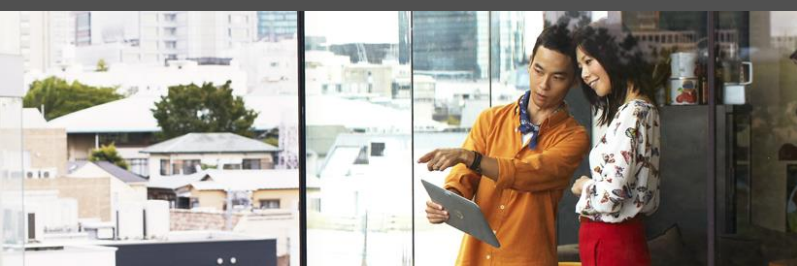


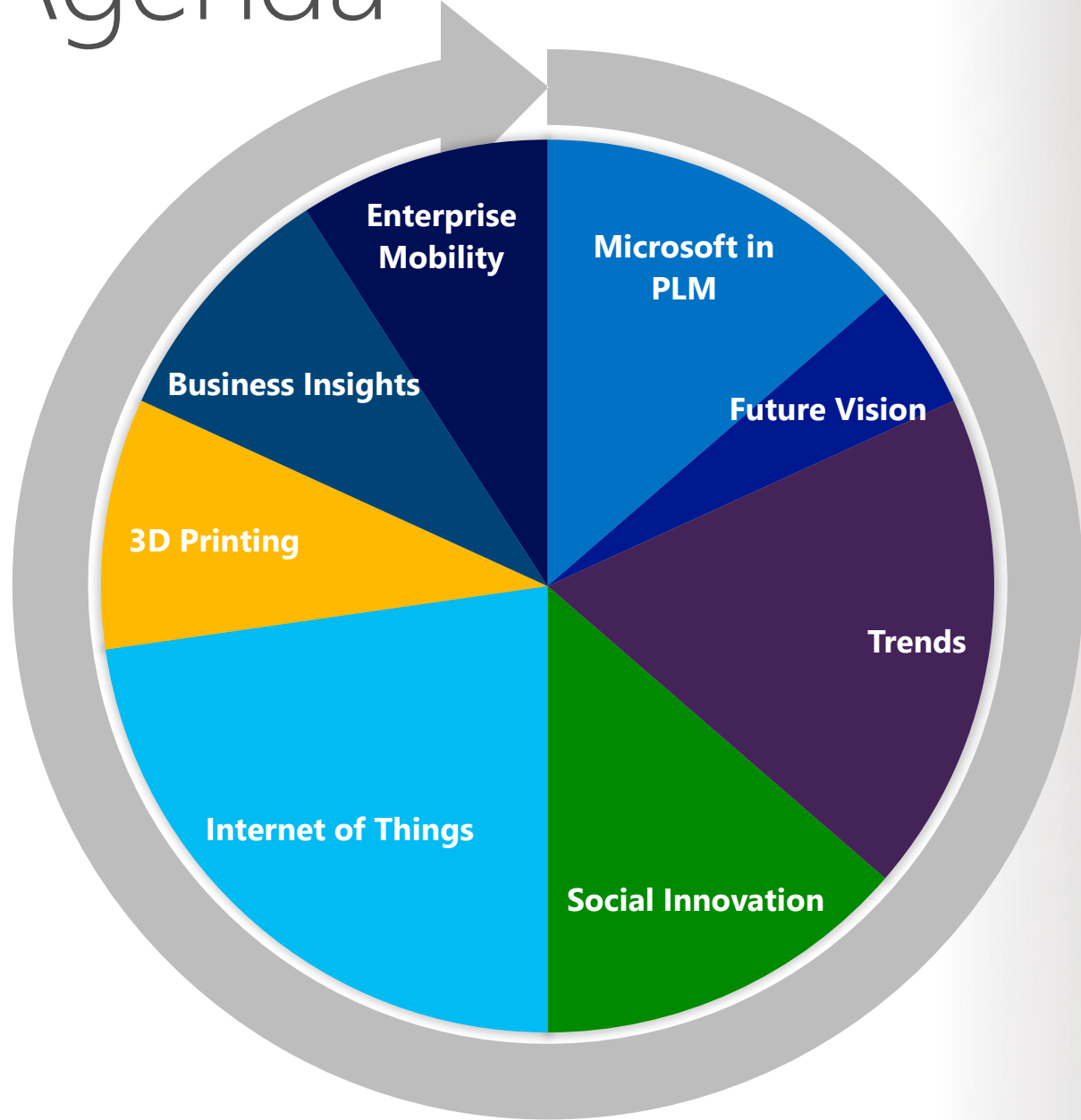


Product Development & Manufacturing Technology Trends

Simon Floyd
Director, Business Development & Strategy
PLM Solutions



Agenda



Share our perspective.
What's yours?

Solution Strategy in Product Development

Products that facilitate product innovation

Design anywhere

Facilitate high performance **mobile** productivity with line-of-business Apps, security and cloud connectivity



 Windows 8

 Office 365

Enterprise

Design together

Engage internal and external teams in collaborative, **social** thinking to problem solve rapidly, identify high value ideas or proposals and convert them to projects

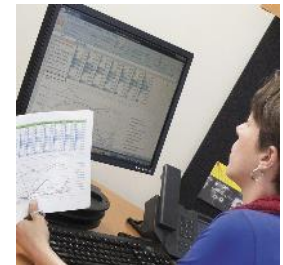


SharePoint Online

 Lync  Yammer

Design smarter

Enable deep **insights** to improve decision making within product development, engineering programs and product portfolio performance



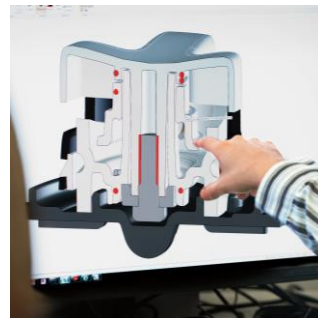
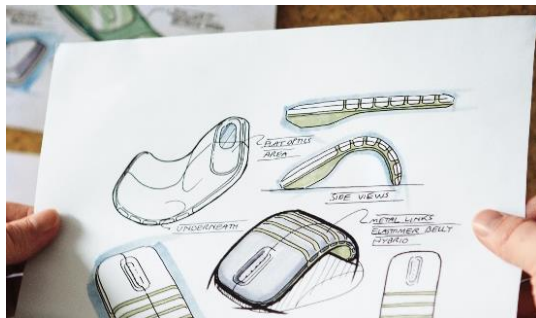
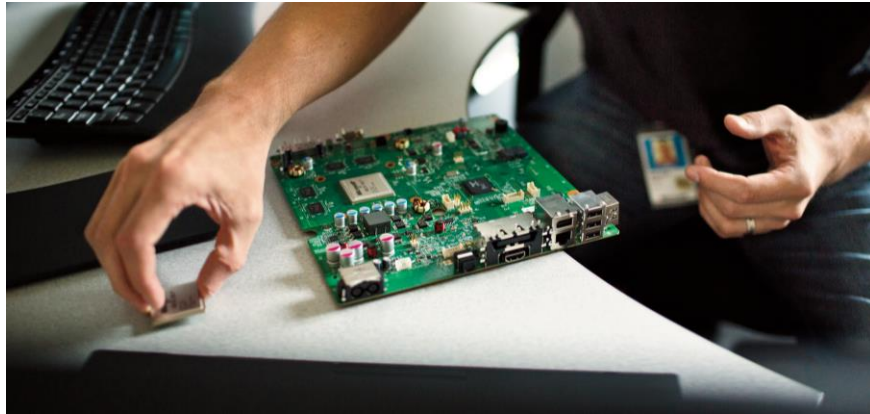
 Excel  Microsoft SQL Server

 Windows Azure

Partner Solutions

Microsoft Designs and Manufactures Products

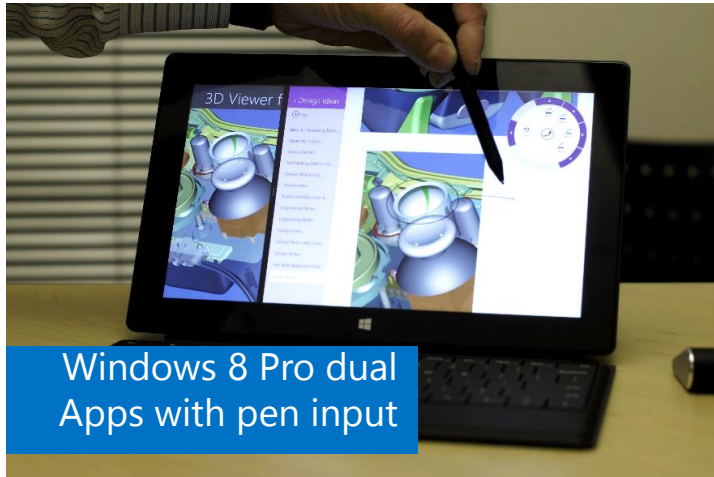
We use our own software with PLM



Agile processes and orchestration. Secure collaboration. Advanced analytics.

Devices for PLM

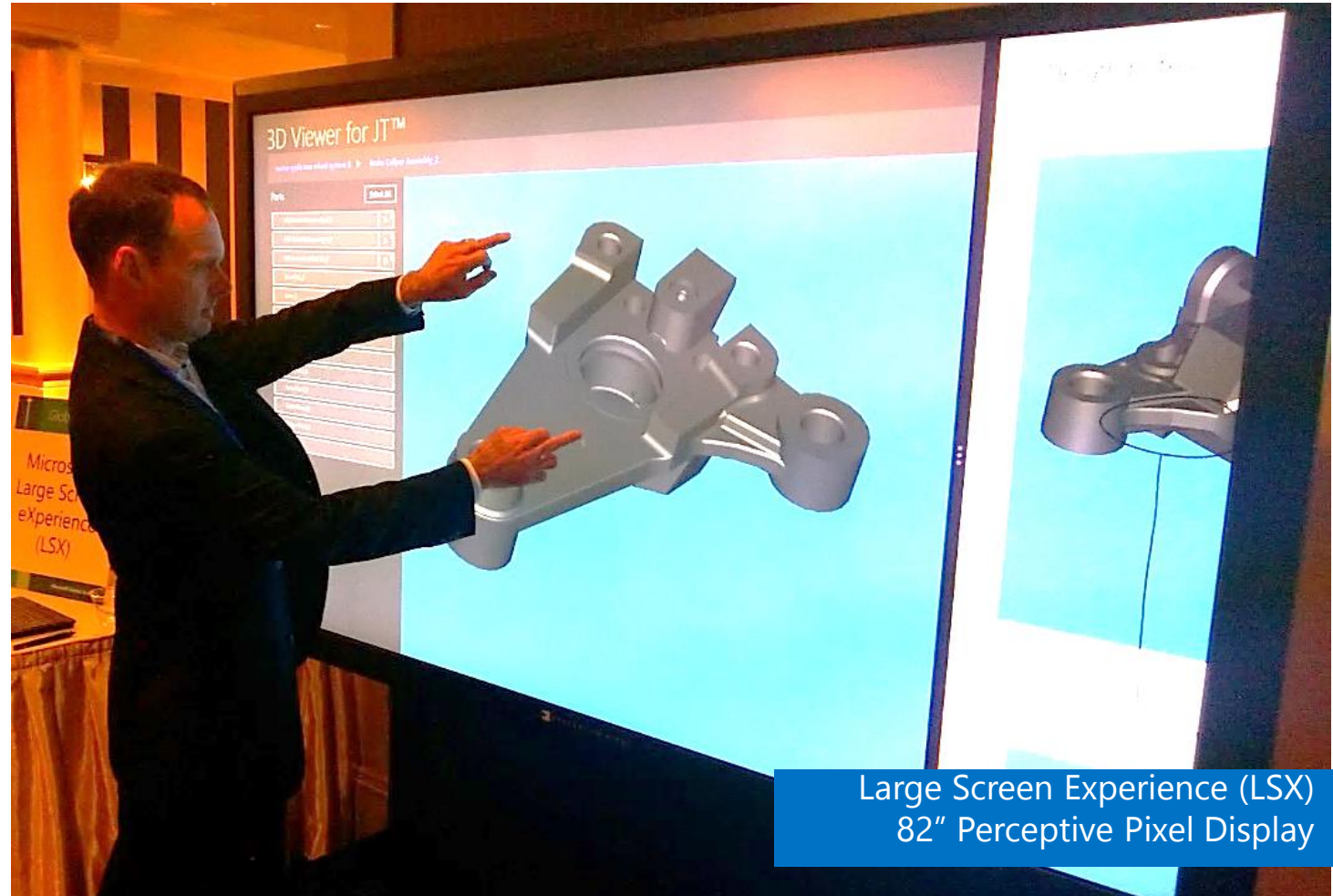
Large screen experience to tablet. Seamless interaction. Cloud connected.



Windows 8 Pro dual Apps with pen input



Windows 8 Pro desktop App for CAD



Large Screen Experience (LSX)
82" Perceptive Pixel Display

Microsoft & Aras



Windows 8

Microsoft SQL Server

Windows Azure

SharePoint

Office

Microsoft Dynamics

- Resilient, modern architecture
- Fastest to new Microsoft technologies
- Most scalable PLM system in the market
- Customization protection
- Market demand



My InBasket >

APQP-001 > Plan & Define Program > 1 <
1 Collect VoC
2013/11/01 Voice of Customer
APQP-001 > Plan & Define Program > 1 <
2 Business Plan/Marketing...
2013/11/01 Business Plan Service Overview
APQP-001 > Plan & Define Program > 2 < InReview
3 Design Goals
2013/11/01 GM Design Goals Wheel Design Other Design
APQP-001 > Plan & Define Program > 2 <
4 Reliability & Quality Goals
2013/11/01 Reliability Goals Quality Goals

Binder >

Strategy Review VoC Business Plan / Marketing Design Quality Schedule(Pending) 2013/11/20	Process Review Process Flow Floor Plan Manufacturing Plan Trial Production Plan AML 2013/11/20
1st Design Review Series / Models Design Quality Cost Environment 2013/11/20	Final Deliverables Table of Contents 1. Abstract 2. Product Plan

Project >

No. 1
APQP-001
期限:2013/12/27



What is the future of PLM?
How I see software evolving.

Major Trends in Information Technology



Apps

Mobile devices:
new primary design
point for end-user
access



#1 tech priority
for executives:
"Improve
the use of



and analytics
to improve
business
decisions and
outcomes"



Resilience
to ensure rapid
adoption of
technologies and
processes without
legacy burdens

70%
of CIOs will
embrace a cloud
first strategy
in 2016



Businesses must employ a **connected strategy**—across mobile, social, cloud, and information—to remain competitive

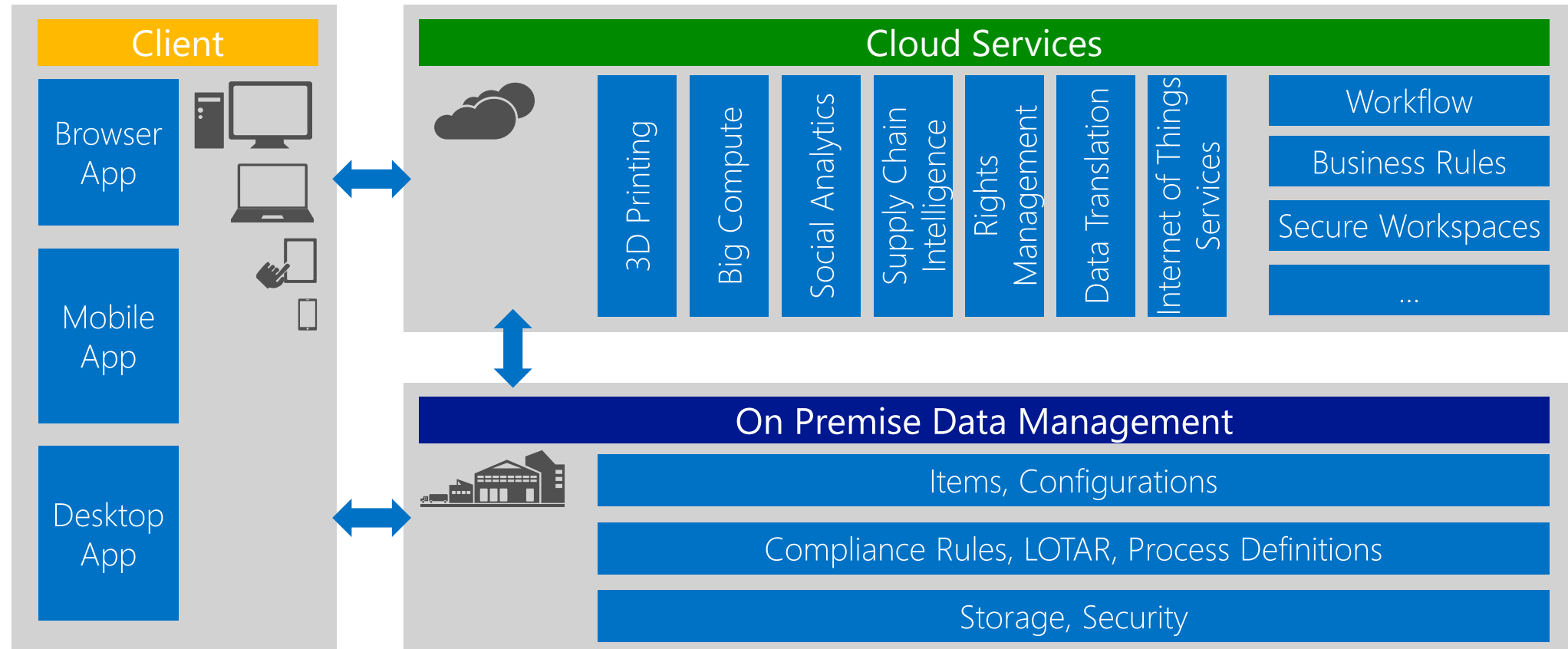
Internet of things



"Smart" assets will
make processes
more efficient, give
products new capabilities, and
spark novel business models

The (Practical) Future of PLM

A hybrid solution with cloud based services for real time performance, combined with Apps and secure on premise data management



What about right now?

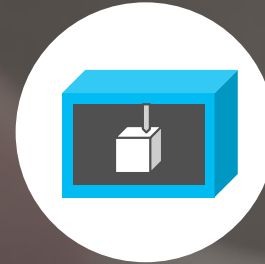
**The trends that are making an
impact today**

Trends in Product Development

Social Innovation



3D Printing



Business Intelligence



Internet of Things

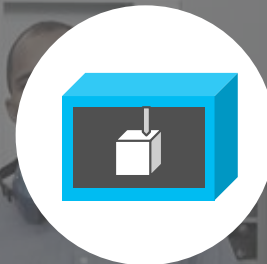


Trends in Manufacturing

Enterprise Mobility



Additive Manufacturing



Predictive Analytics



Internet of Things



Social Innovation

**Collaborative solutions and
insights**

Listen 76%

more visibility into other departments and office locations

Yammer, 2013

Adapt 37%

improvement in project collaboration

Inside Communication, 2012

Grow 93%

of business leaders agree that internal social tools stimulate innovation

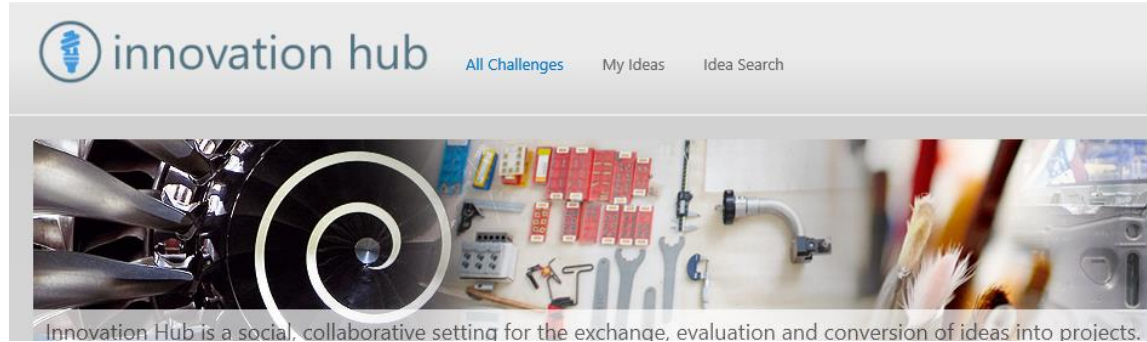
Red River, 2013



#worklikenetwork

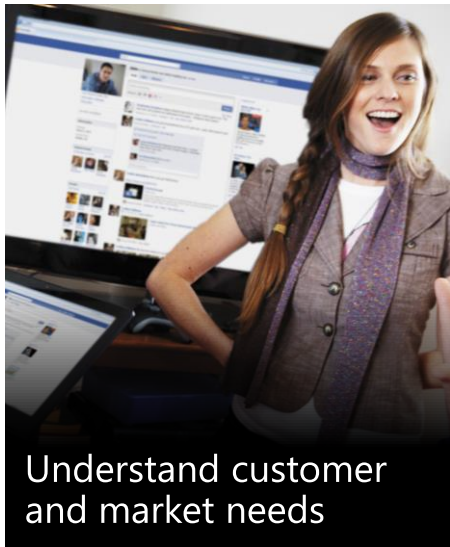
Social Innovation Management

5xEs

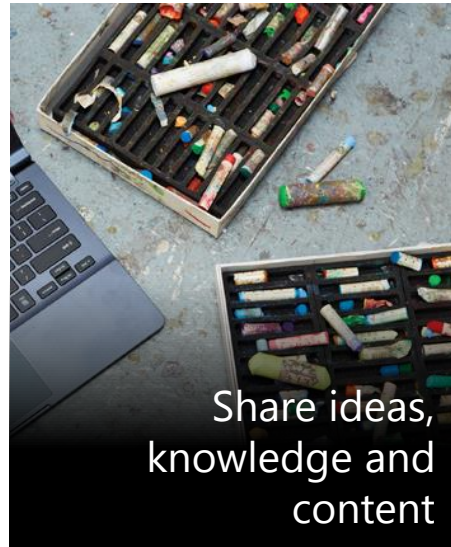


Free whitepaper
download from
Microsoft

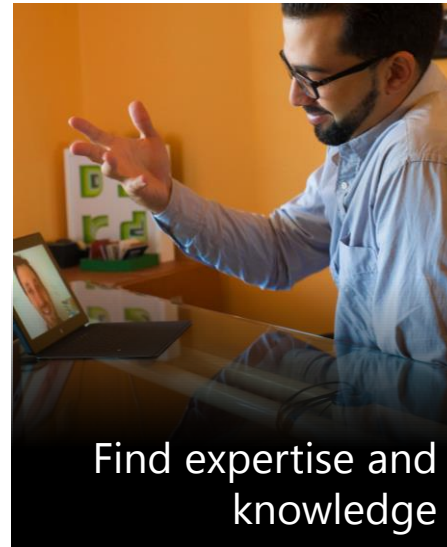
<http://aka.ms/IMF>



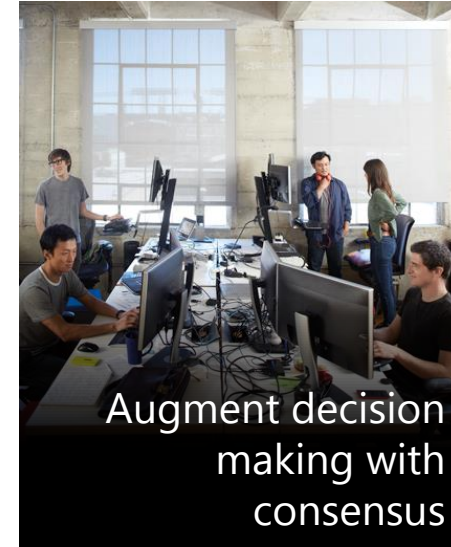
Understand customer
and market needs



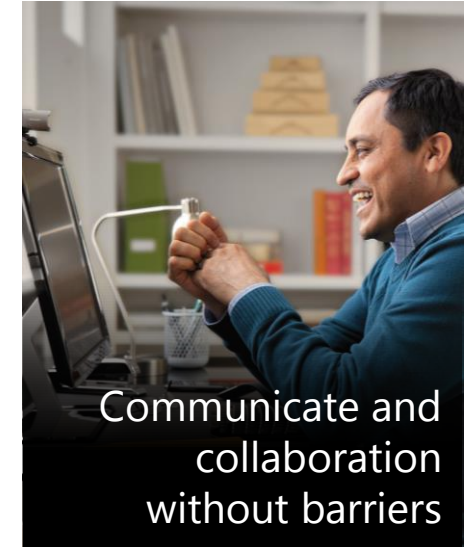
Share ideas,
knowledge and
content



Find expertise and
knowledge

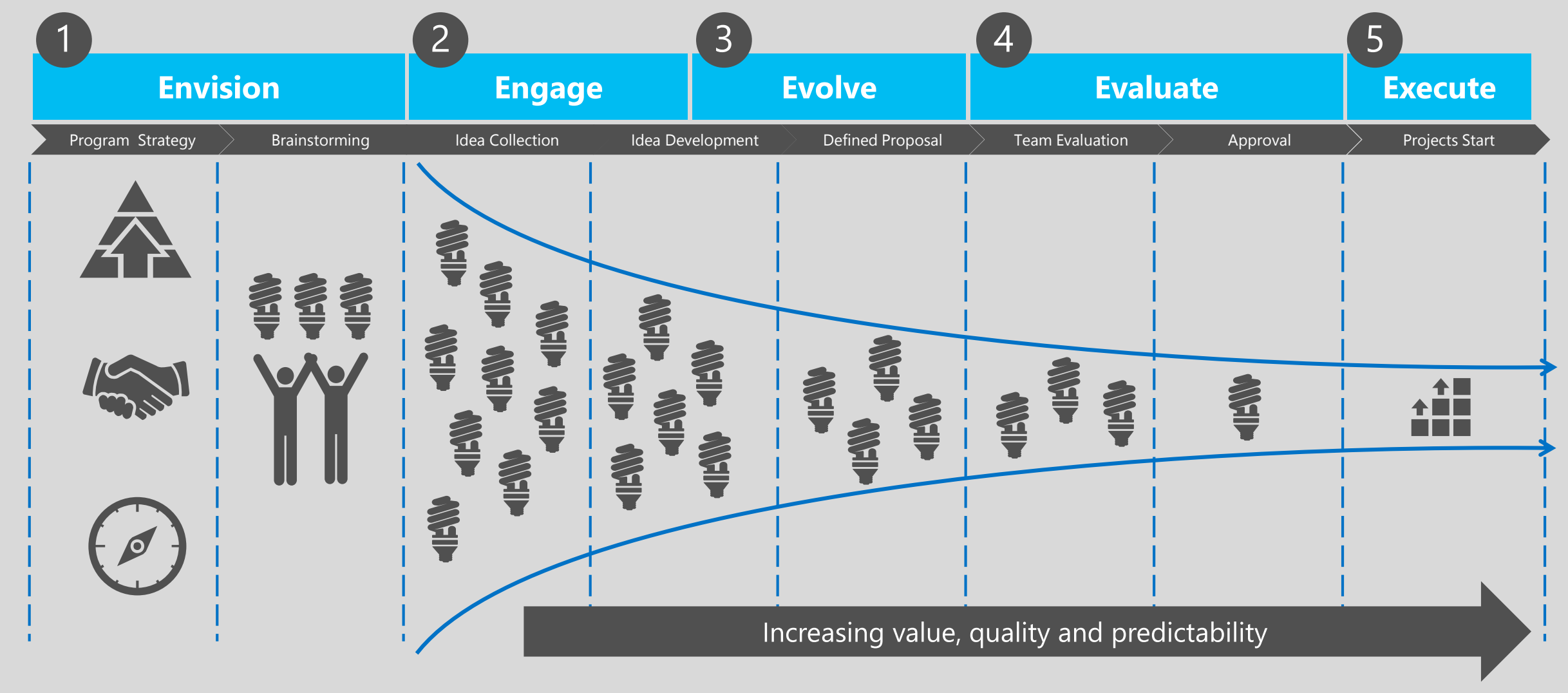


Augment decision
making with
consensus



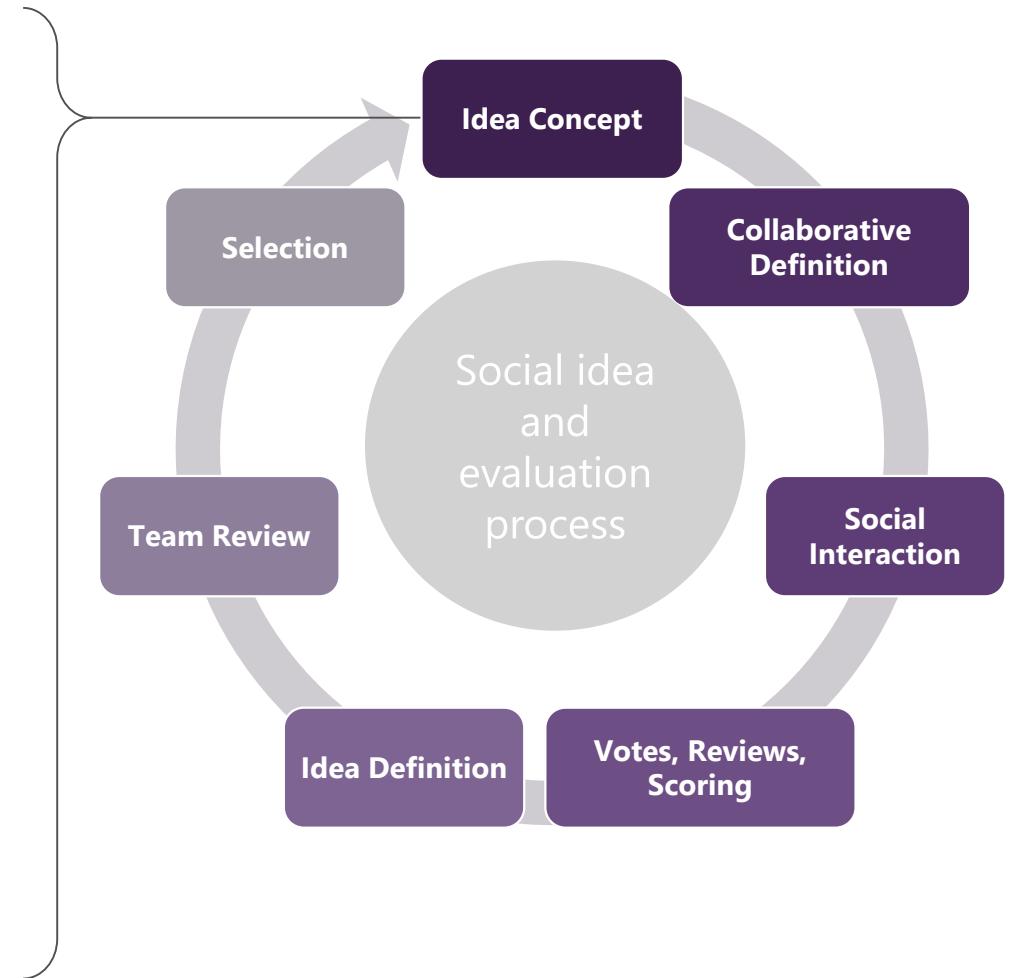
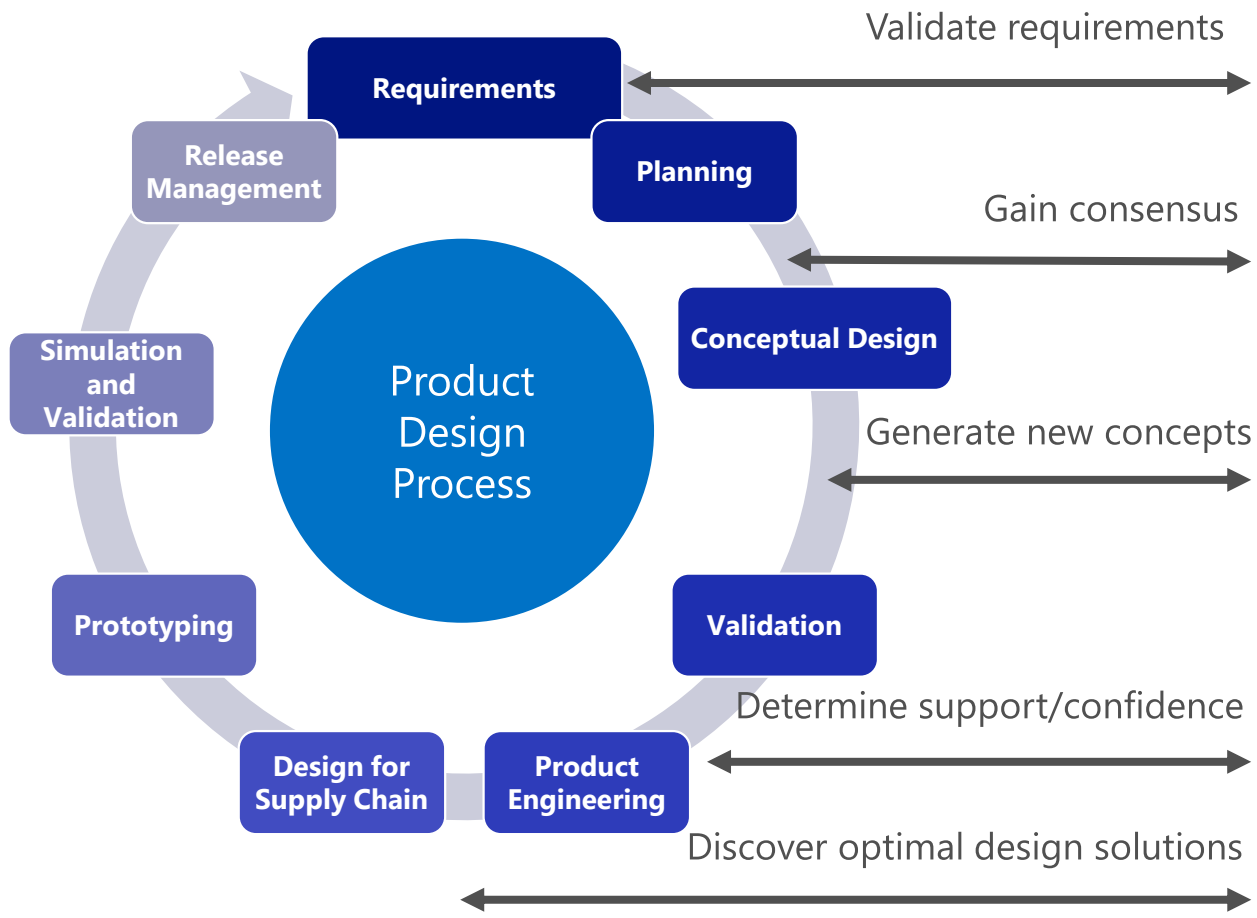
Communicate and
collaboration
without barriers

The 5xE's in Practice



Infuse new thinking. Enhance collaboration.

Find solutions to problem. Share alternative answers. Evolve, choose and act.



Internet of Things

Connected, intelligent products

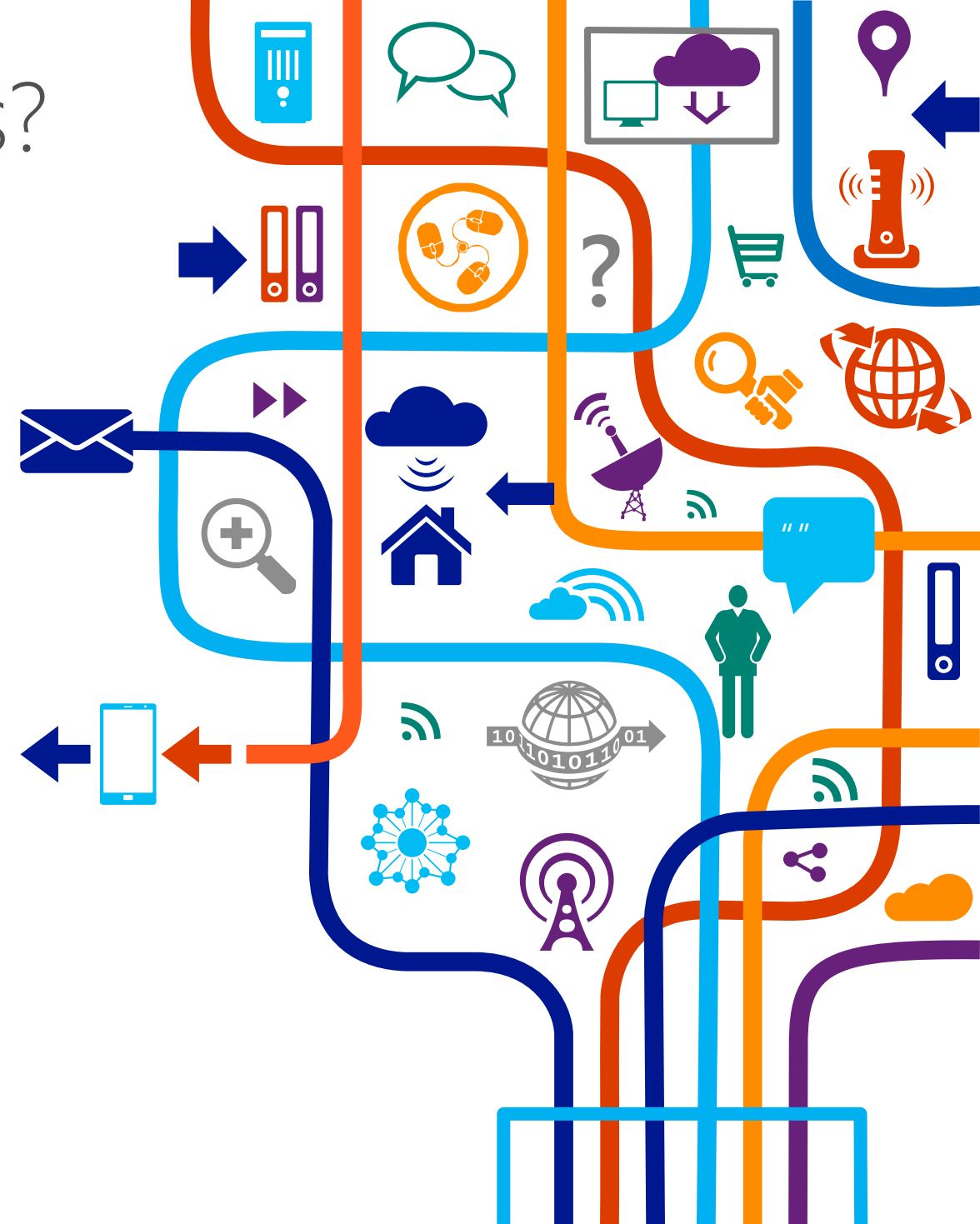
What is the Internet of Things?



The network of physical objects that contain embedded technology to communicate and interact with their internal states or the external environment.



Source: Gartner



212B
"things" globally by the end of 2020 – IDC

200TB
of data is generated by an average company with more than 1,000 employees – McKinsey

Market perspective: we are at the inflection point

Component costs continue to fall

Connected device demand is accelerating

Device options are expanding

More machines are talking to each other

Economic benefits are enormous

Today, leaders are already connecting their things to create new kinds of business value



Video: Autolib

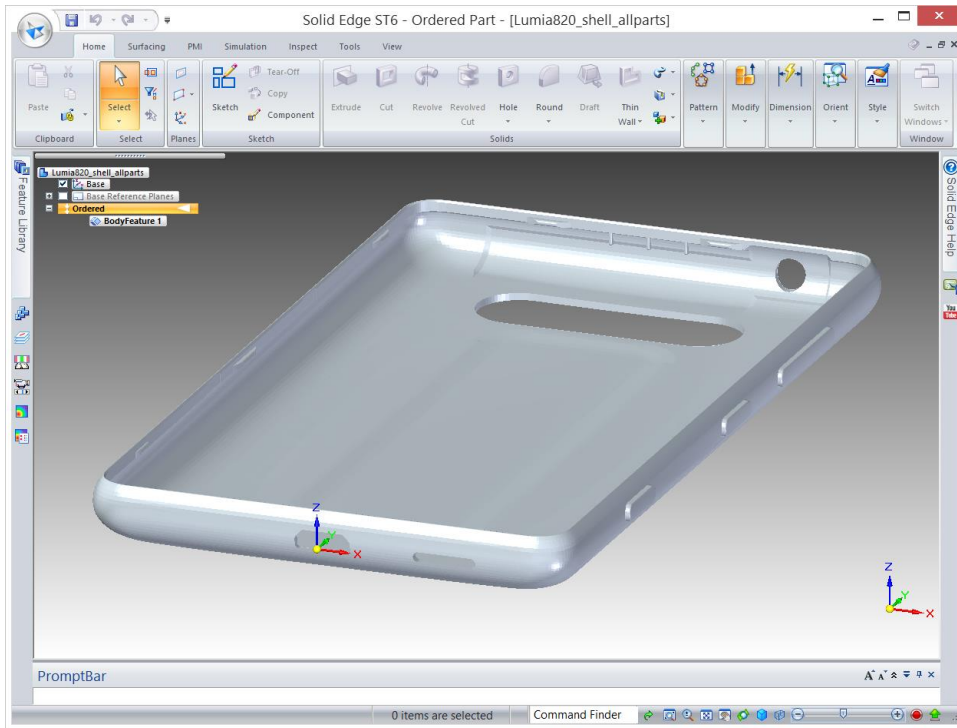


3D Printing

**The Engineer's precursor to
Additive Manufacturing**

Maker Market: Personal Factory

Design your own Lumia 820 back panel

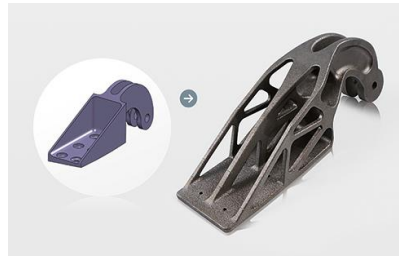


The Personal Factory is not a gimmick. It's the manifestation of trends.

EADS: Additive Layer Manufacturing Direct Metal Laser Sintering in Titanium



- Lower environmental impact vs. die casting
- Lighter weight vs. steel
- Design flexibility

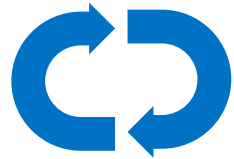


Microsoft 3D Printing

Catering to evolving work styles and optimization



Design in 3D

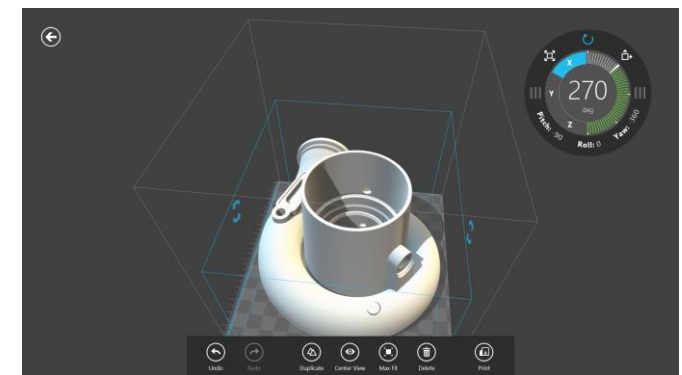
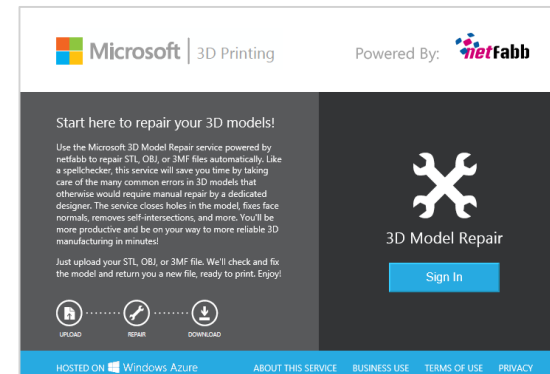


Validate/Iterate in 3D



Prototype, Manufacture

- Integrated drivers for plug-n-play
- App for easy printing
- File optimization service
- 3MF format
- Easy to integrate



Business Insights

Advanced decision making

Filter Results

clear all

Keyword Properties

Item Type

Part Type

Part Classification

Revision

Status

Project

- ARCADE
- AUSTIN
- BARCELONA
- CM-CDM Model
- CORONA
- CYCLOPS
- DENALI
- DOVER
- ExternalALL
- FALCON
- GREYBULL MB
- JASPER
- LAMPREY
- MILAN 1.5
- MUSTANG
- OPUS
- PATRIOT
- PC HARDWARE
- QT
- SAPPHIRE
- SERENITY
- SILVERTON
- SMART SURFACES
- SYDNEY

Author

Prod/Funct Group Owner

Status Date

Show All Filters [Save this Search](#)

Program Charters (0) Documents (5778) Parts (1006) Changes (12) Sourcing (1006)

Revision: Latest Released > Showing 1 - 20 of 1006 results

Type	Status	ID / Rev	Description	Used in SKUs	Current Change Record	Content
	EV	GE2-00080/E	TOP ASSY,ZEPHYR B,PRO,GPU SUBSTRATE,NA	1	C17905/A	1 TCitem TOP ASSY,ZEPHYR B,PRO, GPU SUBSTRATE,NA FinishedGood Epim.Services15MAAcTfhPwk5D top assy,zephyr b,pro, gpu substrate,na False UPC Code;MPC Code
	DV	GE2-00098/C	TOP ASSY,,ZEPHYR B,DEV2,PRO,GPU SUBSTRATE,NA	1	C17905/A	TCitem TOP ASSY,,ZEPHYR B,DEV2,PRO, GPU SUBSTRATE,NA FinishedGood Epim.Services15MAAcTfhPwk5D top assy,zephyr b,dev2,pro, gpu substrate,na False UPC Code;MPC Code
	Prod	X0018-001/F-5	HEAT SINK,GPU,PASSIVE	176	C08298/A	MgMAAY\$QhpWk5D:1 TCitem HEAT SINK, GPU ,PASSIVE Strategic Epim.ServicesdPDAAY3ahPwk5D F-5 IHNAAcwEhpWk5D heat sink, gpu ,passive False \$sNAAY9OhPwk5D;2HJAAyCehPwk5D
	Prod	X0020-001/E	CLIP,HEAT SINK,GPU	176	C09263/A	QhpWk5D:1 TCitem CLIP,HEAT SINK, GPU Strategic Epim.Services.Bcs.TCDataServiceE p,,BAAY77hPwk5D clip,heat sink, gpu False tyNAAYcBhpWk5D Part Type;Compliant
	Prod	X00284-001/B-2	FAN-SINK,GPU,ACTIVE	22	C02665/A	LAAYdbhPwk5D:1 TCitem FAN-SINK, GPU ,ACTIVE Commodity Epim.Services B-2 PSMAAYu7hPwk5D fan-sink, gpu ,active False BSBAAy8ahPwk5D Part
	DV	X00285-001/1	CLIP,FAN-SINK,GPU	0	C00199/A	Business Stream TCitem CLIP,FAN-SINK, GPU Commodity Epim.Services.Bcs.TCDataService1 WcCAAYLdhPwk5D clip,fan-sink, gpu False Part Type;Compliant Owner
	Inac	X00436-001/INA	IC,S/ M,VLSI,VIDEO,CX25871,PQFP80,-15,QT	0	C03348/A	4FKAAy\$EhPwk5D 2339 True Migration User (migrationuser) C03348/A GPU ;SM;0001;GB;DD1.1;0001.00;MHZ;SHINKO;CHT AMKOR;IC- ASICS/M,GCPU
	DV	X02041-001/A-1	IC-ASIC,GPU DAUGHTER DIE,XENON	0	C08790/A	Authorized:0007010181 TCitem IC-ASIC, GPU DAUGHTER DIE,XENON Other Epim.ServicesnPAAY3ahPwk5D A-1 tTLAAcQ5hPwk5D ic-asic, gpu daughter die,xenon False hGAAYtdhPwk5D
	DV	X02041-002/A	IC,XENON GPU D-DIE REV8 FROM NEC	1	C08718/A	xxvIAAYrDhPwk5D:1 TCitem IC,XENON GPU D-DIE REV8 FROM NEC Consigned EpimuYPAAY3ahPwk5D A ncNAAcQ5hPwk5D ic,xenon gpu d-die rev8 from nec False xxNAAYtdhPwk5D
	Prod	X02041-003/A-1	IC,XENON,GPU,D-DIE,ES3	471	C23843/A	MHMAAY\$OhPwk5D:1 TCitem IC,XENON, GPU ,D-DIE,ES3 Consigned Epim.Services A-1 VtFAAcw4hPwk5D ic,xenon, gpu ,d-die,es3 False w8JAAytdhPwk5D
	DV	X02041-004/A	IC,XENON,GPU,D-DIE,ES4	0	C12734/A	Business Stream TCitem IC,XENON, GPU ,D-DIE,ES4 Consigned Epim.Servicesf5EAAY3ahPwk5D A BpAAAYPXPkhPwk5D ic,xenon, gpu ,d-die,es4 False Part Type;Alternate
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						Authorized:0007010245 TCitem XENON GPU PARENT DIE REV.B

X00284-001/B-2 FAN-SINK,GPU,ACTIVE

Prod

Copy URL Export Details

Properties

Description: FAN-SINK,GPU,ACTIVE

Alternate ID

Part Type: Commodity

Classification

Status: Production

Status Date: 5/9/2003

Owner: Migration User (migrationu)

Group Owner: Xbox.Business Stream

Project(s): QT;XDK;XBOX CONSOLE

T1 Vendor

T1 Part Status

Data Restriction

Current Change Record

Change Type

ID/Rev: C02665/A

Description

Status: Released

Status Date: 5/9/2003

Originator: Bill Lawrence

Change Impact

Reason Code(s): AVL Change

Reason for Change

CCB Class

Distribution

T1 Imp Priority: Emergency

Manufacturer(s)

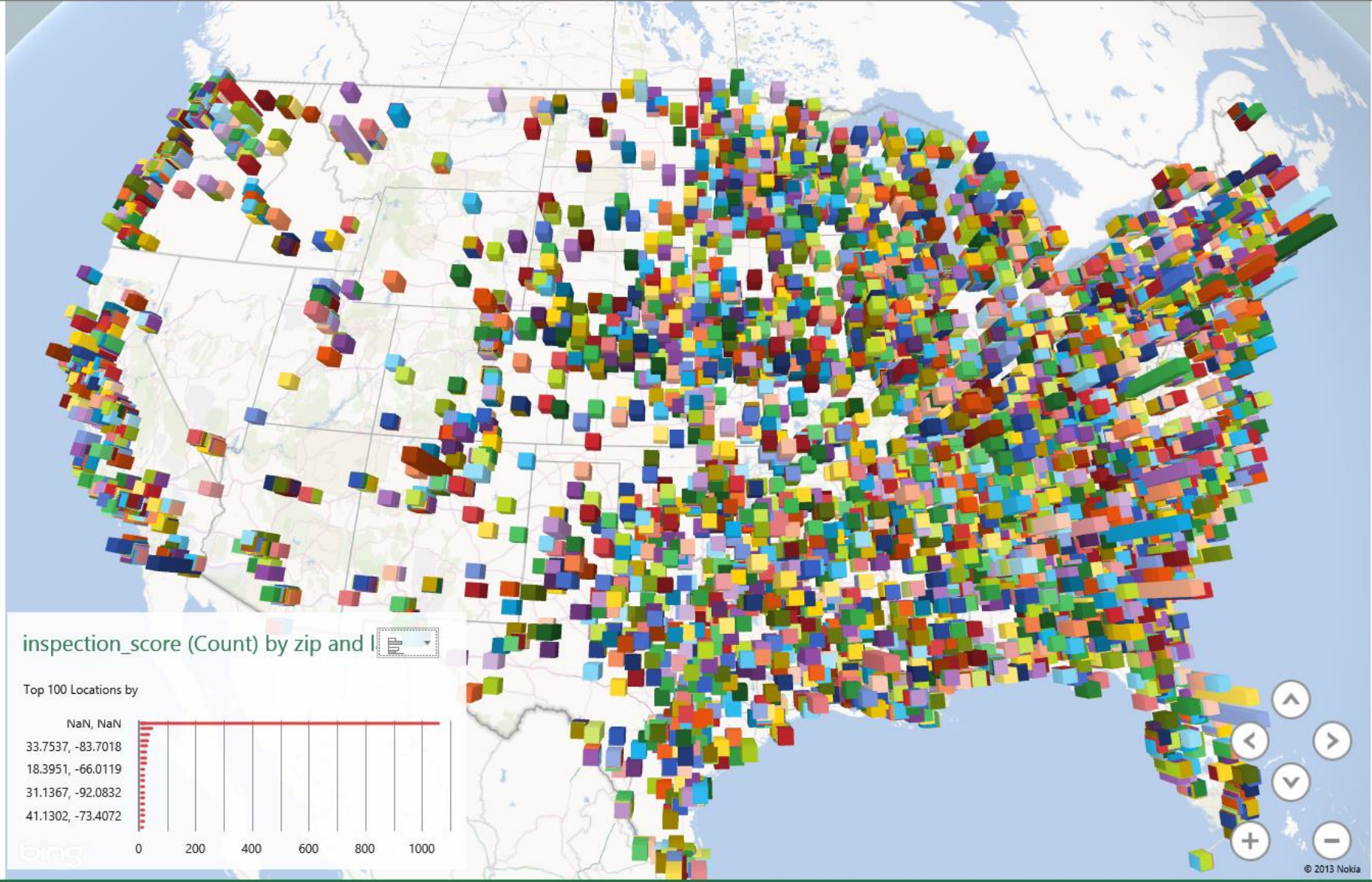
MTHERM-1 MILLEN Qualified V00873

SKU(s)

- F23-00061/INA XBOX
- XBOX VIDEO GAME SYS EN/FR/ES HDWR NTSC
- F23-00074/INA XBOX
- XBOX VIDEO GAME SYS HDWR NFR NA ONLY INTE
- F23-00082/INA XENON
- XBOX VIDEO GAME SYS EN/FR/ES HDWR NFR MS
- F23-00092/INA XBOX
- XBOX VIDEO GAME SYS EN/FR/ES HDWR NTSC INT
- F23-00093/INA XBOX
- XBOX VIDEO GAME SYS JAPANESE HDWR NTSC-J
- F23-00124/INA XBOX
- XBOX VIDEO GAME SYS EN/FR/ES HDWR NTSC DV
- F88-00156/OBS-1 XDK
- XBOX DEV KIT ENGLISH NA HDWR DIRECT DEV KIT

FILE HOME

Themes Map Labels Data Shapes Add Scene Play Tour Chart Show All Legends Textbox Tour Editor Time Line Time Decorator Task Panel Add Layer Refresh Data Find Location Copy Screen



Layer 1

Choose which fields you would like to visualize.

Map by latitude (Latitude) Edit

latitude/longitude (Latitude/Longitude)

- cbsa_code
- cbsa_name
- city
- county_code
- county_name
- inspection_date
- inspection_score
- latitude
- longitude
- pha_code
- pha_name
- property_id
- property_name
- state_code
- state_name
- zip

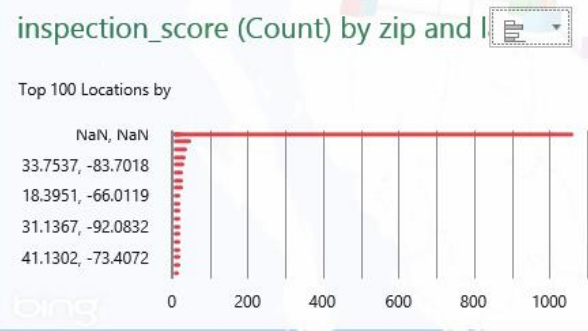
Check or drag fields to areas below:

CHART TYPE
Column

HEIGHT
inspection_score (Count)

CATEGORY
 Clustered Stacked
zip

TIME



Enterprise Mobility

Accelerating work processes



Assembly Execution

SITUATION

PCs in cart at floor level or external fixture
Tight spaces, heavy tools, large components
Travel time: stairs, ladders, floor space

NEEDS

Point of use
MES interaction
Battery power for shift
Work with gloves, pen, peripherals
Multiple users. Single sign-on

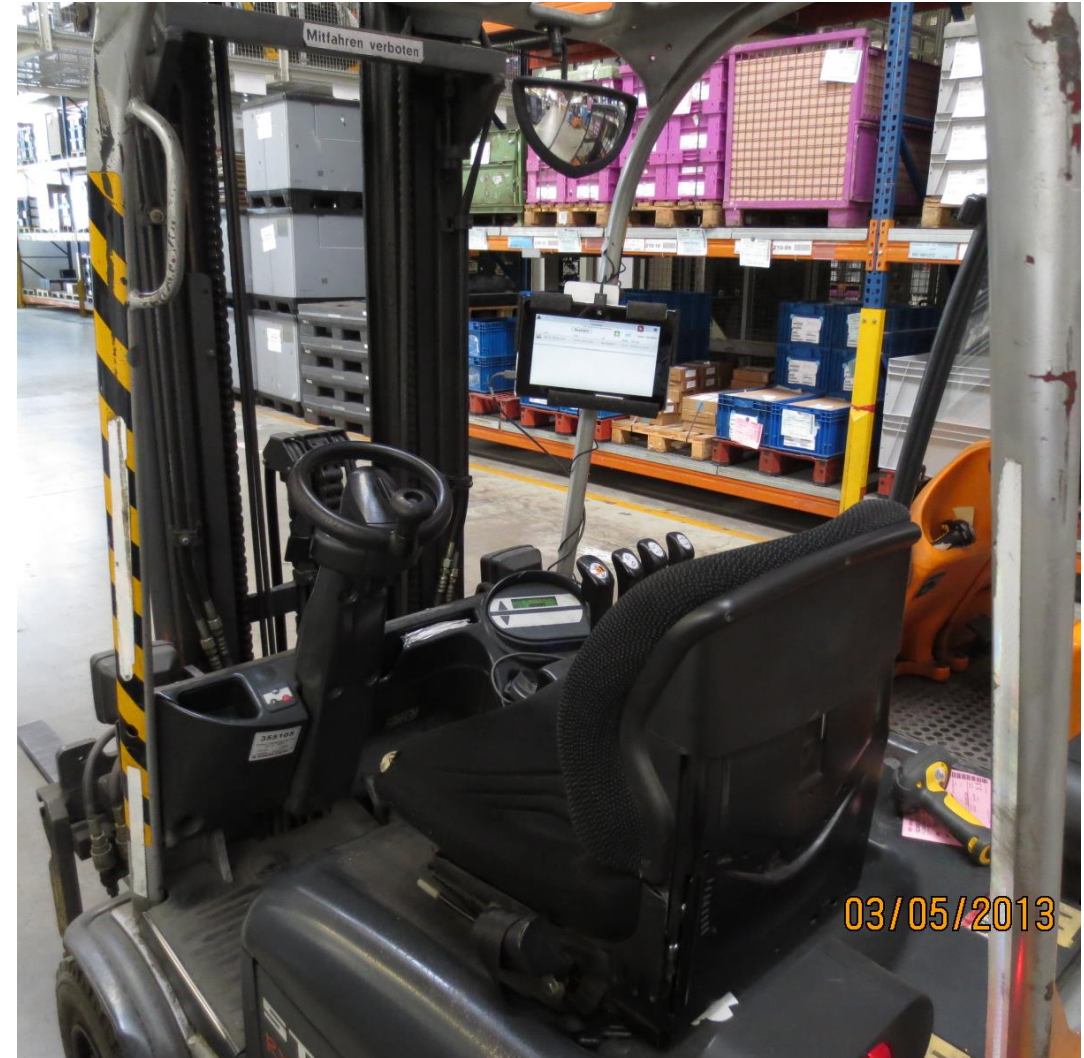
POTENTIAL

Save 8-12 minutes/shift. Reduce down time. Accelerate orchestration.



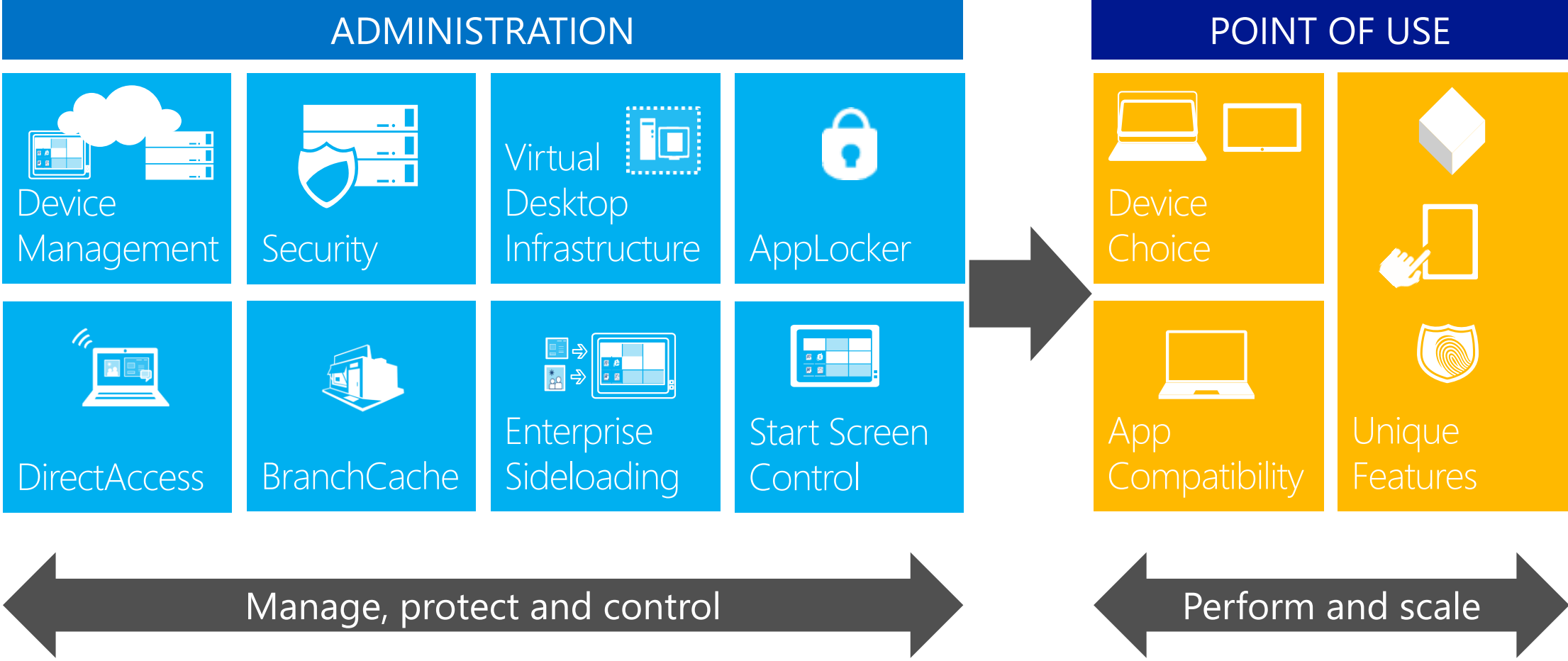
Magna Steyr: Assembly Systems Orchestration

Electronic dispatch and assembly systems execution



Why this works

End-to-end solution for managing devices, security and apps



Device specifications to suit workloads

Office, Site Work

Panasonic Toughpad 4K

- Intel Core i7
- NVidia® Quadro GPU
- 16GB RAM
- 20" 4K Resolution
- Optical touch pen
- Rugged 2.5' drop
- Workstation replacement

Surface Pro 2

- Intel Core processor (Pro)
- Intel HD 4400 Graphics
- 8GB RAM
- Pen input
- Built-in kickstand
- Multi-monitor
- Battery life
- Accessories

Field Service, Factory

Panasonic Toughpad FZ G1

- Intel Core Processor
- Ruggedized for 4 ft. drops
- Daylight readable screen
- Pen input
- MIL-STD-810G & IP65 certified

Dell Venue 8 Pro

- Intel Atom Bay Trail
- Long battery life
- Lightweight
- Pen input



Simon Floyd

simonfl@microsoft.com
www.microsoft.com/industry

[LinkedIn](#)

Twitter @floydinnovation

THANK YOU!

