



“The Next Wave”

CSO Xchange

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Just in case you forgot
what Gary looked like....

....he says hello!



Definitions (Wikipedia)



▶ Function as a Service (FaaS)

- ▶ **FaaS** is a category of cloud computing services that provides a platform allowing customers to develop, run, and manage application functionalities without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app

▶ Edge Computing

- ▶ **Edge Computing** is a method of optimizing cloud computing systems by performing data processing at the edge of the network, near the source of the data. This reduces the communications bandwidth needed between sensors and the central datacenter by performing analytics and knowledge generation at or near the source of the data.

Another "Compute" Architecture...Oh Know!

Fighting Compute Unit Creation Time

From the Software Developer Perspective



Physical Servers
(Months)



Virtual Machines
(Minutes)



Containers
(Seconds)

Introduced at
re:Invent 2014

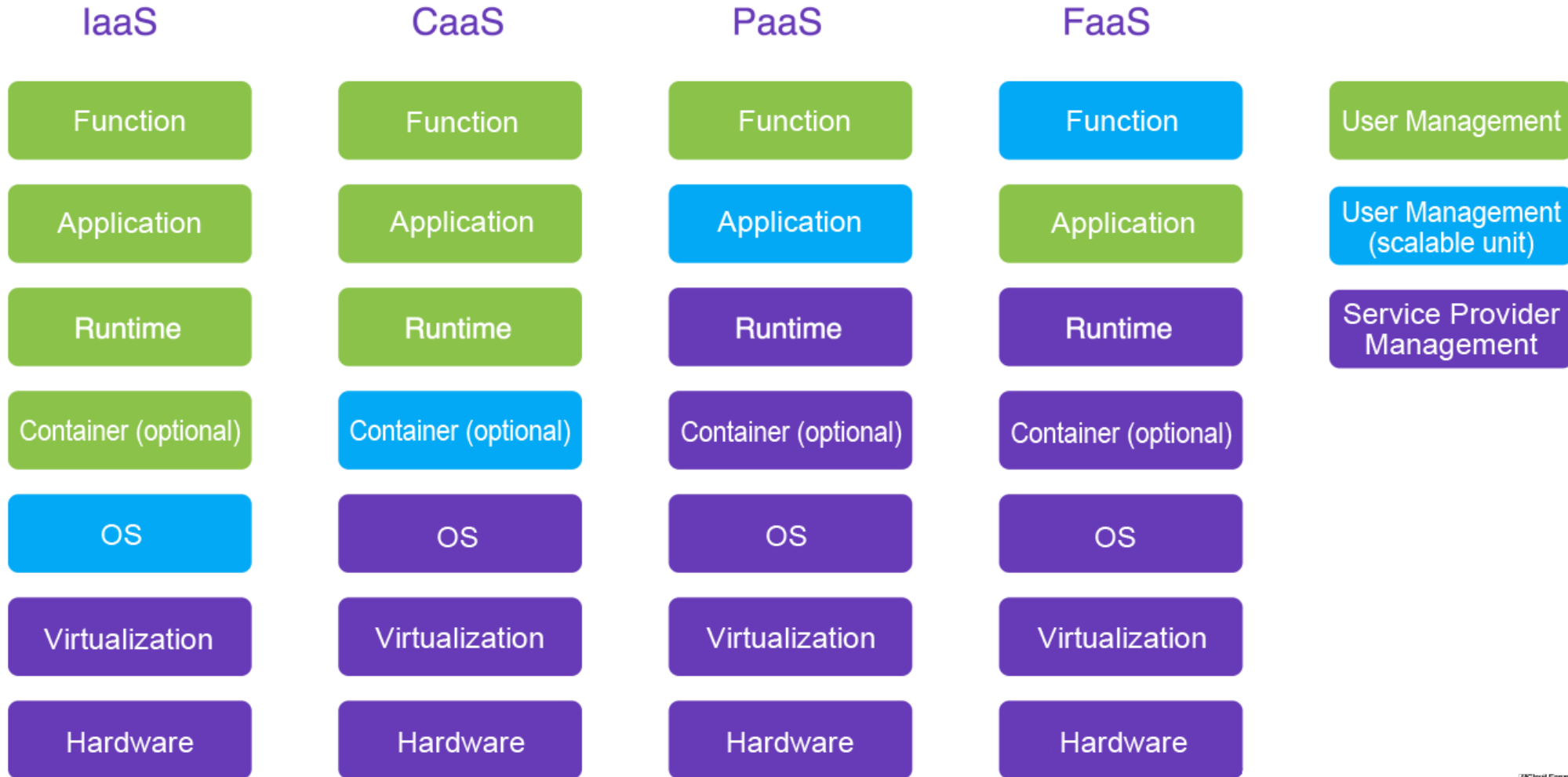


Function-as-a-Service
(Milliseconds)

When you can do this,
compute functions can
stay on disk until needed
on demand

Source: <https://blogs.cisco.com/cloud/function-as-a-service-101-what-is-it>

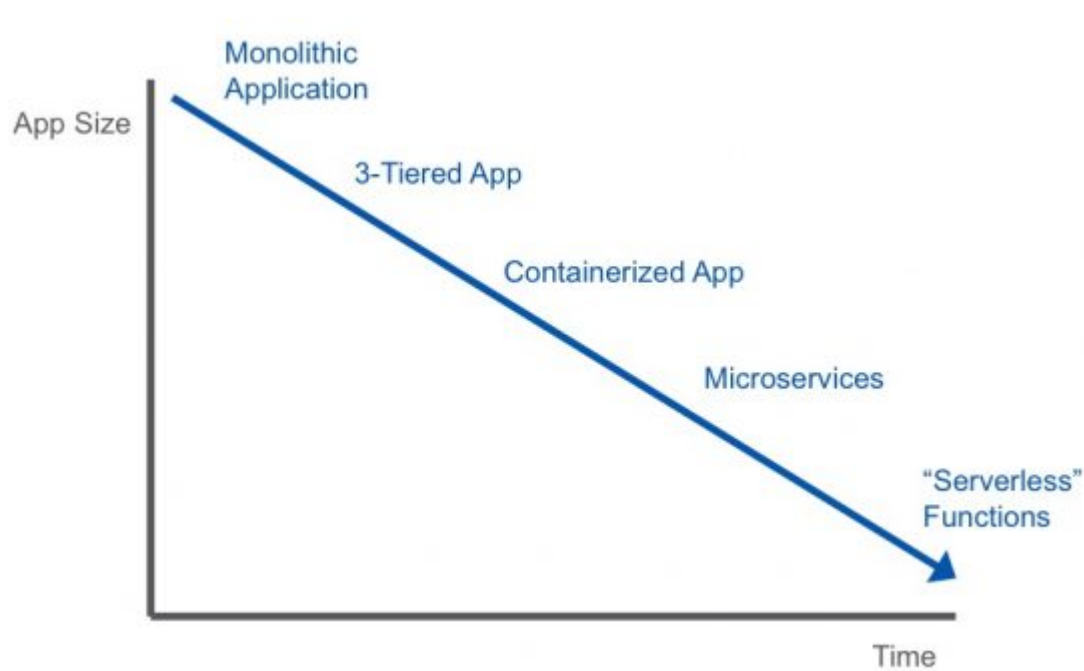
"X"aaS Model Comparison



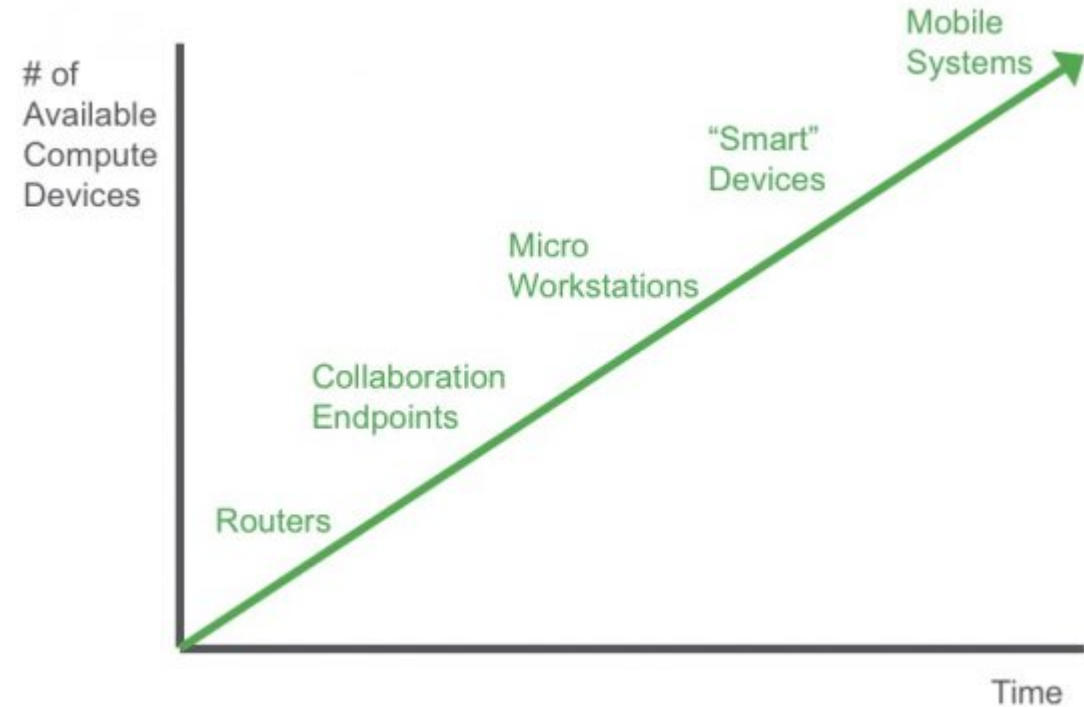
©Alibaba Cloud Forum

Source: <https://www.alibabacloud.com/forum/read-499>

What is Driving this Approach?



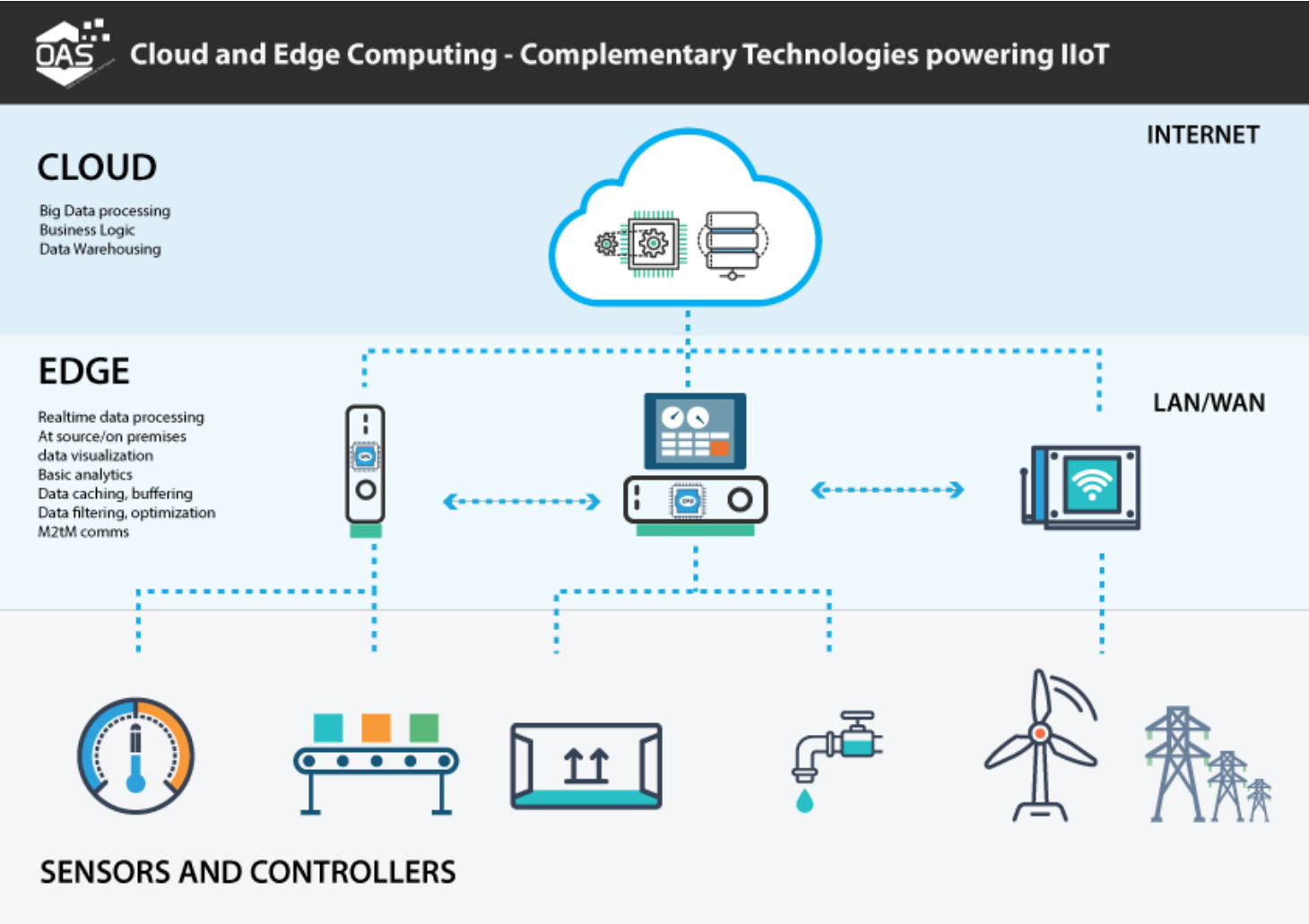
Performance and Available Options



Proliferation of Devices and Edge Computing

Source: <https://blogs.cisco.com/cloud/function-as-a-service-301-new-frontiers>

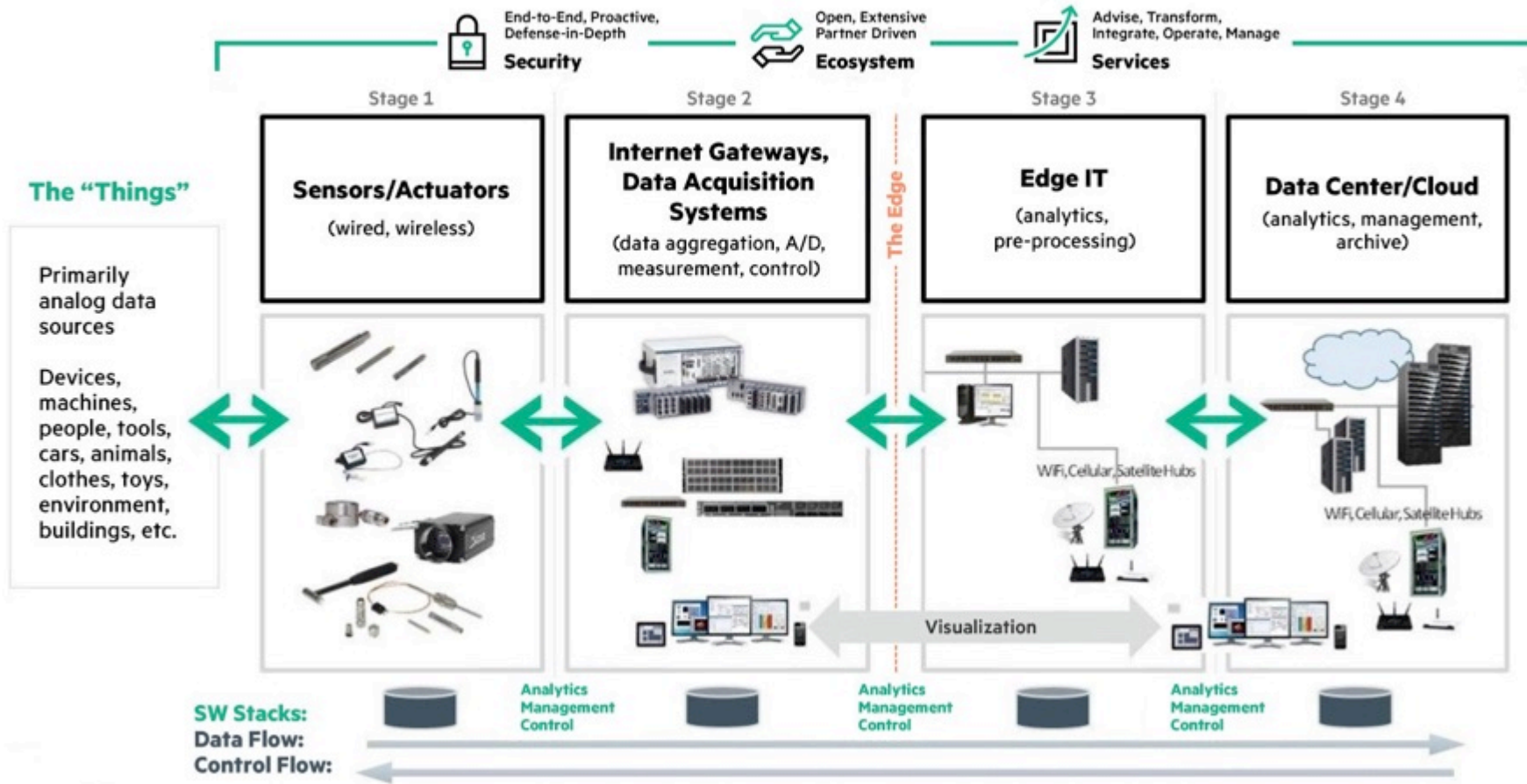
Edge Computing Model



Source: <https://openautomationsoftware.com/blog/iiot-edge-computing-vs-cloud-computing/>

All of the Pieces

The 4-Stage IoT Solutions Architecture



Source: <https://codeburst.io/edge-computing-iot-a-partnership-that-will-rule-the-connected-world-in-2018-70737afade84>

Another Definition

▶ Digital Transformation

- ▶ **Digital Transformation** is application of digital capabilities to processes, products, and assets to improve efficiency, enhance customer value, manage risk, and uncover new monetization opportunities.

▶ Digital Capabilities

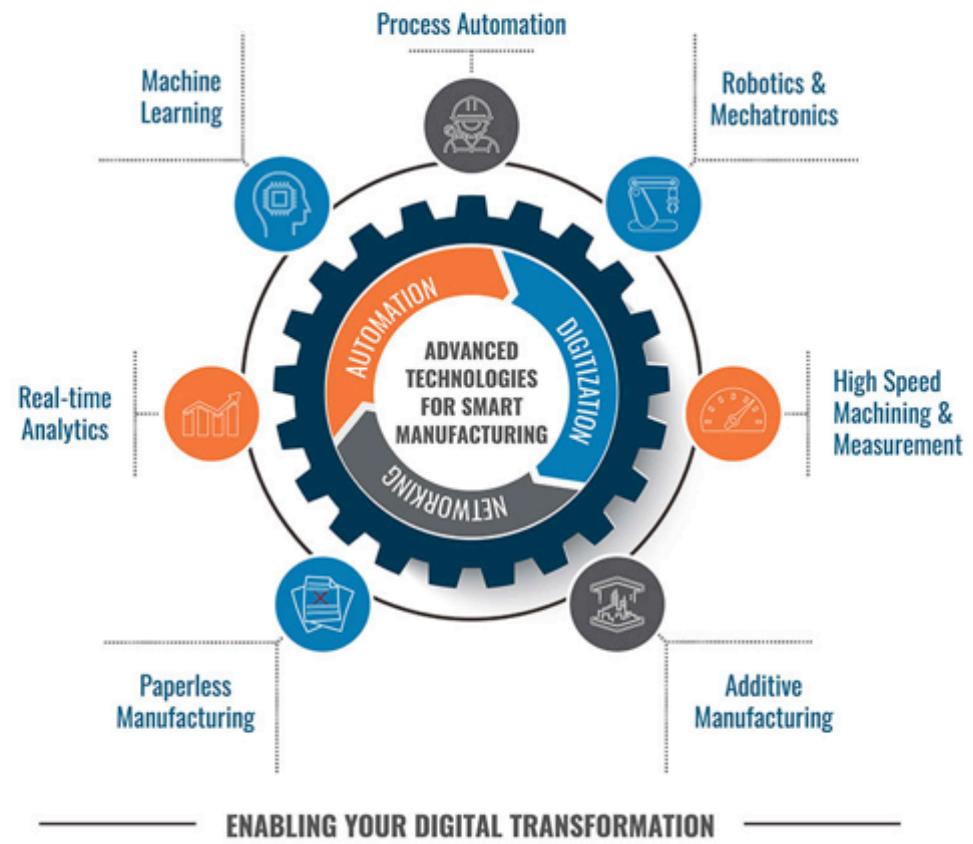
- ▶ **Digital Capabilities** are: electronic, scientific, data-driven, quantified, instrumented, measured, mathematic, calculated and/or automated.

Source: <https://www.cio.com/article/3199030/analytics/what-is-digital-transformation.html>

Digital Transformation - Manufacturing

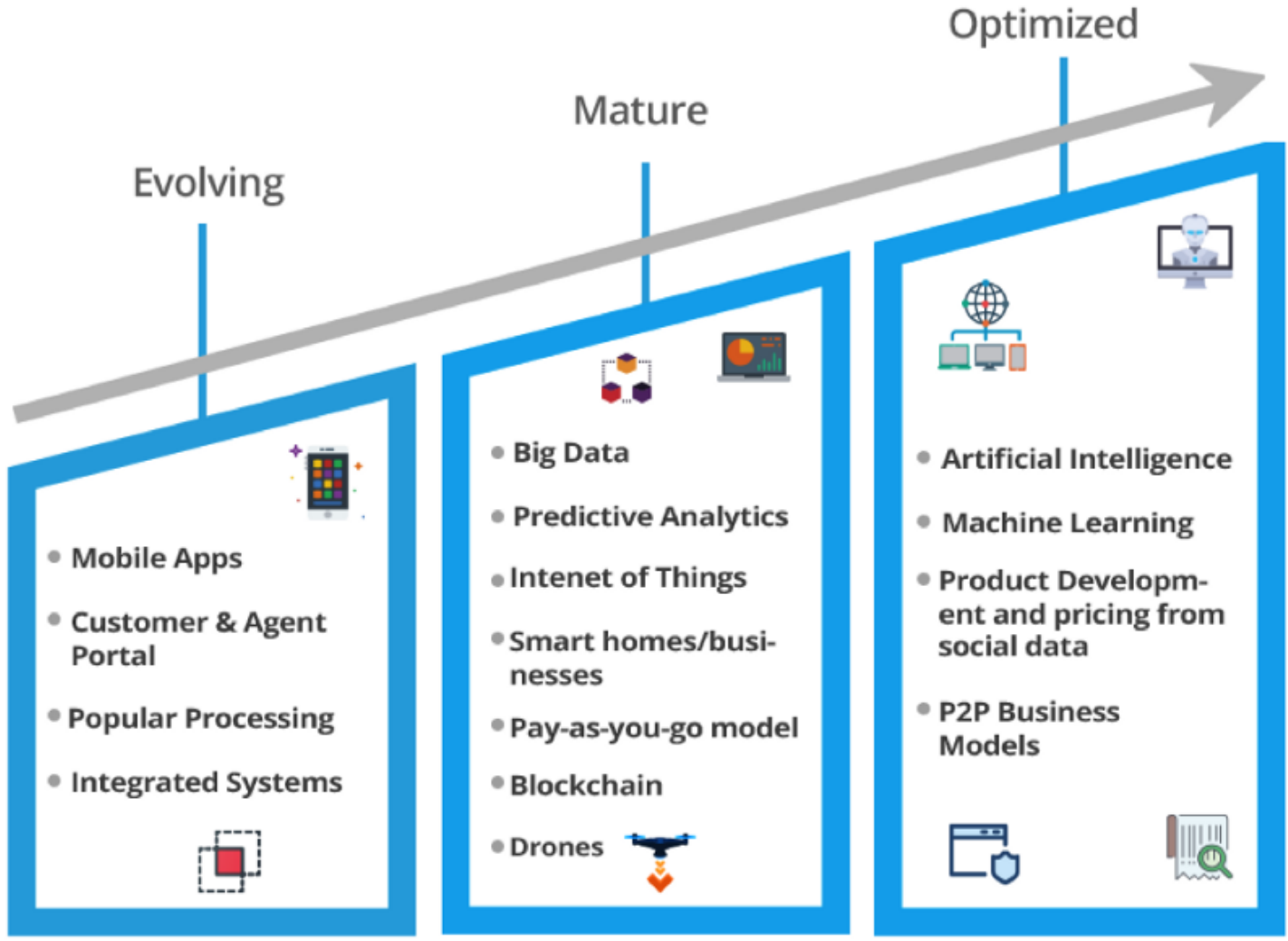


GEARING YOU UP FOR INDUSTRY 4.0



Source: <https://www.quest-global.com/service/services-and-solutions/product-lifecycle-solutions/automation-solutions/digital-manufacturing-solutions/>

Digital Transformation - Insurance



Source: https://medium.com/@NitinVerma_55410/smart-insurers-in-the-age-of-digital-5a0342efdde8

GRC and the “Next Wave”



- ▶ Not If, but When
 - ▶ If not already underway, these changes are inevitable for every industry / vertical
- ▶ Business Driving
 - ▶ Customers and Competition will not subside
- ▶ Proactive or Reactive
 - ▶ Don't wait for an incident or regulations to dictate timing and priority

Additional References

- ▶ Function as a Service (FaaS)
 - ▶ <https://medium.com/@pkerrison/pizza-as-a-service-2-0-5085cd4c365e>
- ▶ Edge Computing
 - ▶ <https://www.networkworld.com/article/3224893/internet-of-things/what-is-edge-computing-and-how-it-s-changing-the-network.html>
 - ▶ <https://edgylabs.com/edge-computing-att-5g-internet-of-everything>
- ▶ Cybersecurity Policy for the Internet of Things
 - ▶ https://mscorpmedia.azureedge.net/mscorpmedia/2017/05/IoT_WhitePaper_5_15_17.pdf
- ▶ Digital Transformation
 - ▶ <https://hbr.org/webinar/2017/12/what-digital-transformation-really-means>
- ▶ Digital Transformation and GDPR
 - ▶ <https://blog.code42.com/gdpr-strategy-accelerates-digital-transformation/>
- ▶ Digital Transformation and Cybersecurity
 - ▶ <https://www.i-scoop.eu/cyber-security-cyber-risks-dx/>

Thank You