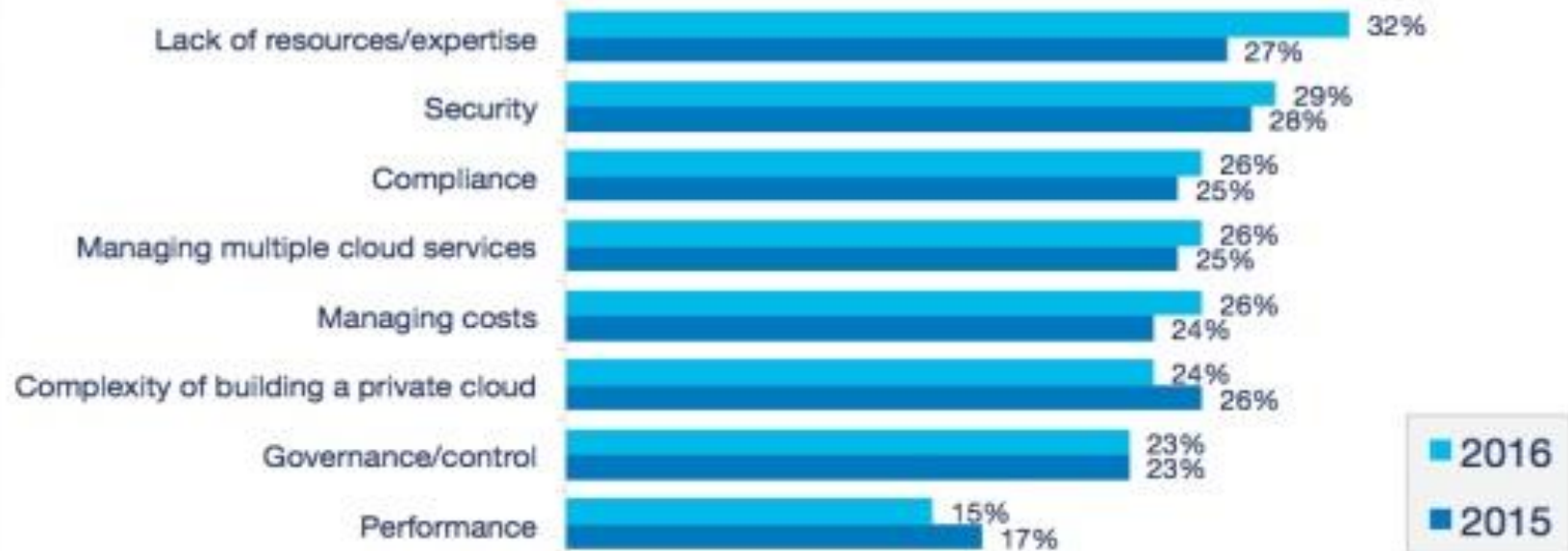
# Get To Know The Cloud

- What is cloud?
  - Something-as-a-Service
    - Infrastructure-as-a-Service, Platform-as-a-Service, Software-as-a-Service, Security-as-a-Service, etc.
  - Benefits
    - Scalability
    - Automating the plumbing
    - Lower initial cost but not always cheaper
    - Experts handle some of the administrative burden (esp. security, patching)
  - Lots of cloud providers but really four big ones
    - MS Azure, Google, Amazon, Rack Space
  - Not yet any clear winner
    - Multi-vendor is common
    - Linux/Open Source stack and MS stack
- MS Azure – wide and deep in its offering
  - Student friendly
  - Changes weekly – opportunity to become an expert



# Cloud Challenges

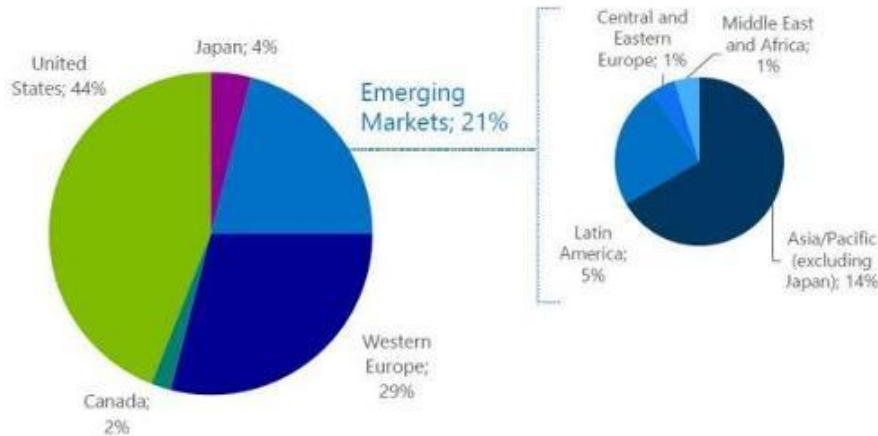
**Cloud Challenges 2016 vs. 2015**



Source: RightScale 2016 State of the Cloud Report

# Opportunity In The Cloud (IDC Study – MS)

**\$127B** Worldwide Public IT Cloud Services Revenue in 2018<sup>1</sup>



**\$256 B** The managed services opportunity by 2018<sup>2</sup>



1. 2014 IDC study commissioned by Microsoft  
2. Markets and Markets - Managed Services Market worth \$256.02 Billion by 2018 (IDC COMMUNICATIONS)

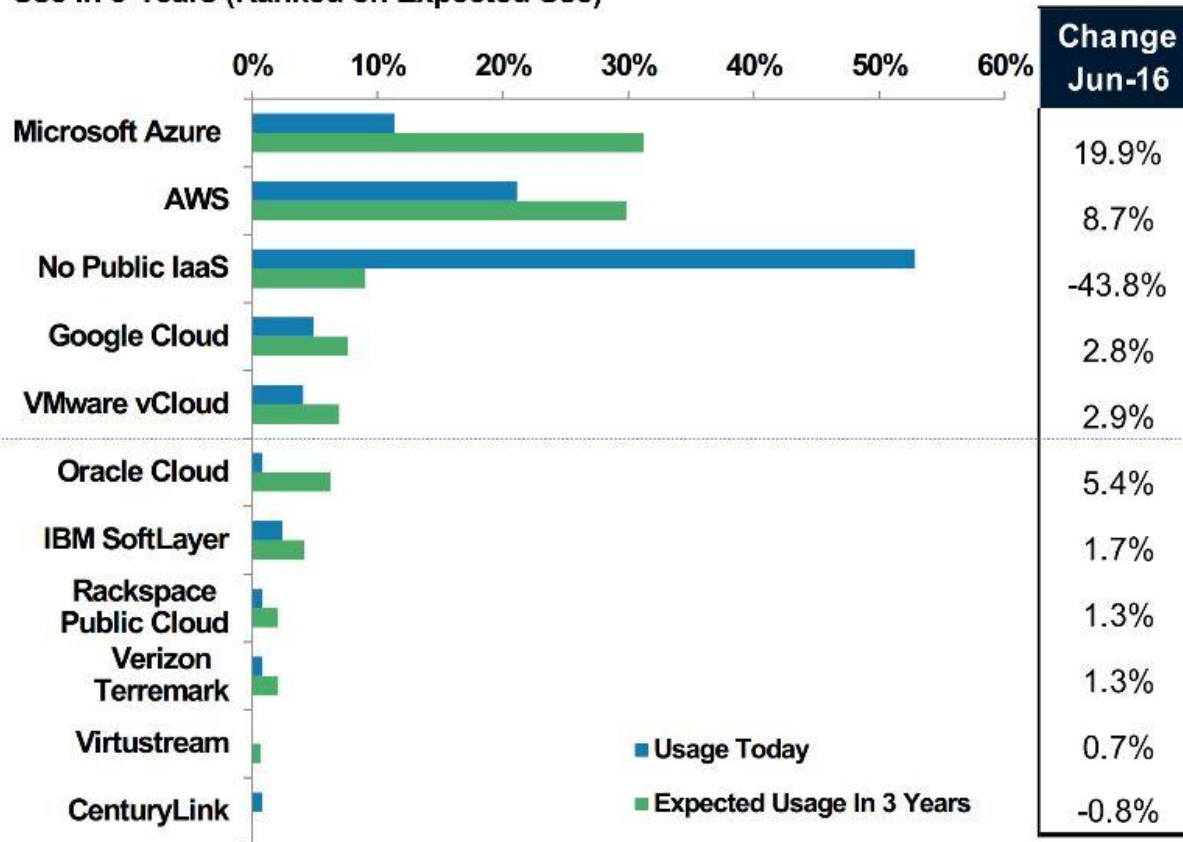
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# Growth In The Cloud

Exhibit 15: Cloud-based IaaS Use Today and Expected Use in Three Years

% of Respondents Using Cloud-based IaaS Today and Expected Use In 3-Years (Ranked on Expected Use)



# What Will You Want To Know Tomorrow?



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# Microservices and Service Fabric

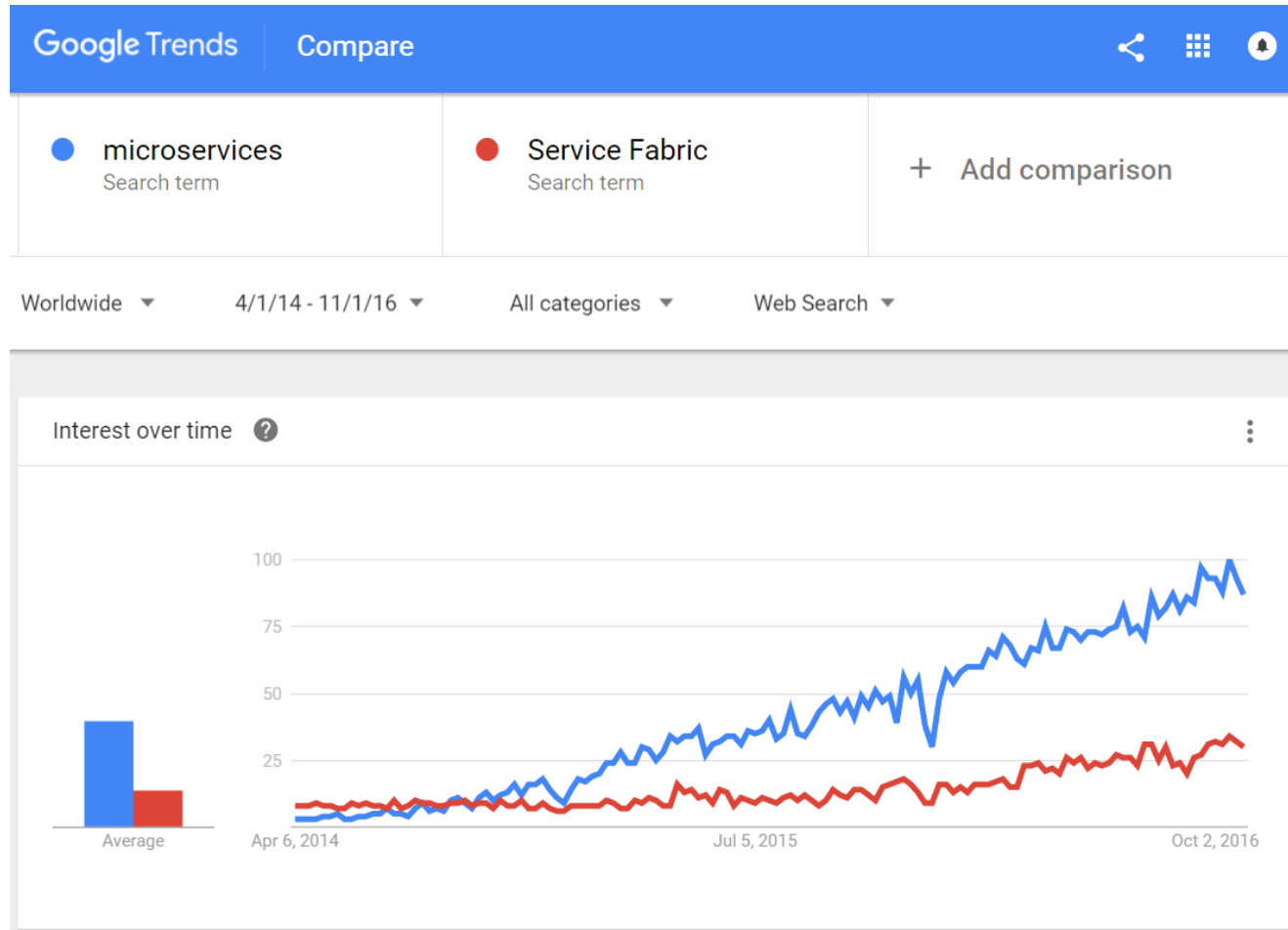
- Technology of the near future
- Small, very efficient building blocks communicating with language-agnostic APIs
- A whole new way of thinking about applications and processes
- Developing Market
  - Amazon Lambda, IBM Bluemix, Heroku, Pivotal, Spring Cloud, Microsoft Azure Service Fabric, etc.



# Why Microservices and Service Fabric?

- Smaller codebases make maintenance easier and faster.
  - Saves development effort and time, therefore increases overall productivity.
  - The parts of an application can be scaled separately and are easier to deploy.
  - Do not require teams to rewrite entire application to add new features.

# Market For Microservices and Service Fabric



# Market For Microservices and Service Fabric

- Big online companies are strong advocates
  - Netflix, Twitter, EBay, Spotify, Amazon, Microsoft
- Very new as a technology offering
  - MS Azure Service Fabric – March 2016
  - Docker & MS Server – October 2016
    - Bundled into MS Server 2016 at no add'l cost

# AI & Machine Learning (forbes.com)

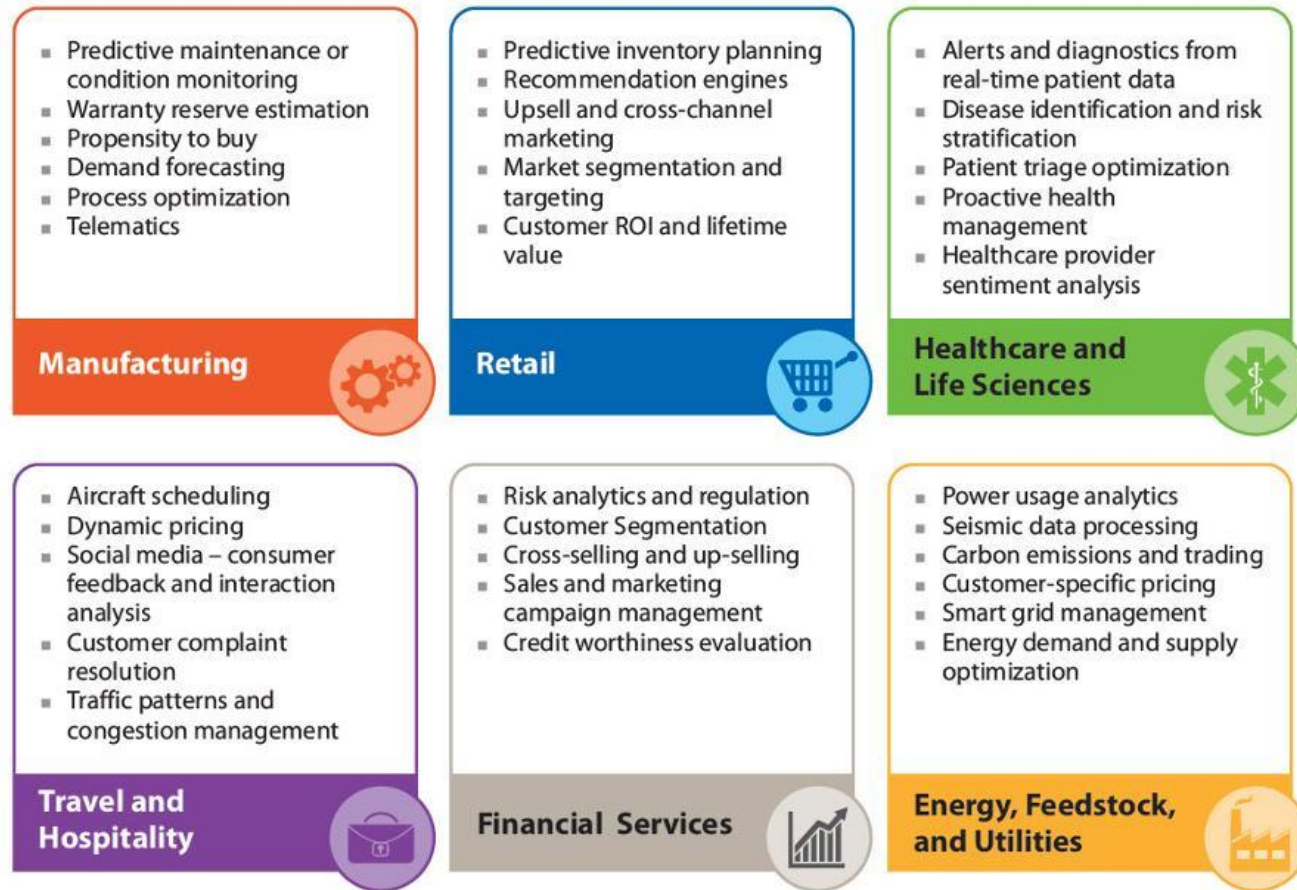
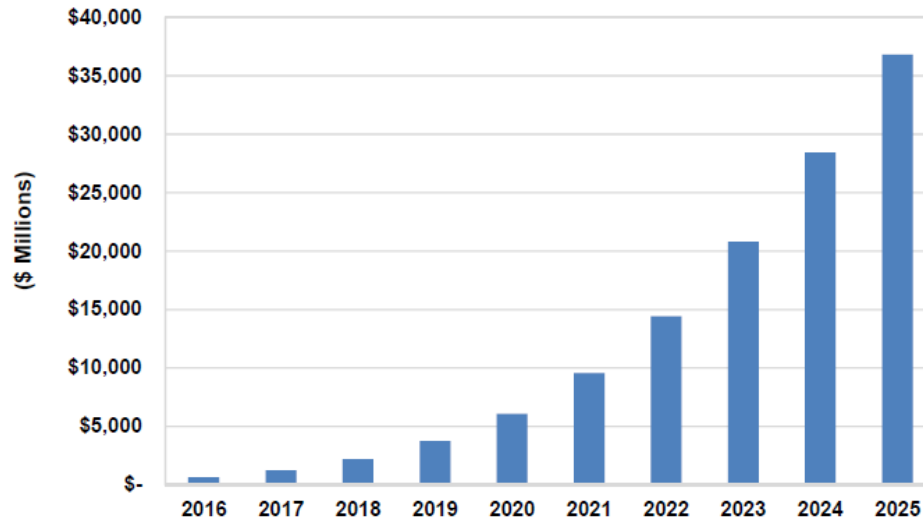


Figure 2: Machine Learning applications across industries

# AI & Machine Learning – Exponential Growth

Chart 1.1 Artificial Intelligence Revenue, World Markets: 2016-2025

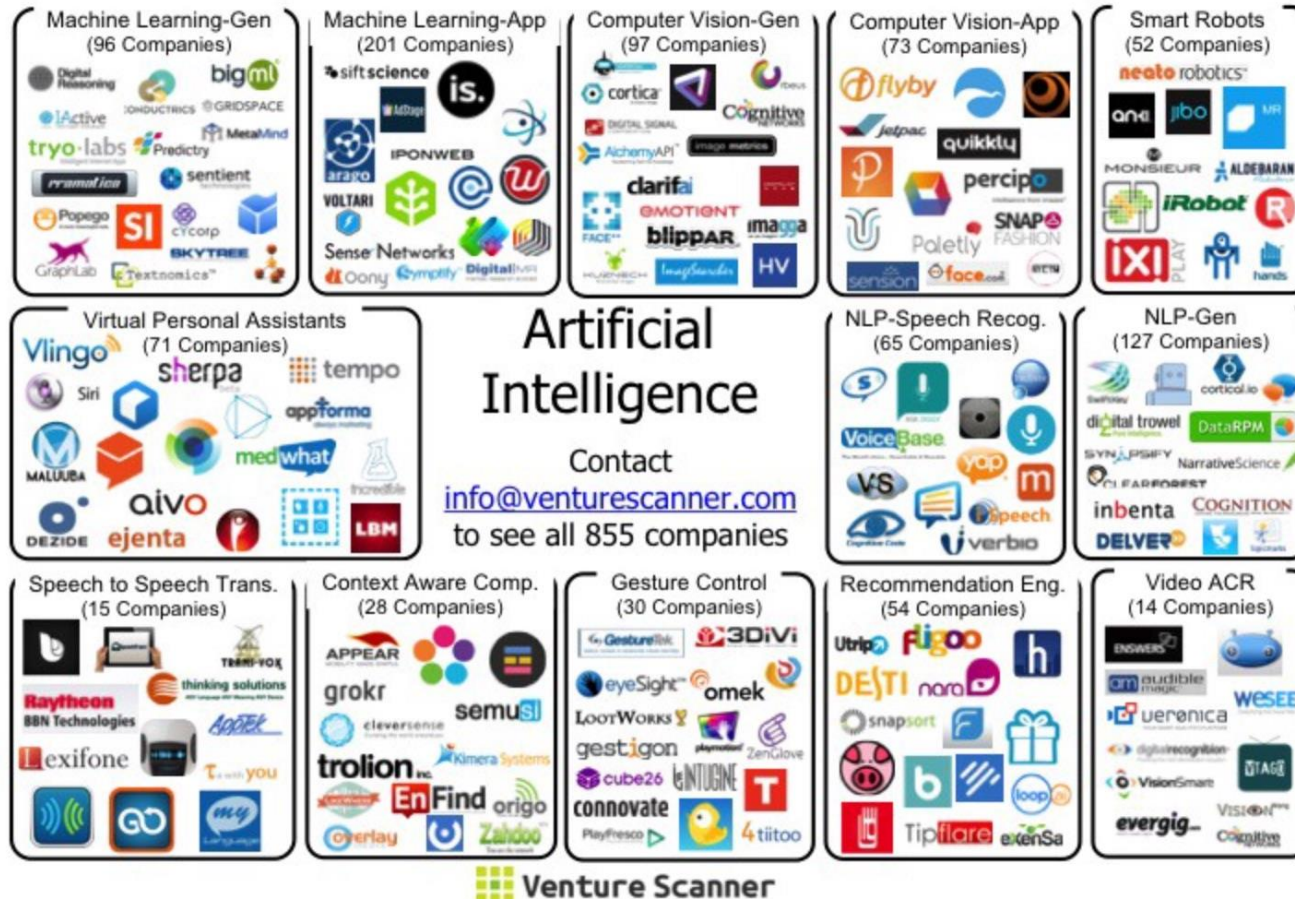


(Source: Tractica)

- The MLaaS market size is estimated to grow from USD 613.4 million in 2016 to USD 3.7 billion by 2021 ([researchandmarkets.com](https://www.researchandmarkets.com))



# AI & Machine Learning Eye Chart (venturescanner.com)



# AI & Machine Learning - Microsoft

- MS creates new Microsoft AI and Research Group -  
<https://news.microsoft.com/2016/09/29/microsoft-expands-artificial-intelligence-ai-efforts-with-creation-of-new-microsoft-ai-and-research-group/#sm.000rqivnfehueih10hu11t23f2zow>
  - “. . . more than 5,000 computer scientists and engineers focused on the company’s AI product efforts.”
- Microsoft is taking a four-pronged approach to its initiative to democratize AI:
  - **Agents.** Harness AI to change human and computer interaction through agents such as Cortana
  - **Applications.** Infuse every application with intelligence
  - **Services.** Make the same intelligent capabilities in Microsoft’s apps — cognitive capabilities such as vision and speech, and machine analytics — available to every application developer in the world
  - **Infrastructure.** Build the world’s most powerful AI supercomputer with Azure and make it available to anyone, to enable people and organizations to harness its power

# IOT

- Defining IOT – Difficult for our purposes
  - Not just Raspberry PI
  - Now things know something
  - Data shared
  - Security

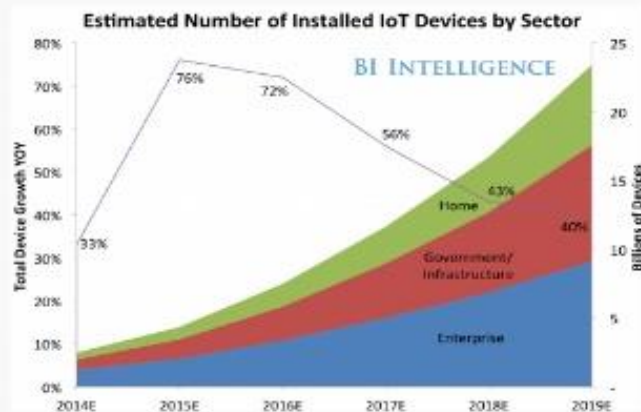
# IOT Market Growth (SparkLabs)

## MARKET OVERVIEW



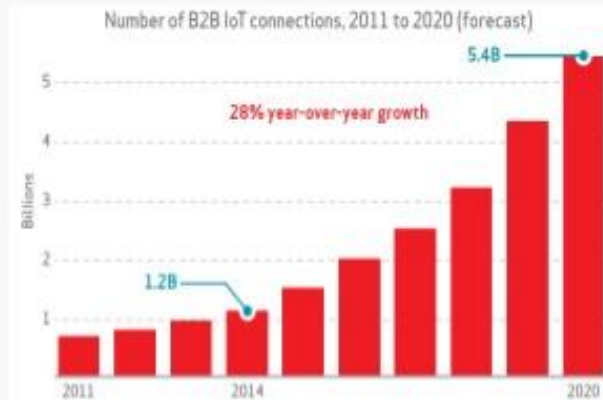
### More Machines are Going Online

As prices for semi-conductors fall and connectivity technology develops, more machines are going online. Appearance of smart objects is the main driver of IoT industry's development.



Source: BI Intelligence Estimates

- The number of IoT devices connected will increase to 25 billion by 2020.
- Connected homes seems to be the leading sector, however, all sectors are expected to exponentially grow.



Source: Verizon's 2015 Report

- Number of B2B IoT connections will greatly increase to 5.4 billion by 2020.
- Organizations that utilize IoT technologies in their products/operations are expected to be 10% more profitable.

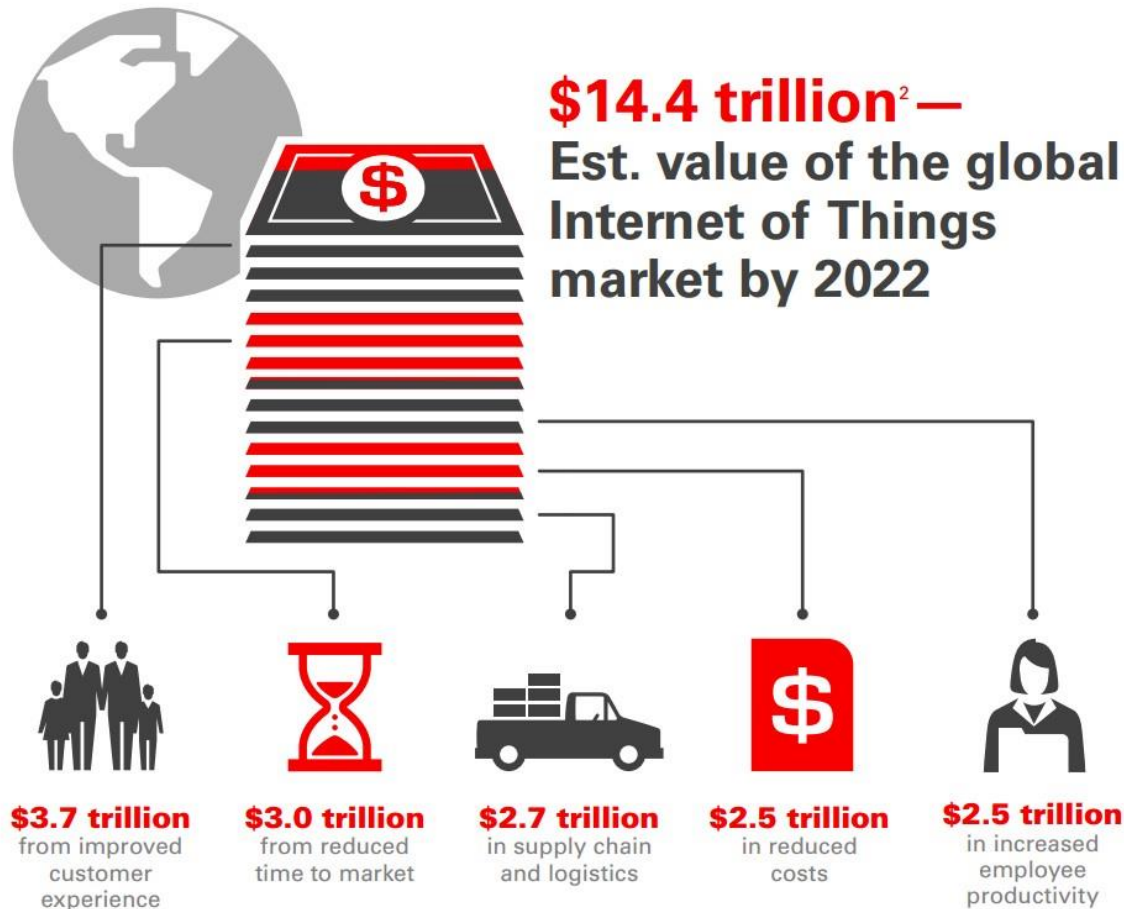


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# IOT Market Size (Forbes.com)





# IOT Eye Chart



**Internet of Things**  
 Contact  
[info@venturescanner.com](mailto:info@venturescanner.com) to  
 see all 813 companies



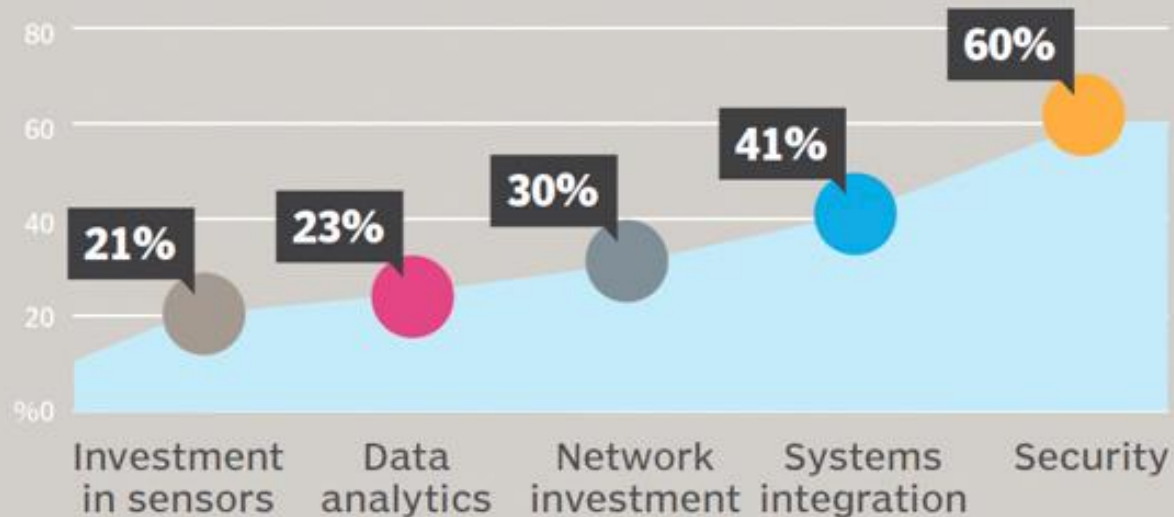
**Venture Scanner**

# IOT Opportunities

## Security concerns plague IoT

*What do you see as the biggest challenges with IoT?*

*Respondents could select multiple answers.*

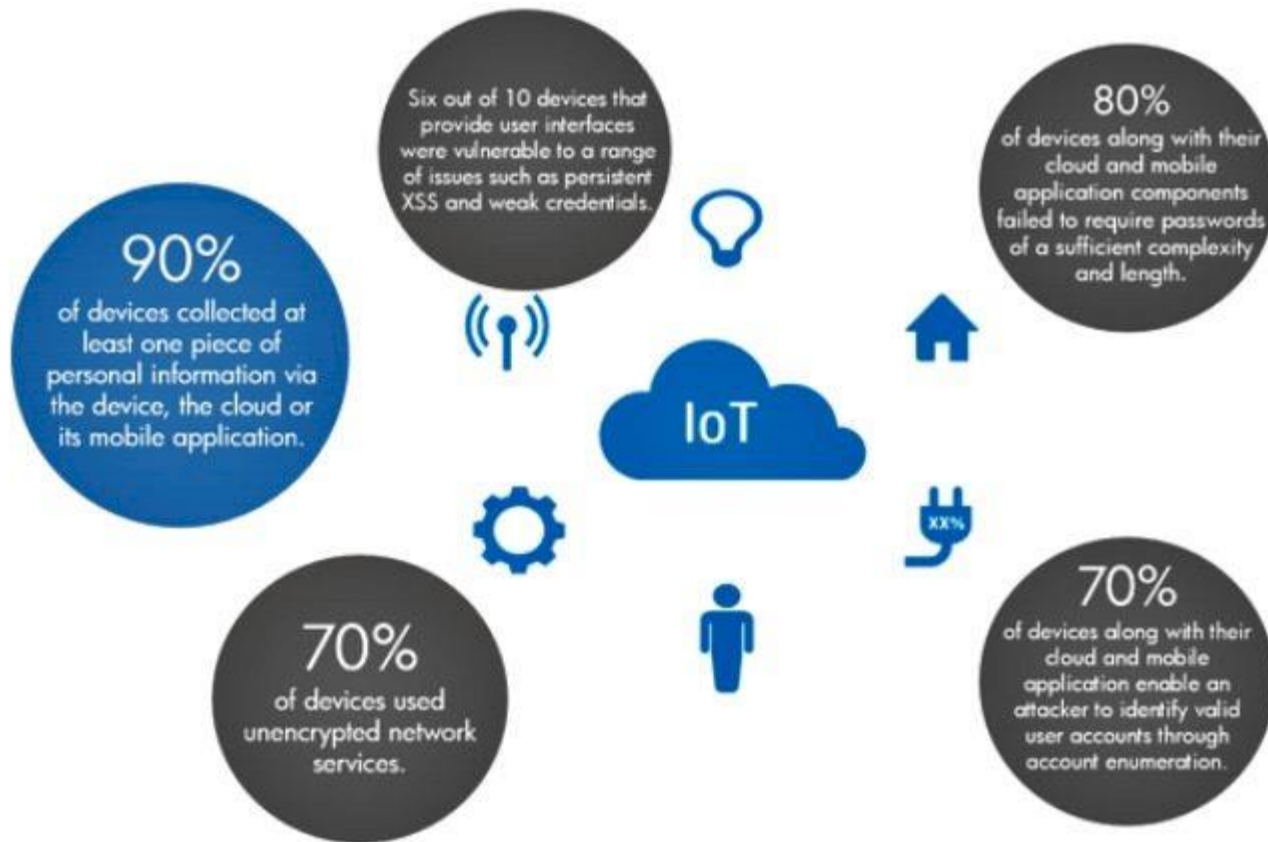


Source: "SearchNetworking 2015 Purchasing Intentions Survey," TechTarget, May 2015, N=830

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# IOT Security (CMSWire.com)



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# IOT Security (CMSWire.com)

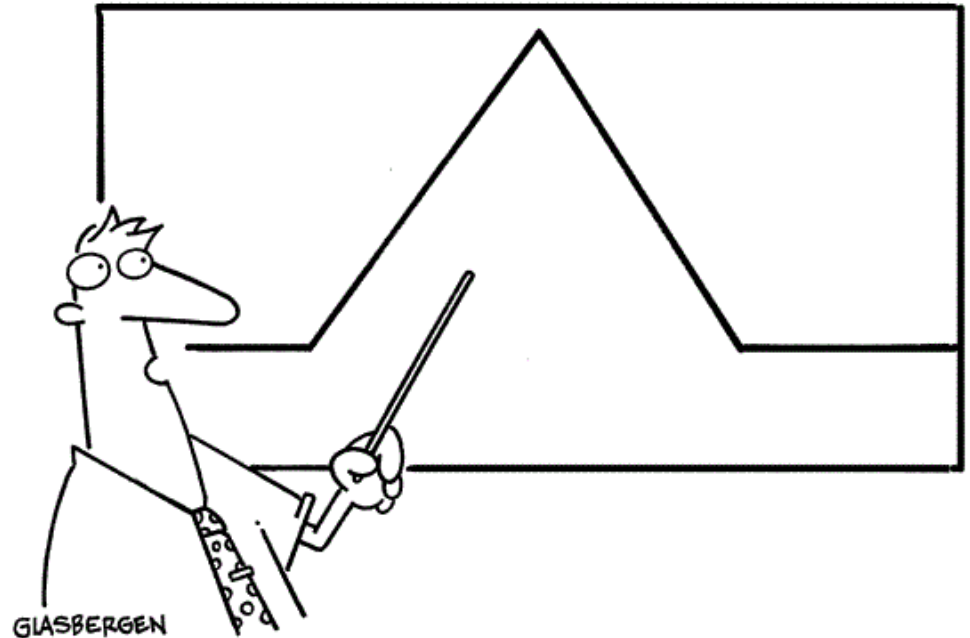
- IOT applications fall into three basic categories:
  - Mobile or desktop applications that control IOT devices;
  - IOT firmware and embedded applications;
  - Applications on open IOT platforms (for example, apps built for Apple Watch).
- All of these applications need to be protected or you run the risk of undesirable outcomes such as:
  - Improper or unsafe operation of IOT devices;
  - Theft of confidential data, private user information or application-related intellectual property;
  - Fraud and unauthorized access to payment processing channels;
  - Damage to your brand image and deterioration of customer, prospect and partner trust.



# Questions and Answers



"There are no stupid questions, so let's also agree there are no stupid answers."



**"When preparation and opportunity collide, it causes a seismic upheaval and that's how mountains of money are made!"**

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