

luxexecutivesummit 2018
Tokyo • October 17

The 3 Ts

The Making of a Successful DigiTal TransformaTion

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Research Director, Lux Research



Agenda

- 1 | Digital transformation is hard
- 2 | Understanding the 3 Ts
- 3 | Putting the Ts to work

What is Digital Transformation?

DATA



MONEY

Walmart 







80-90% of
digital
transformation
projects **fail**








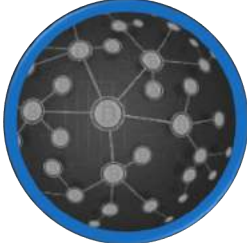
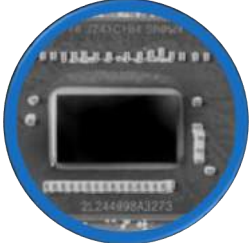



And it's only getting harder, with more complexity



And it's only getting harder, with more complexity

DIGITAL TOOLBOX



 Machine vision	 Blockchain	 Cloud computing
 Predictive maintenance	 Self-driving cars	 Augmented reality

Digital Transformation failures fall into three categories

Technology

- Not secure data
- Not adaptable
- Too expensive
- Lack of interoperability

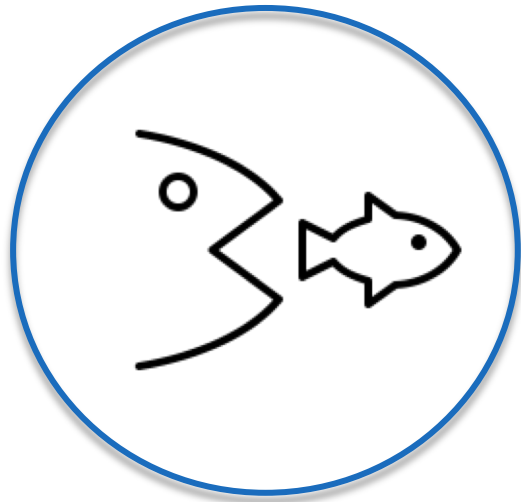
Team

- Lack of executive buy-in
- Lack of cross team buy-in
- Executive/champion turnover
- User not interested or not capable

Timing

- Technology readiness
- Timing mismatch with business goals
- Competitors' maturity

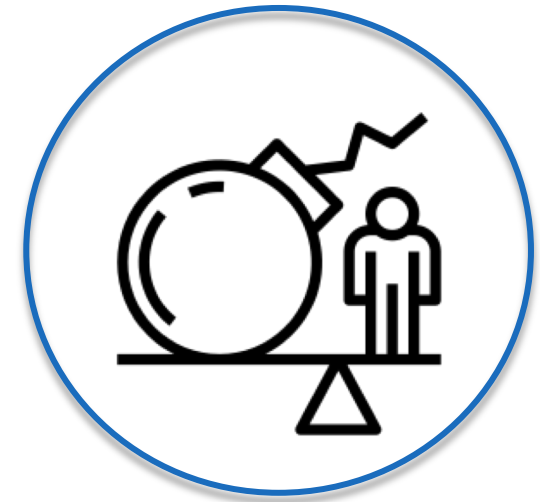
So, why not just skip the whole thing?



Your competitors
are doing it



Rapid growth
opportunity

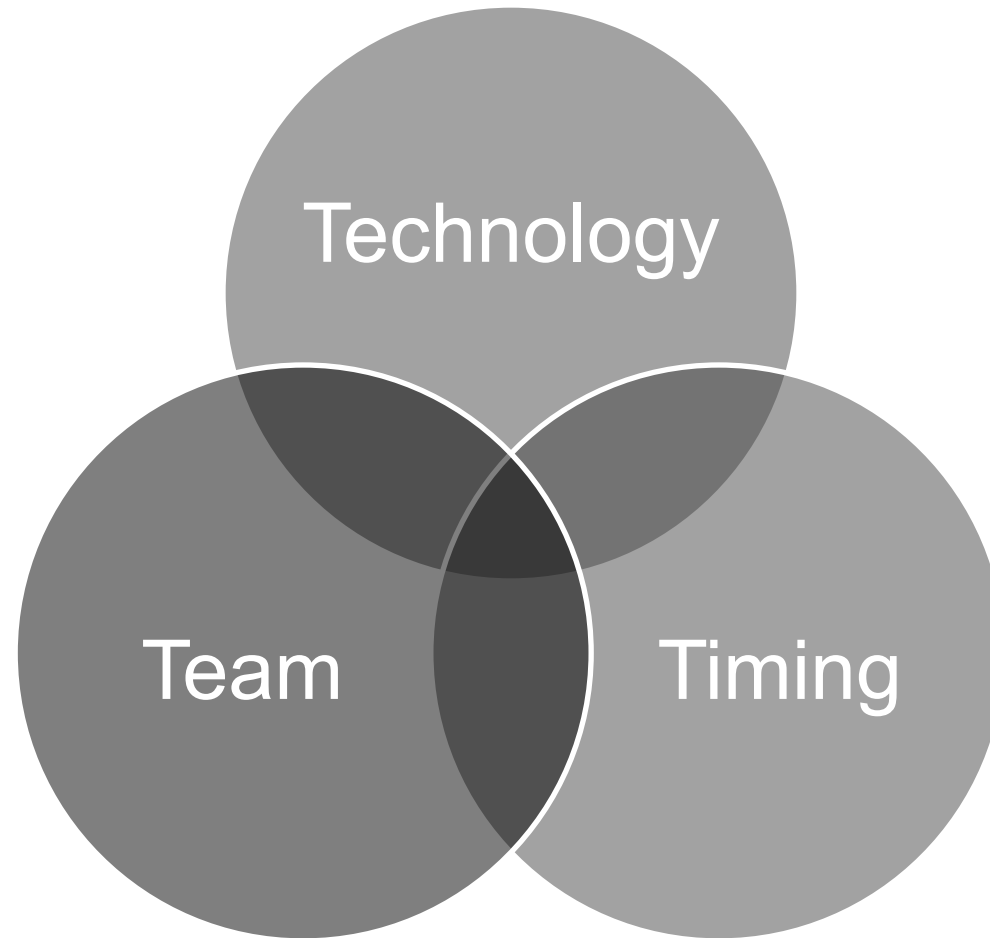


Failure comes
with risk

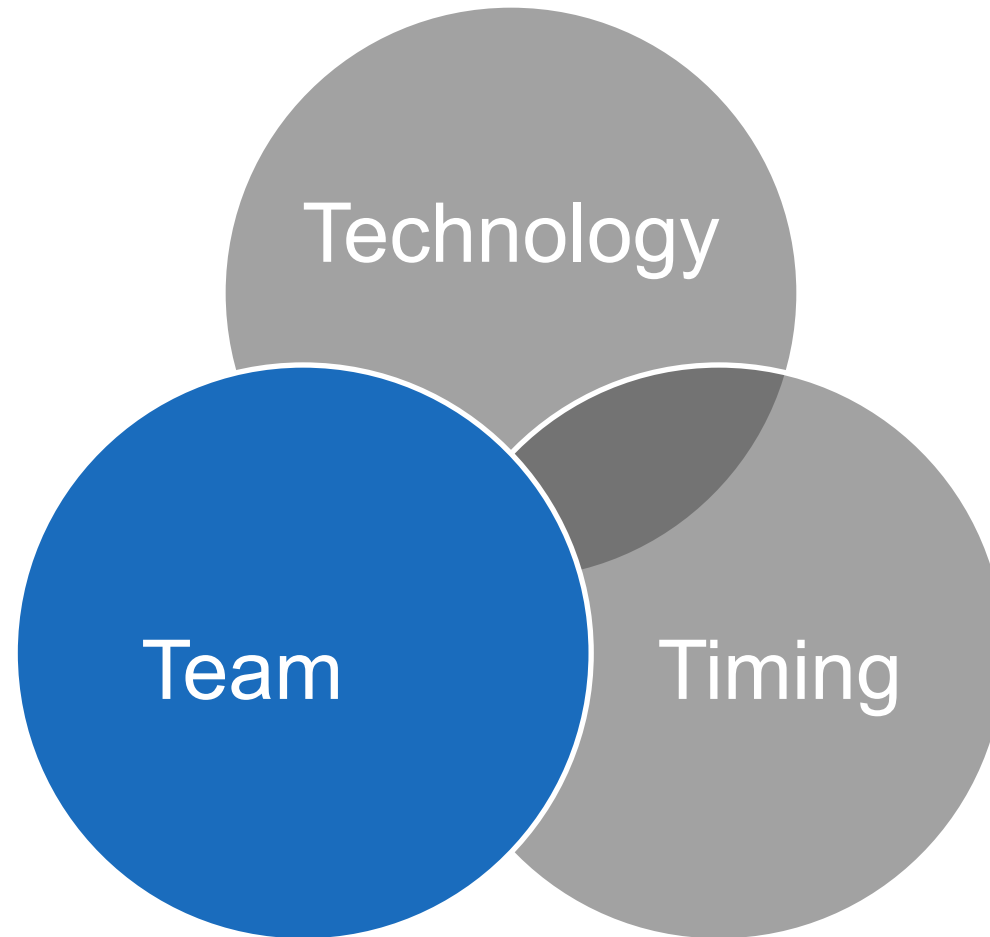
Agenda

- 1 | Digital transformation is hard
- 2 | **Understanding the 3 Ts**
- 3 | Putting the Ts to work

Overcoming Digital Transformation failures



Overcoming Digital Transformation failures





There are
so many
stakeholders
who need to
buy-in

Demonstrating goal metrics and calculating ROI helps to get broad executive buy-in and mitigate turnover



Ease of use is key to entry-level user adoption

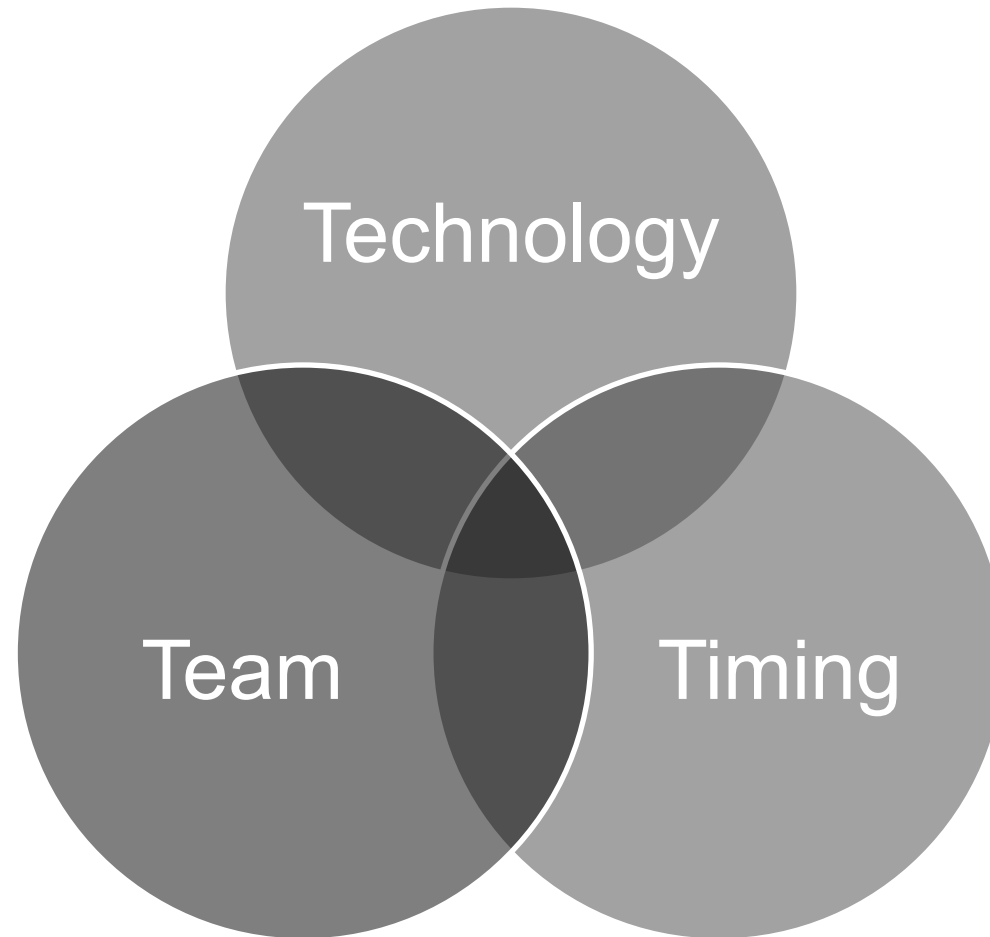


 Microsoft
HoloLens

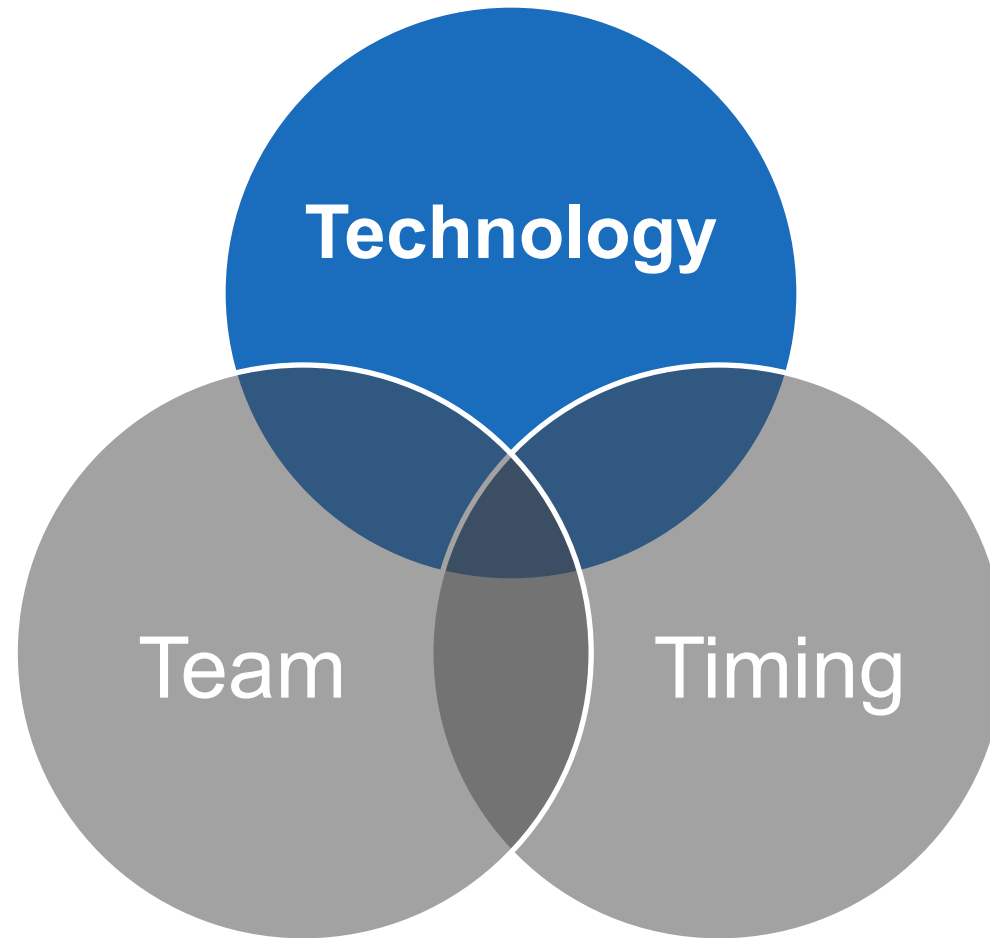


VUZIX[®]
View the Future[®]

Overcoming Digital Transformation failures



Overcoming Digital Transformation failures





Technology
failures are a
fast way to bring
digital
transformation
to a grinding
halt.

Machine Vision started in manufacturing and has been finding new applications



Established applications



Paige.ai raises \$25 million for cancer detection powered by computer vision

KHAR|JOHNSON @KHAR|JOHNSON FEBRUARY 5, 2018 10:54 AM



Machine Vision started in manufacturing and has been finding new applications



Established applications



Current Developments



Paige.ai raises \$25 million for cancer detection powered by computer vision

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Established applications



Current Developments



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Future Deployments

Machine Vision started in manufacturing and has been finding new applications



Current Developments



Paige.ai raises \$25 million for cancer detection powered by computer vision

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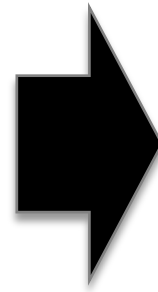
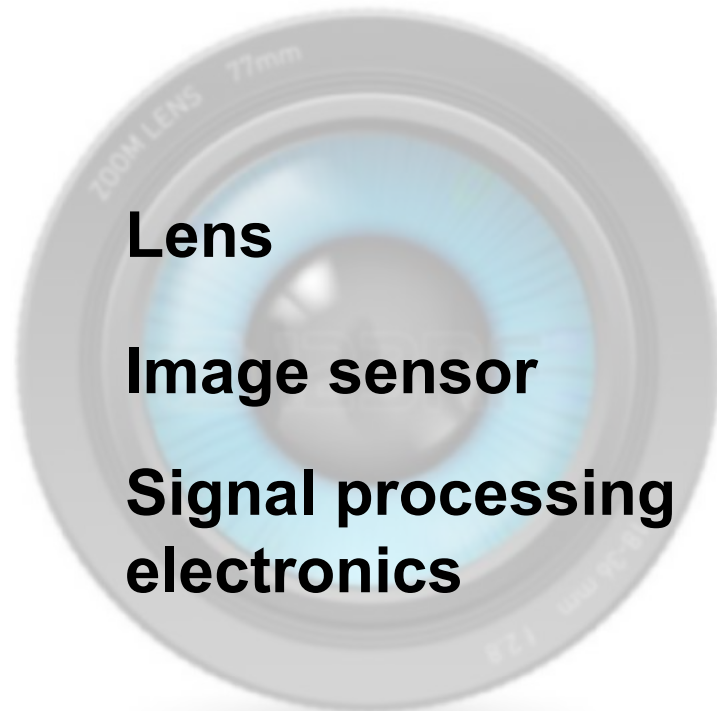


Machine Vision started in manufacturing and has been finding new applications

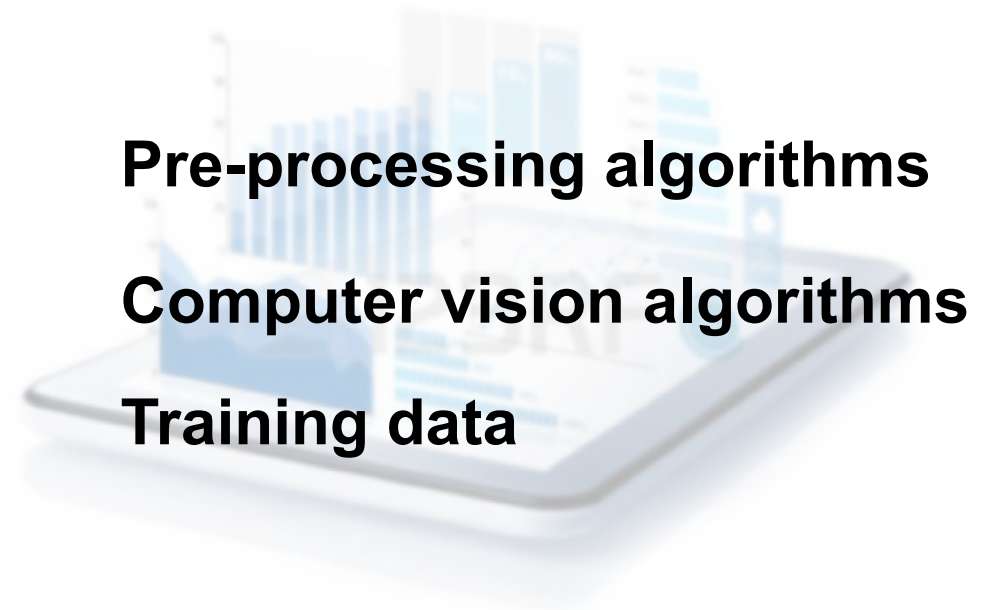


Training data is the critical component for accurate machine vision

IMAGE

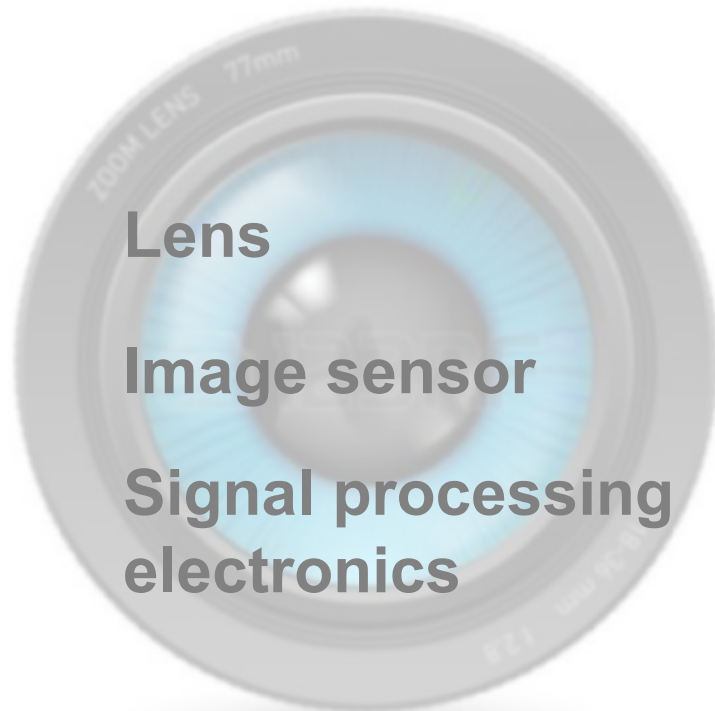


ANALYSIS



Training data is the critical component for accurate machine vision

IMAGE



ANALYSIS

Pre-processing algorithms
Computer vision algorithms

The background of the analysis section features a blurred image of a laptop displaying a bar chart and a line graph, suggesting data analysis and machine learning.

Training data

Large data set needed

Can introduce bias or mistakes

Strategies for developing a training data set for machine vision, each with pros and cons

STRATEGY:

EXAMPLES

- 1 Large Proprietary Dataset**
CON: Difficult to get / expensive, time-consuming
PRO: High-value differentiator

facebook



- 2 Computer Vision as a Service**
CON: Lose data exclusivity
PRO: Rapid access to large dataset

 Google Cloud Platform

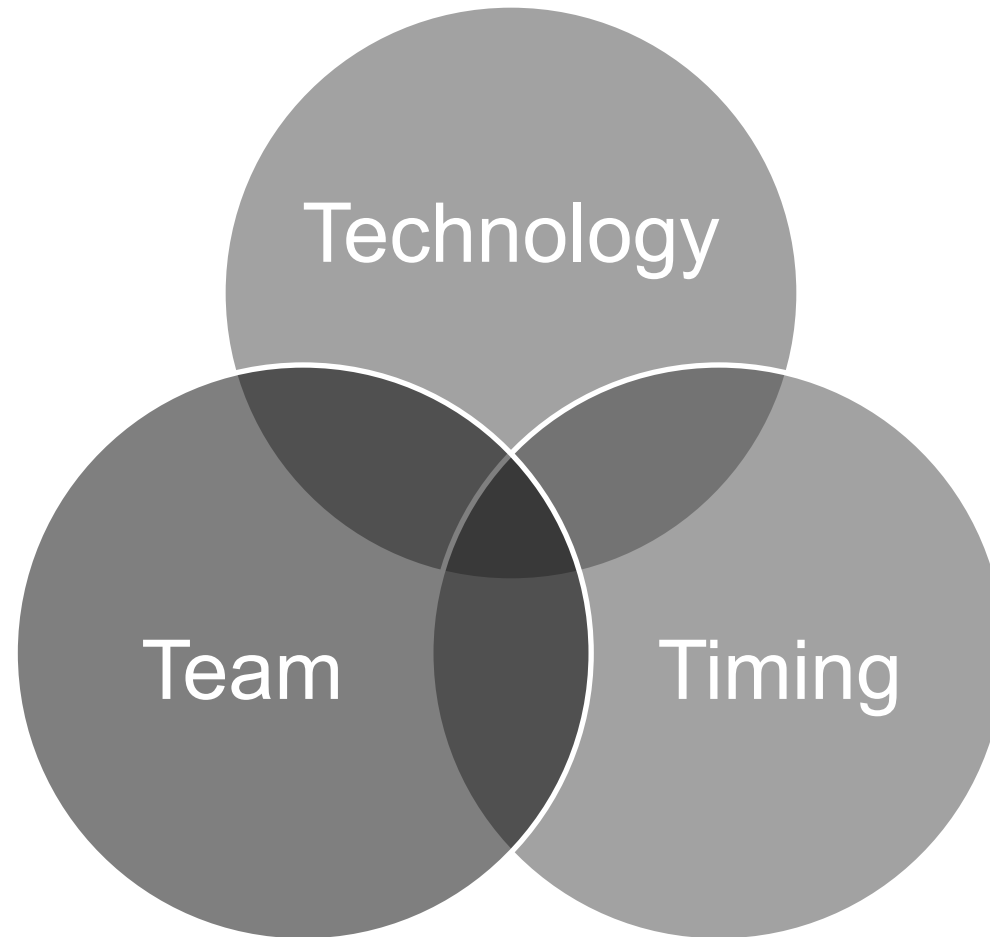
clarifai

- 3 Transfer Learning**
CON: Less mature approach
PRO: De-facto large dataset with data exclusivity

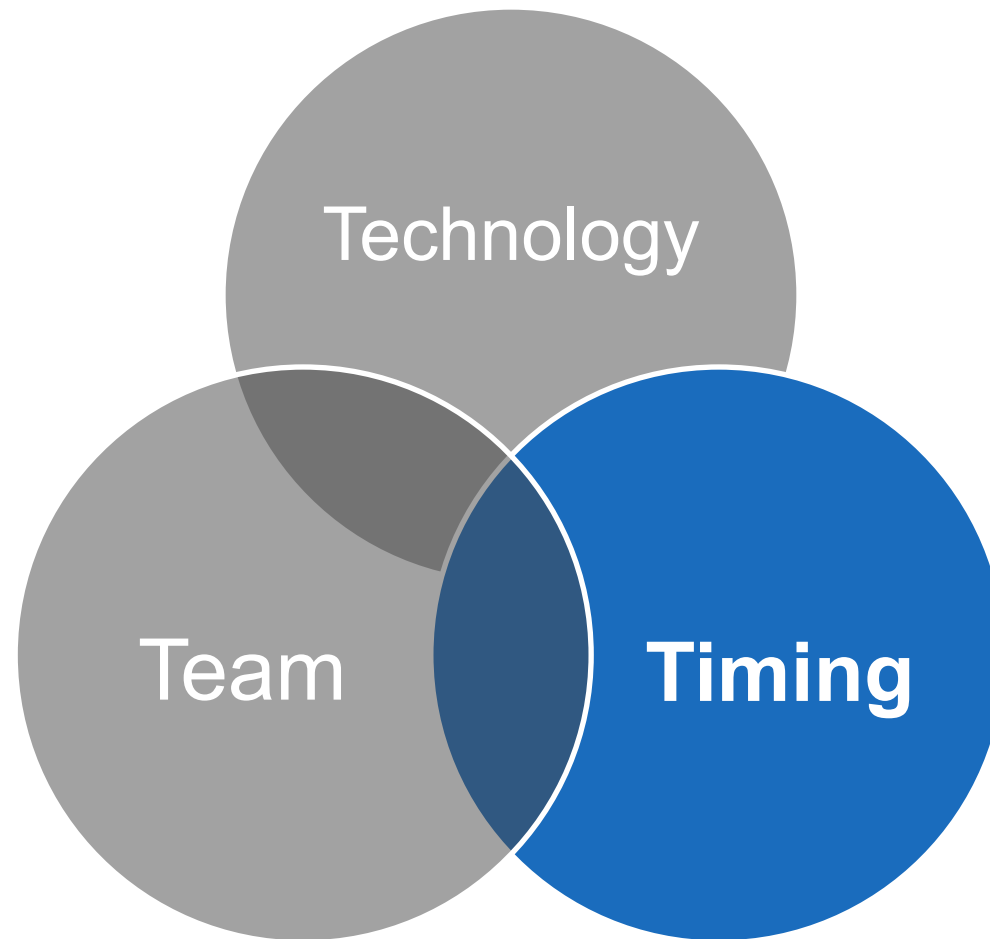
 NanoNets


 twentybn

Overcoming Digital Transformation failures



Overcoming Digital Transformation failures



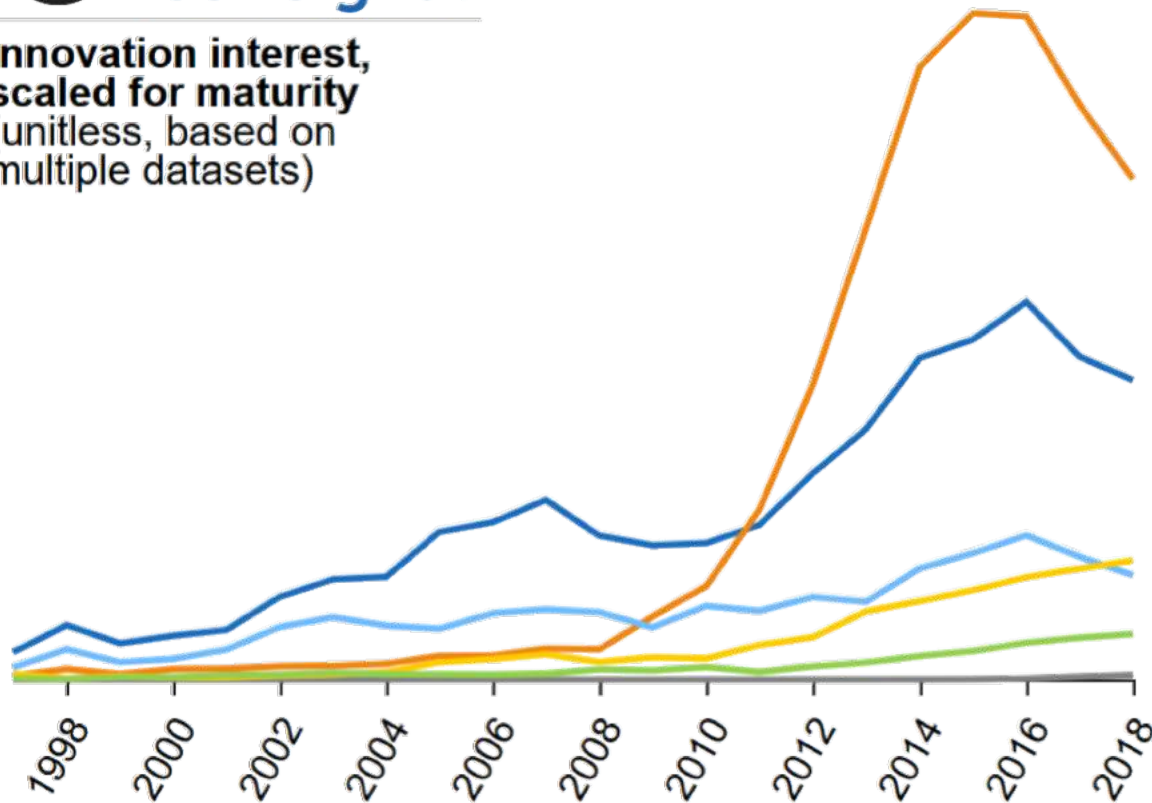


Is the
technology
ready for your
organizational
goals?

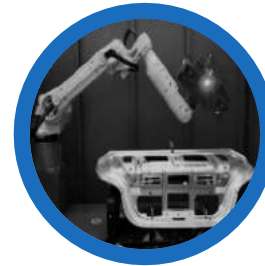
Understanding the readiness of your Digital Toolbox



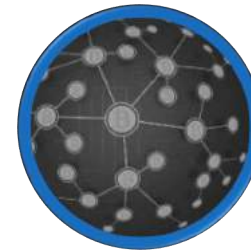
Innovation interest, scaled for maturity (unitless, based on multiple datasets)



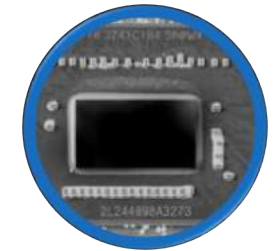
DIGITAL TOOLBOX



Machine vision



Blockchain



Cloud computing



Predictive maintenance



Self-driving cars

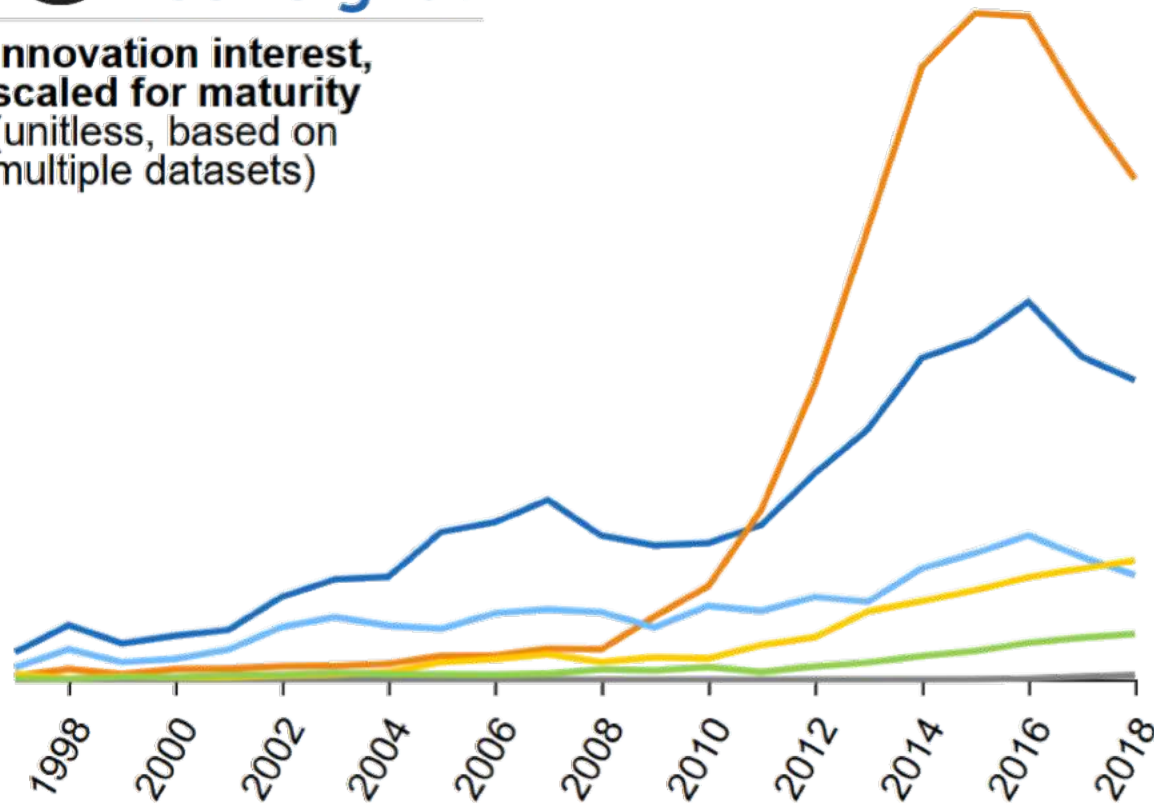


Augmented reality

Technology readiness needs to match organizational strategy



Innovation interest, scaled for maturity (unitless, based on multiple datasets)



**MORE
MATURE**

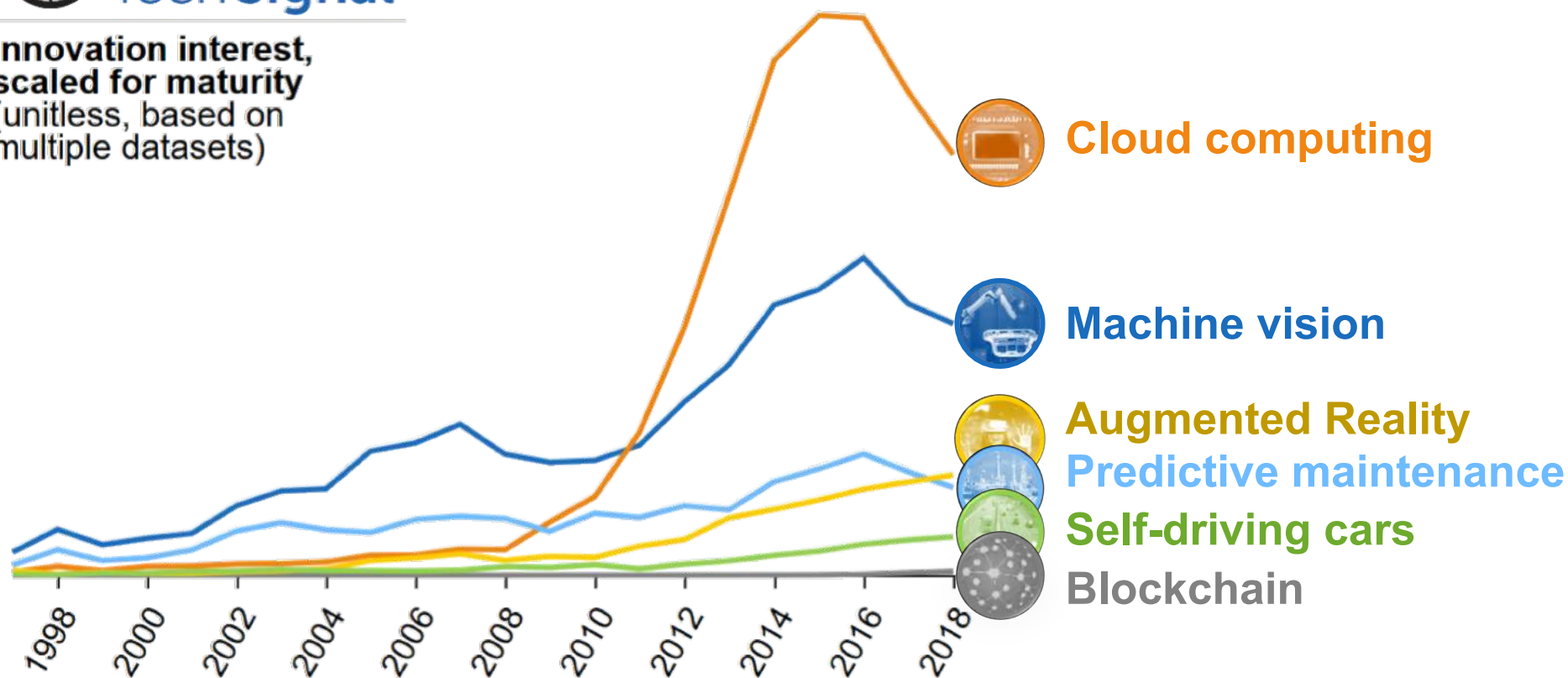


**LESS
MATURE**

Understanding the readiness of your Digital Toolbox



Innovation interest, scaled for maturity (unitless, based on multiple datasets)



MORE MATURE



LESS MATURE

Agenda

- 1 | Digital transformation is hard
- 2 | Understanding the 3 Ts
- 3 | **Putting the Ts to work**

Start your thinking at the top

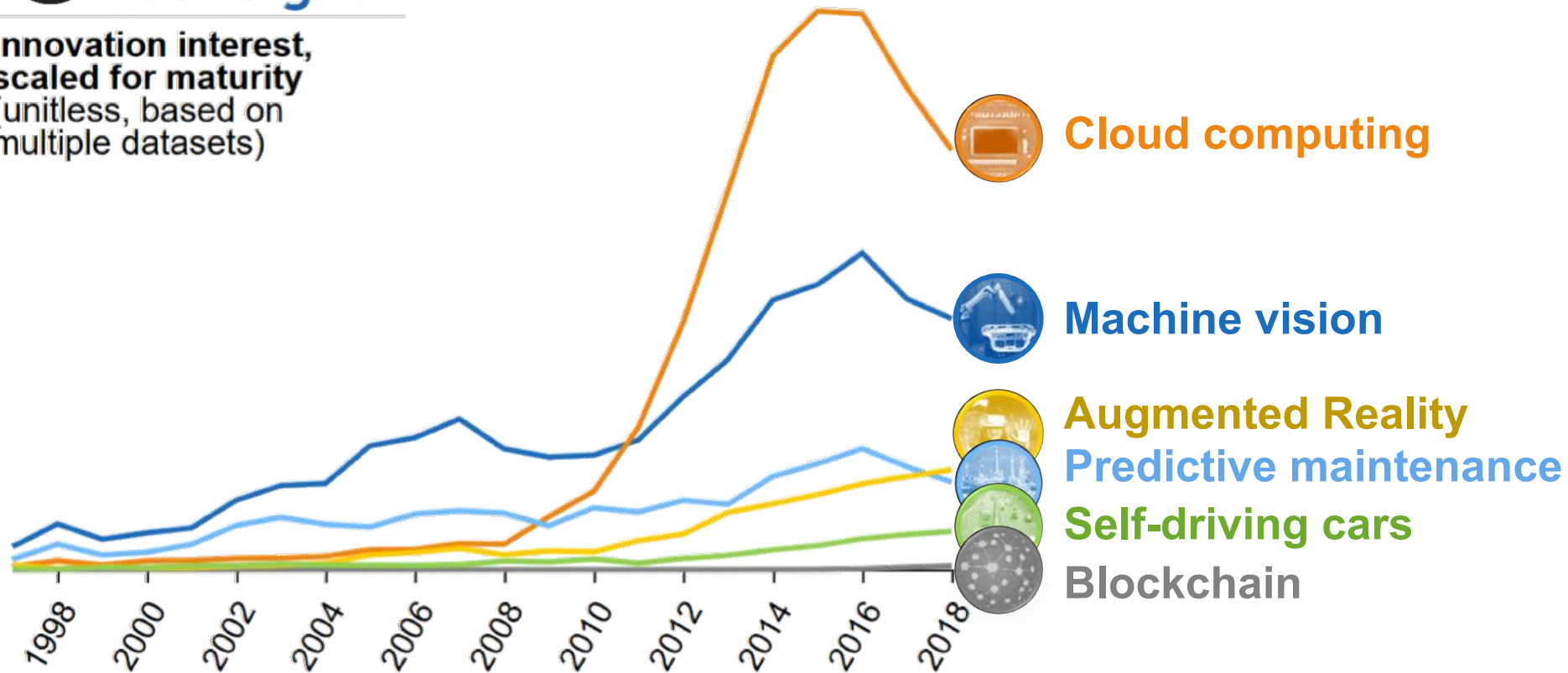
Example organizations

Operational				
Efficiency				
Agility				
Consumer/Societal				
Social consciousness				
Health oriented				
Financial/Marketing				
Disciplined capital				
Branding				

Operations timing: fitting a 3 year timeline



Innovation interest, scaled for maturity (unitless, based on multiple datasets)



**MORE
MATURE**

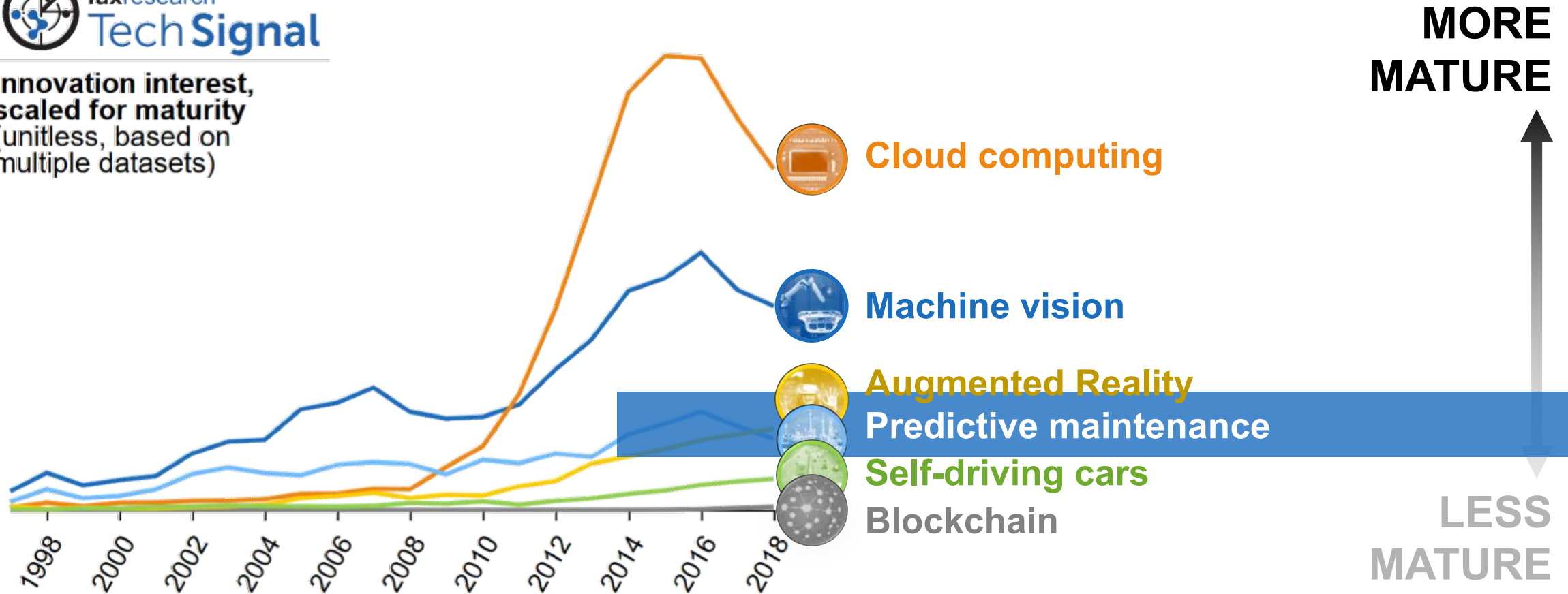


**LESS
MATURE**

Operations timing: fitting a 3 year timeline

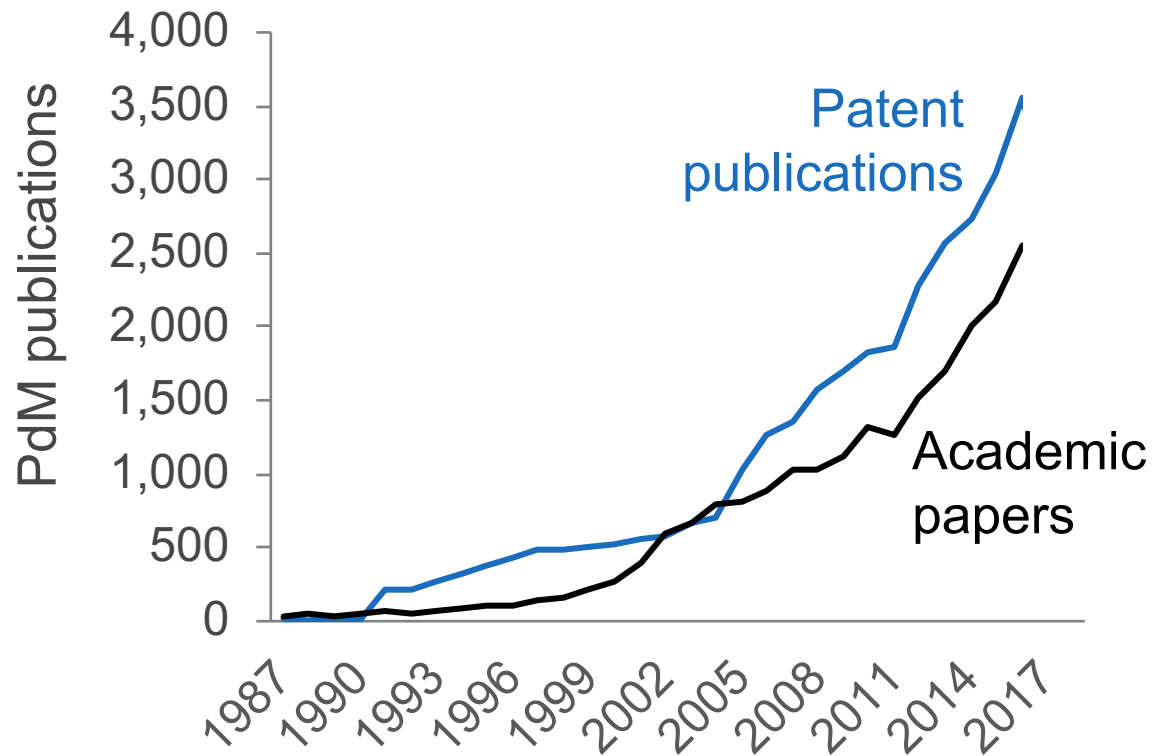


Innovation interest, scaled for maturity (unitless, based on multiple datasets)

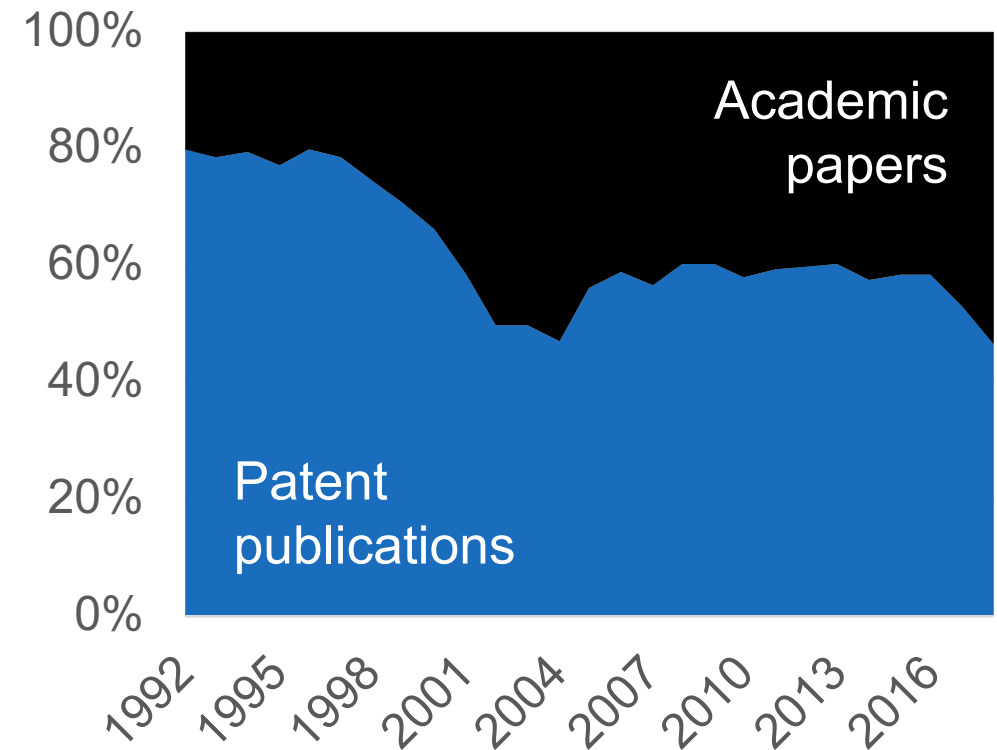


Operations technology: Understanding the innovation landscape of predictive maintenance (PdM)

Number of PdM publications per year, by type

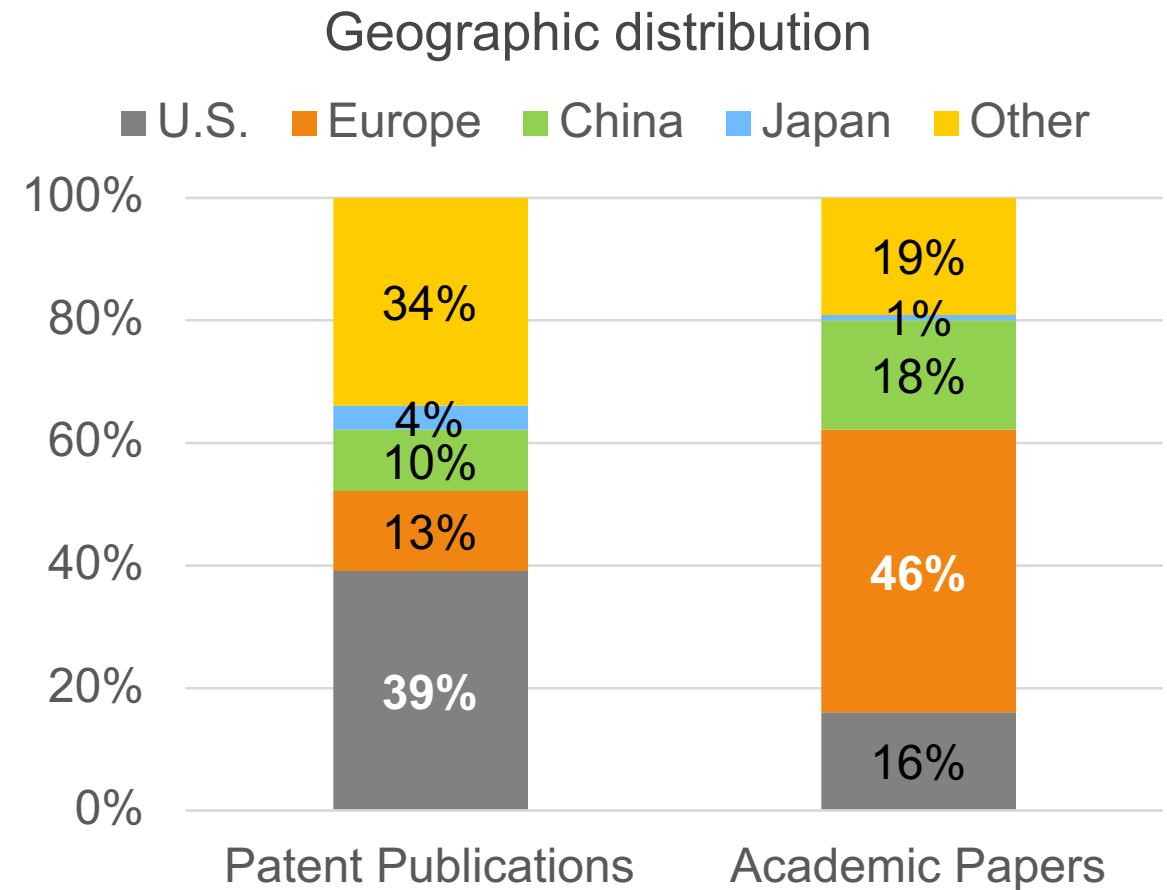
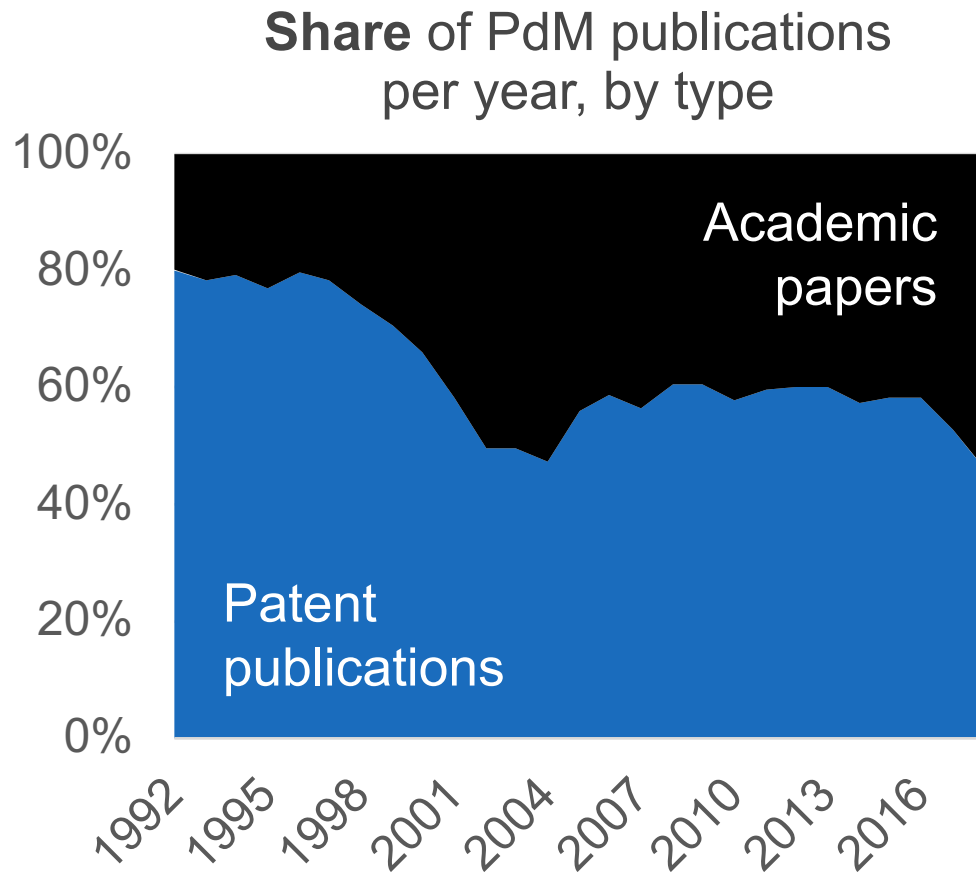


Share of PdM publications per year, by type



Operations technology:

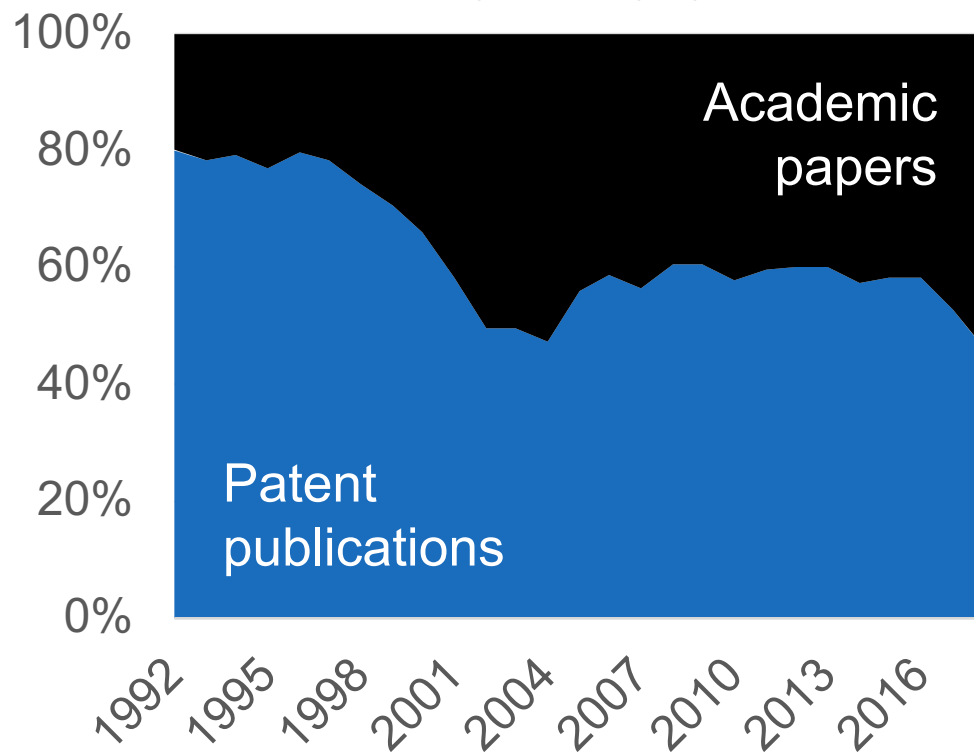
Where do key predictive maintenance innovations come from?



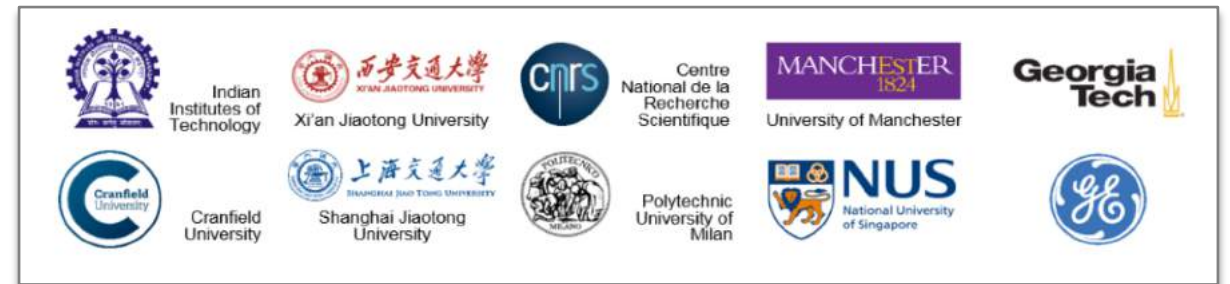
Operations technology:

What organizations have the key innovations?

Share of PdM publications per year, by type



Academic papers























Patent publications



Operations technology:

Choose a partner with the right feature set for your requirements

COMPANY	SENSOR DATA PARAMETER	DIFFERENTIATOR			USER REPORT
		Analytical models	Edge hardware and on-site stack	End Users	
ProAxiom Caution	Vibration, temperature,			 	Anomaly alerts Diagnostics Prognostics
Mnubo Wait and See	Connects to SCADA / PLC			 	Anomaly alerts Diagnostics
Mtell Positive	Connects to SCADA / PLC			  	Diagnostics Prognostics
Casantec Caution	Connects to SCADA / PLC			 	Diagnostics Prognostics
Predikto Wait and See	Connects to SCADA / PLC				Diagnostics Prognostics
Pandata Tech Wait and See	Connects to SCADA / PLC		 	 	Anomaly alerts Diagnostics

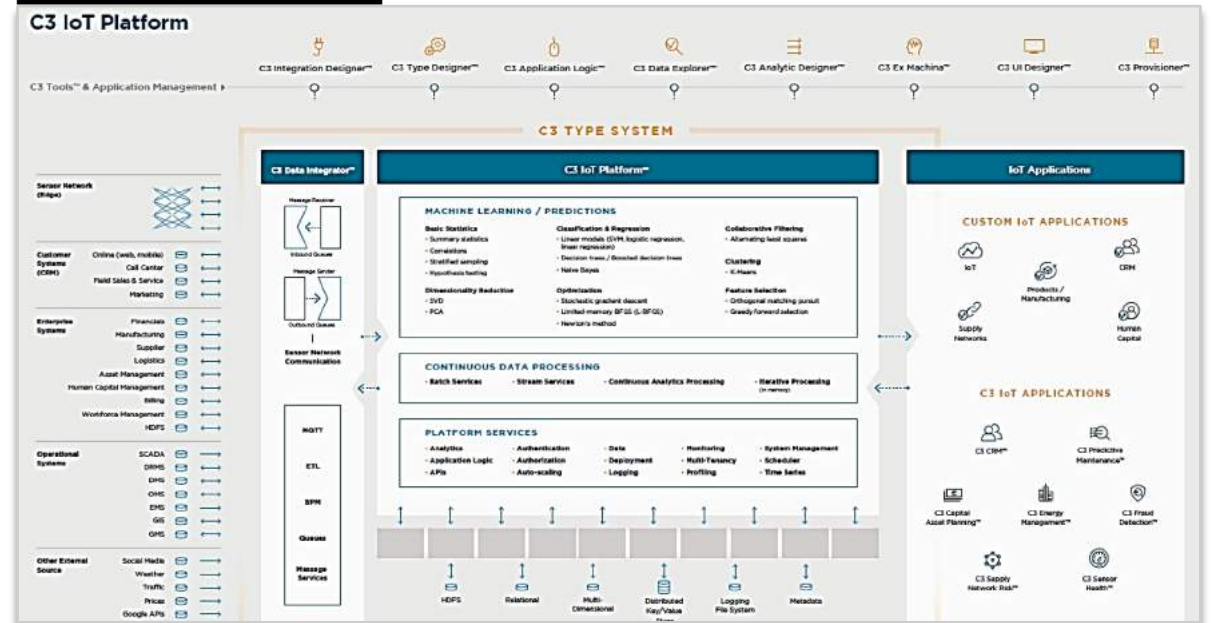
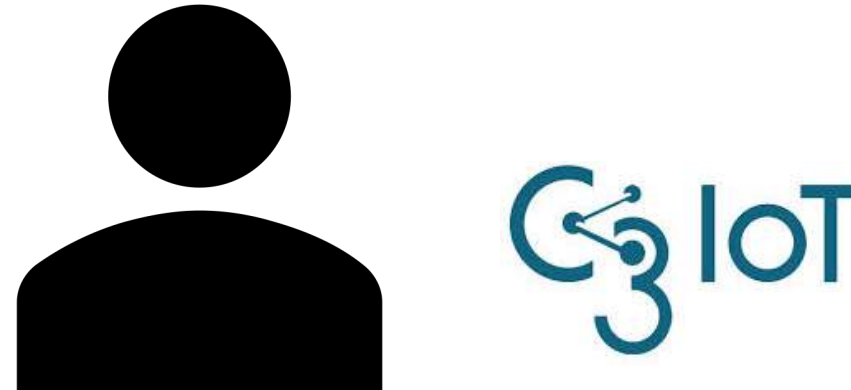
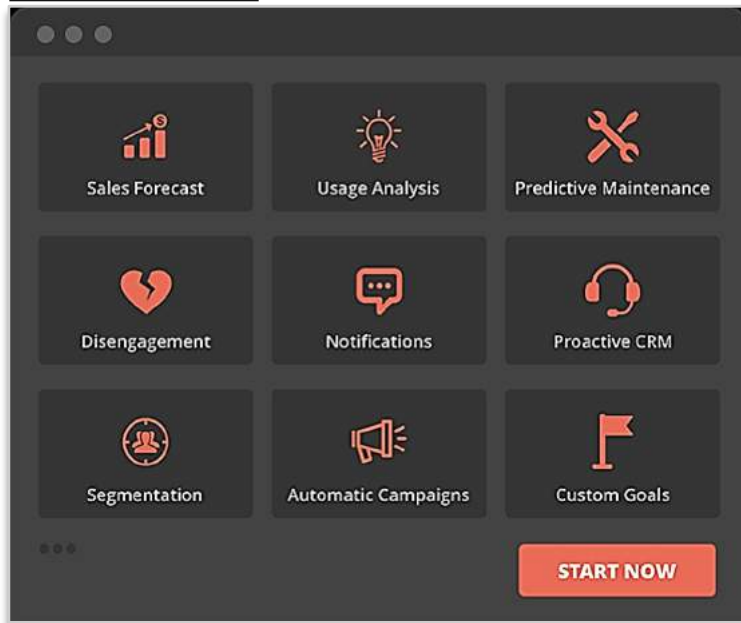
Key features include:

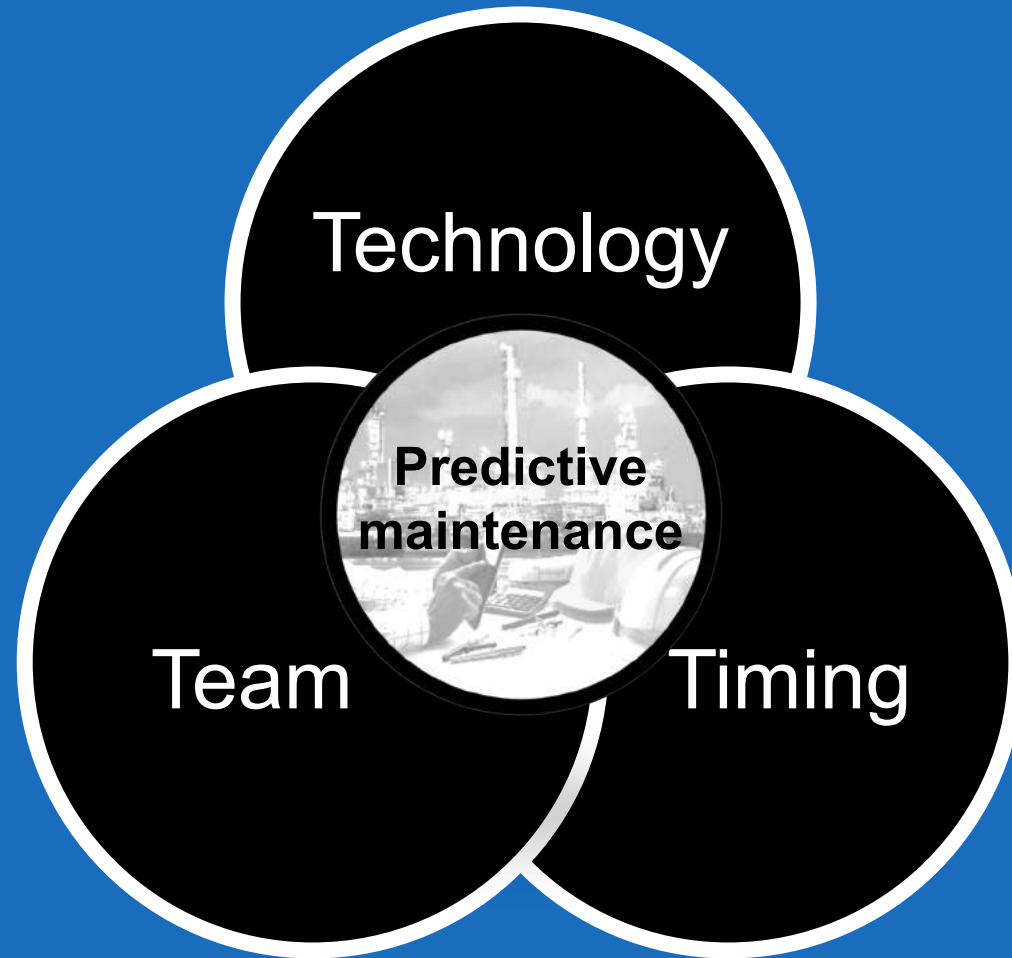
Analytics

Hardware

Business model

Operations team: Choosing a partner for usability





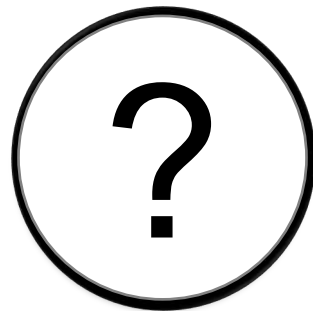
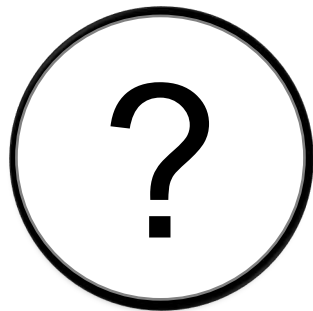
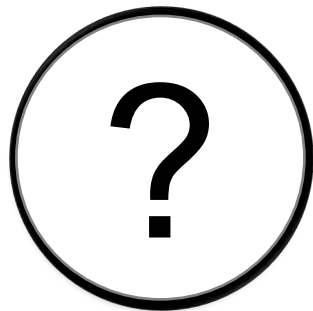
Multifunctional toolbox

Train and maintain

Use correctly



Build your toolbox to suit





Are you part
of the 80%
of failures or
20% of
successes?



2018

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Thank you for joining us.





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