



IOT DO'S AND DON'TS: ENSURE SUCCESS WITH YOUR IOT PROGRAM

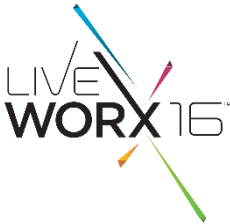
Kent Eriksson
Fellow IoT Business Consultant

June 9, 2016

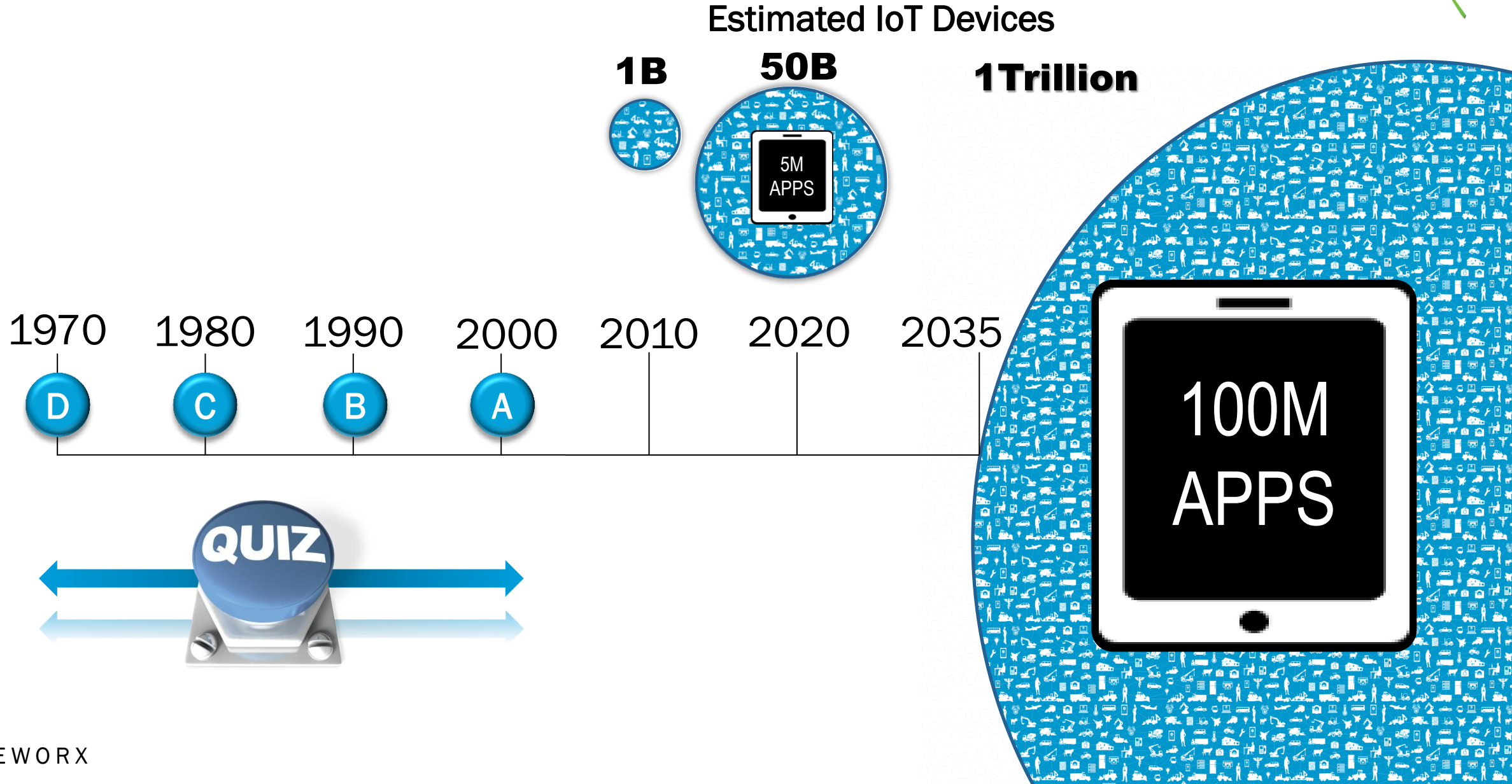
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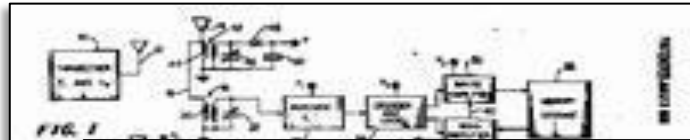
ENSURE SUCCESS WITH YOUR INTERNET OF THINGS PROGRAM



WHEN DID INTERNET OF THINGS START?



QUIZ - WHEN IOT STARTED IS A POINT OF VIEW



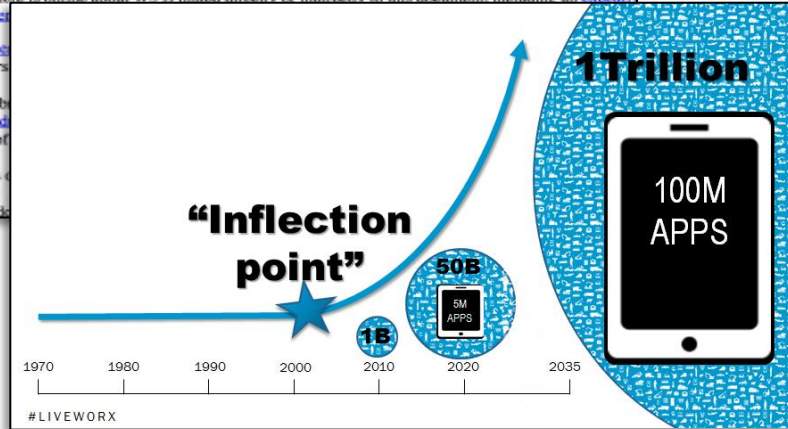
'70s In 1973, first passive RFID patented



'80s Vending machine networked at Carnegie-Mellon



'90s CERN launched world wide web



2000 Tech & skill quickly maturing.
Allowing value to be captured,
but by whom?



QUIZ - WHEN IOT STARTED IS A POINT OF VIEW

'70s In 1973, first passive RFID patented



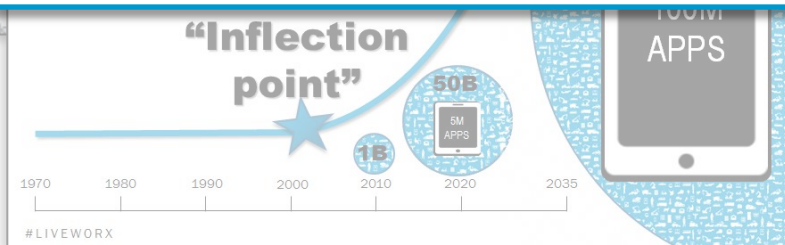
Do

- Leverage what you already have
- Plan for phase-ins and phase-outs



Don't

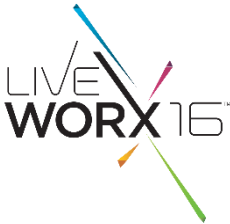
- Don't get hung up on terminology



Allowing value to be captured,
but by whom?



SPORTS, BEER, BIG-DATA AND THE VALUE OF IDEAS



110011

001010

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JJ00JJ



SPORTS, BEER, BIG-DATA AND THE VALUE OF IDEAS



110011
001010



Do

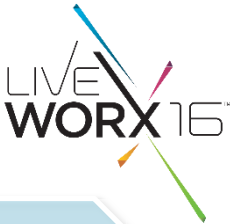
- Talk about ideas



Don't

- Only talk about ideas

BUILDING BLOCKS FOR SUCCESS



Get organized

Security & safety

Ecosystem focus

Start small & scale fast

ABC of IoT -value

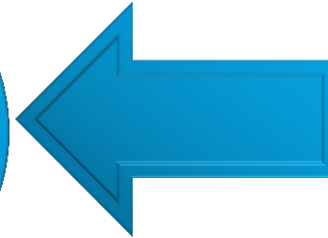
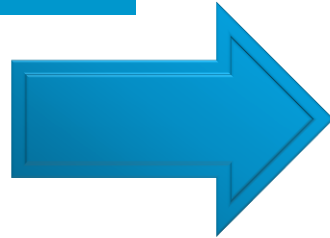


ABC OF THE IOT VALUE

Macro Trends

McKinsey Global Institute on IoT

Factories
Cities
Human
Retail
Outside
Work Sites
Vehicles
Homes
Offices

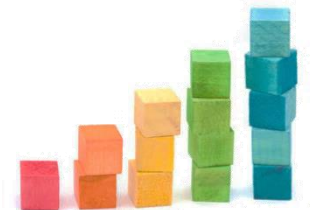


No-Regret Opportunities

Gartner

Through 2020, 70% of industrial & commercial IoT implementations will be intranets of things that deliver operational benefits.

- A** Agile Engineering
- B** Brilliant Factory
- C** Connected Services



ABC OF THE IOT VALUE

Macro Trends

No-Regret Opportunities

McKinsey Global Institute on IoT



Do

- Find & understand macro trends
- Implement no-regrets
- Re-invest for better value trajectory



Don't

- Get paralyzed by analysis

Vehicles



Homes



Offices



A Agile Engineering

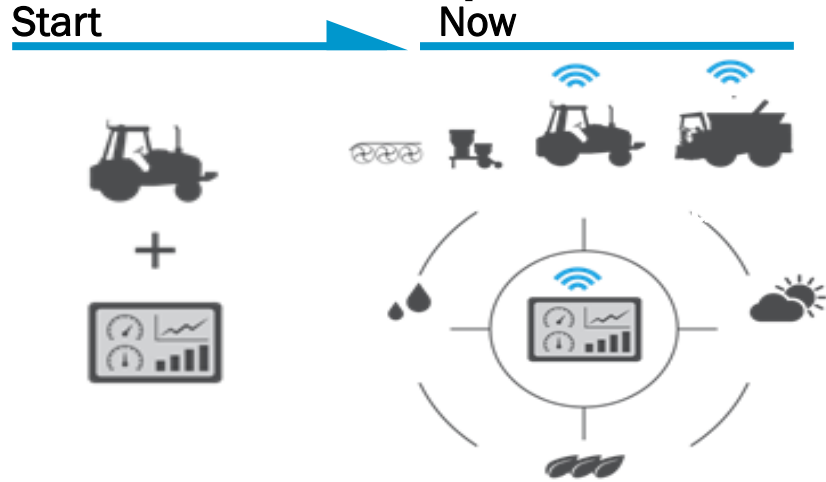
B Brilliant Factory

C Connected Services



START SMALL & SCALE FAST - INSPIRING ARCHETYPES

Traditional approach towards smart, connected products



- Smart product
- ROI on IoT services in maintenance
- Interfaces enables new use cases
- Smart system
- Better productivity in smart operations
- Cross sell paradise

Connect systems to learn and get steeper value trajectory



- Connect systems
- Increased productivity from better business intelligence
- Connect things
- Faster to build apps
- Higher value of connected things and connected systems

Lead and shape your industry



- Smart signs
- Specific proposition
- Each new product adds value to existing
- Traffic flow and safety
- Less congestion and reduced emission
- Journey opportunities to find and realize



START SMALL & SCALE FAST - INSPIRING ARCHETYPES



Traditional approach towards smart, connected products

Connect systems to learn and get steeper value trajectory

Lead and shape your industry



Do

- Find starting point—get experience
- Prioritize pipeline
- Build an architecture that extends



Don't

- Try to remove all ambiguity upfront
- Get complacent

• ROI on IoT services in maintenance

• Better productivity in smart operations

• Increased productivity from better business intelligence

• Faster to build apps

• Specific proposition

• Less congestion and reduced emission

• Interfaces enables new use cases

• Cross sell paradise

• Higher value of connected things and connected systems

• Each new product adds value to existing

• Journey opportunities to find and realize



ECOSYSTEMS BEING BUILD TO SERVE OUTCOMES

IoT encourage outcome focused business models....



Win-Win-Win

- Airline
- Suppliers
- Passenger



Foster view of ecosystem

Self-optimizing on what matters to stay competitive

... and ecosystem partnering grow and accelerate value



Real-estate operator

- Domain knowledge
- Automation equipment



Academia

- Know-how on energy & resource efficiency
- Bleeding edge on analytics



Software developer

- Developing expertise
- Marketing and sales capacity



ECOSYSTEMS BEING BUILD TO SERVE OUTCOMES

IoT encourage outcome focused business models....

... and ecosystem partnering grow and accelerate value

Power-by-the-hour

Real-estate operator




Do

- Understand outcomes
- Ask the customer to co-invent
- Partner with the best



Don't

- Only do business as usual
- Try to do everything yourself



Self-optimizing on what matters to stay competitive

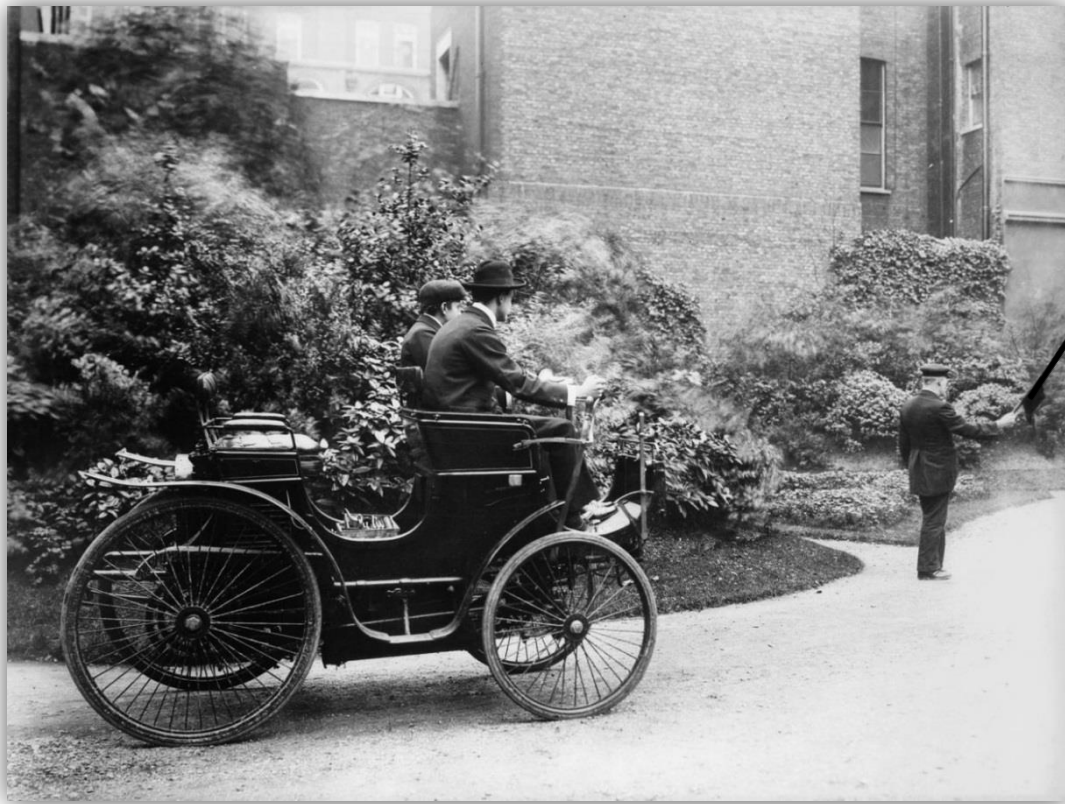


Software developer

- Developing expertise
- Marketing and sales capacity



SECURITY AND SAFETY - BALANCE RISK AND REWARD



Locomotive Act 1865:

Any self-propelled road vehicle had to be preceded by a person walking at least 60 yards ahead, carrying a red flag





Do

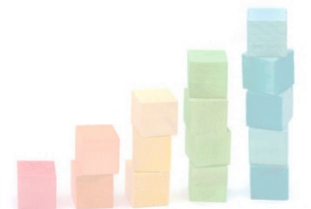
- Meet or exceed customer expectations on privacy and safety
- Segment and define fit for purpose security with a topology



Don't

- Ignore security, compliance nor safety
- Miss rewards looking for the 'perfect' security

had to be preceded by a person walking at least 60 yards ahead, carrying a red flag

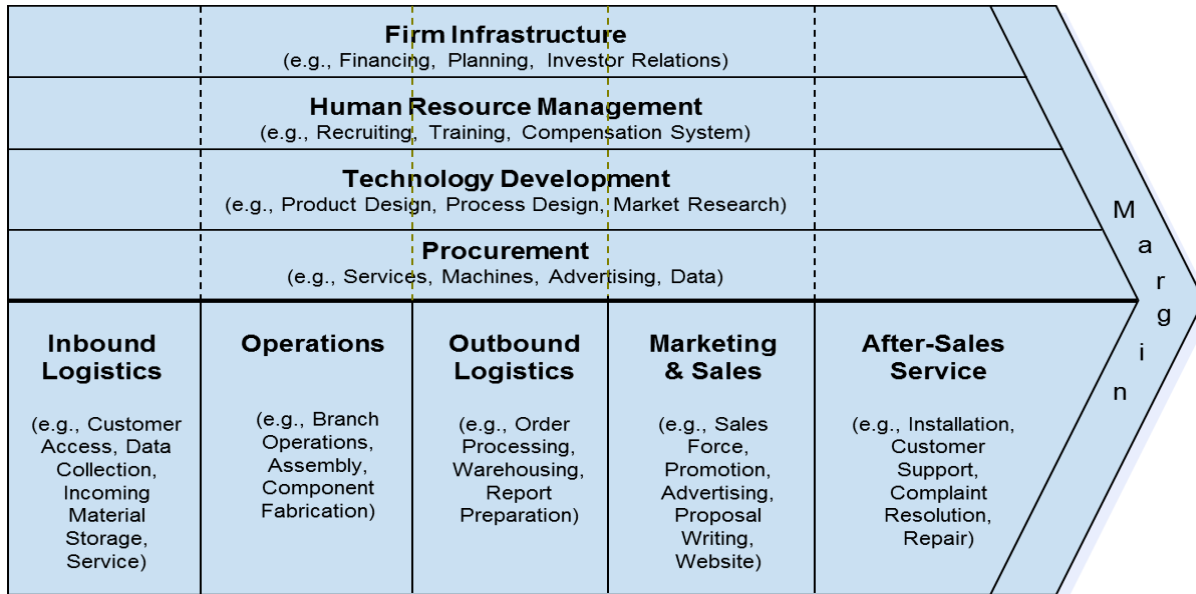


GET ORGANIZED, IOT IS NOT A ONE TIME EVENT

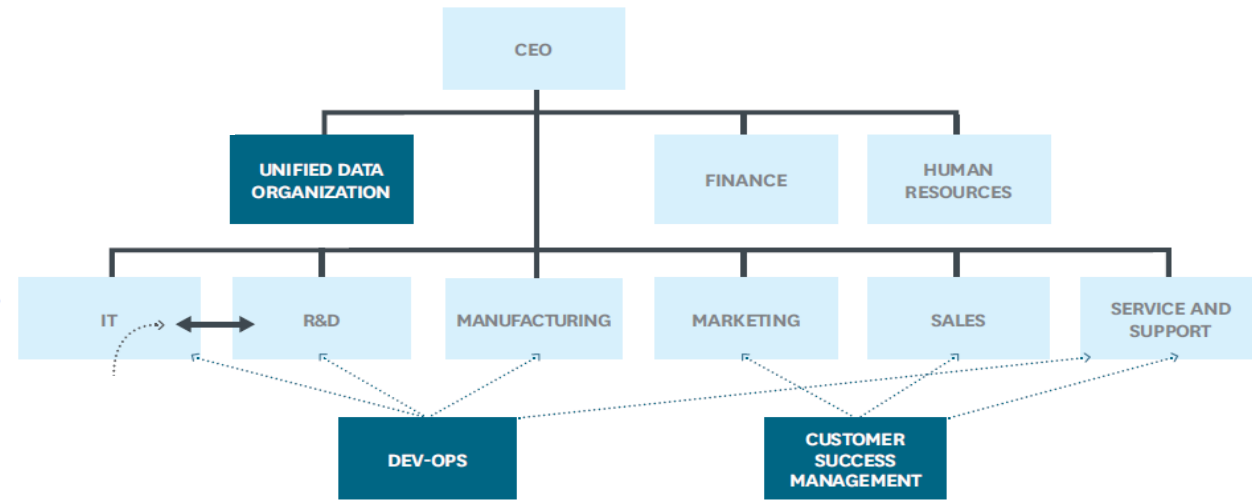


Smart, connected products are transforming companies

Transforms how Companies
DESIGN, MANUFACTURE, OPERATE AND SERVICE PRODUCTS



Requires a **NEW ORGANIZATIONAL STRUCTURE**



GET ORGANIZED, IOT IS NOT A ONE TIME EVENT



Smart, connected products are transforming companies

Transforms how Companies



Do

- Build a governance
- Define the program
- Create and maintain roadmaps
- Be agile
- Test proof of concepts



Don't

- Plan a one time project
- Limit to what you've done before
- Limit success by silo-thinking
- Define an end-state

Incoming
Material
Storage,
Service)

Component
Fabrication)

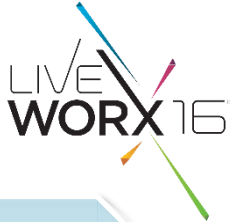
Report
Preparation)

Advertising,
Proposal
Writing,
Website)

Complaint
Resolution,
Repair)



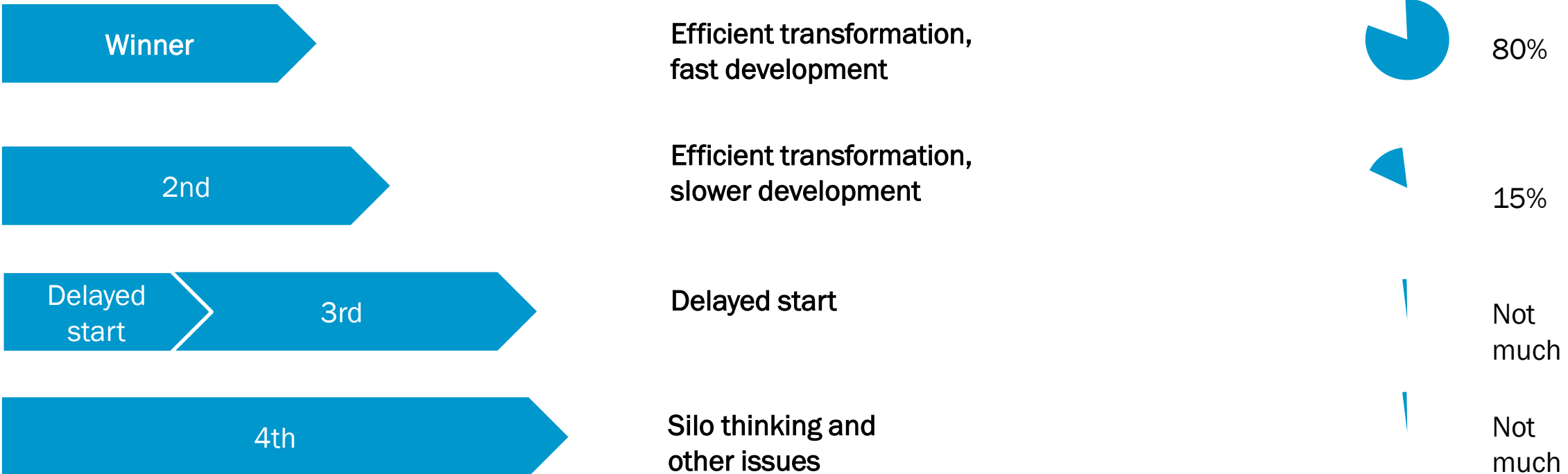
PARAMOUNT IMPORTANCE TO HAVE THE RIGHT BUILDING BLOCKS



Time to market



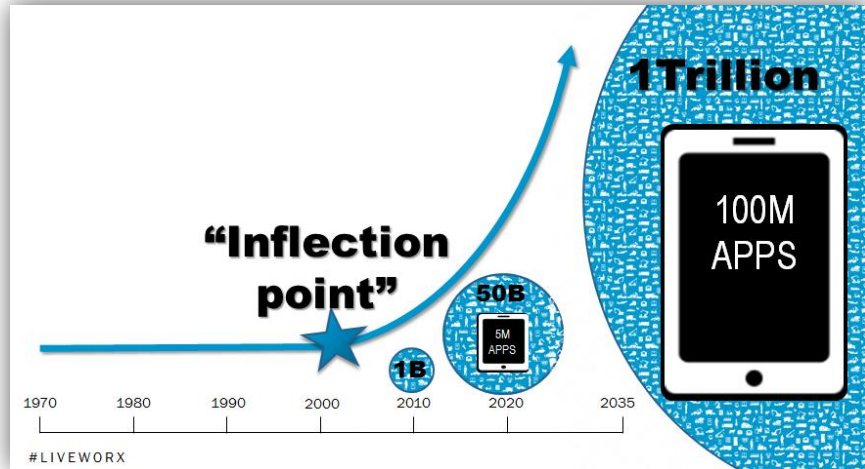
Winner takes it all market capture¹



¹ Basing on experience from pharmaceutical industry of getting first to a new treatment area

ACCELERATE TO STAY RELEVANT

Business in a faster and faster pace



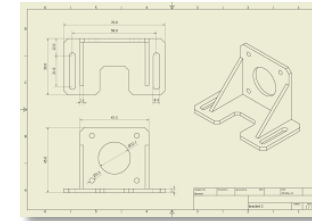
- Moore's law in hardware
- Agility of software development
- Fortune 500 company turn-over

Take traditional business wisdoms to IoT

Building a toy car



Source: motor



Design own motor fasteners



Build toy instilling fun

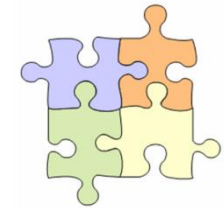
Building a software product



Source: SW platform + modules



Design uniqueness and own modules

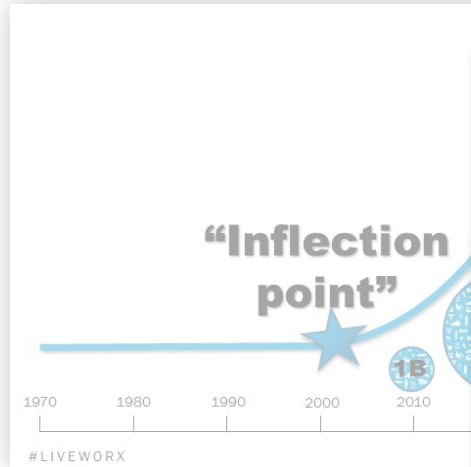


Build targeted customer value add

ACCELERATE TO STAY RELEVANT

Business in a faster and faster pace

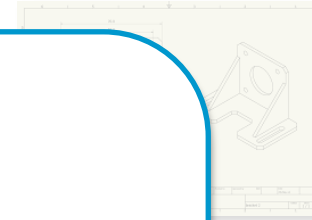
Take traditional business wisdoms to IoT
Building a toy car



Do

- Review competitive positioning
- “What business are you in”?
- Play to learn
- Have contingency plans in the event of market shifts

- Moore’s law in hard
- Agility of software development
- Fortune 500 company turn-over



own
steners



Build toy
instilling fun



Build targeted
customer
value add

Source: SW
platform +
modules

Design
uniqueness
and own
modules

HOW TO ACCELERATE YOUR IOT PROGRAM



CREATE STRATEGY



PROOF OF CONCEPT



PRODUCTION PILOT



SCALE TO PRODUCTION



EXPAND AND OPTIMIZE

Roadmap

Roadmap to realize own services transformation PTC

Outcome business models, End-to-end optimizations

Advanced analytics and actions Machine learning

Operator support tools Market fair

Analytics systems Market fair

Business targets

Project charters

Objectives: Support operations, maintenance and test services with an integrated, hardware enabling and multi-tenants and scalable feature pattern in usage

Current Status: No direct partner or single vendor involvement

Risk: HIGH

Governance map

Governance for connected identity and IoT from services organization

Group: Business B, Business A, Group Selection

BU: Services, Product SaaS A, Product SaaS B

Services: CCE, ST, ST

Use case prioritization

Use case prioritization matrix showing effort vs. value

Use cases overview doc

Value and IoT maturity focus

Value steps per use case

Realization and risk focus

Crowd sourcing for speed and participation



THANK YOU FOR YOUR TIME – QUESTIONS AND ANSWERS



Warm up
quiz

Building for
Success

Accelerate
to value

Q & A



The image features several colorful geometric shapes, including triangles and lines in shades of blue, green, yellow, orange, pink, and purple, scattered across the background. A large, multi-colored geometric shape is prominent on the right side. The text 'LIVE WORX 16' is centered, with 'LIVE' in a thin, outlined font and 'WORX 16' in a bold, solid black font. A small 'TM' trademark symbol is positioned to the upper right of the '6'.

LIVE
WORX 16™

TAKE A FRESH LOOK AT THINGS

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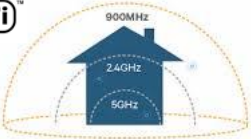
BACKUP

THE QUESTION ON “STANDARDS”

IoT Wireless



802.11ah



Power efficient, long range, scalable Wi-Fi



M2M Dev



AllJoyn™



Interest Groups



THOUGHTS ON THE FUTURE OF ARTIFICIAL INTELLIGENCE



Bill Gates



"I don't understand why we aren't concerned."

Elon Musk



About AI "If I had to guess at what our biggest existential threat is, it's probably that."

Steve Wozniak



"They're going to be smarter than us and if they're smarter than us then they'll realise they need us,"

"We want to be the family pet and be taken care of all the time."