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Digitalization as a Service – New Models to Accelerate Transformation to Smart Industry

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What is ”Smart Industry” aka “The 4th Industrial Revolution”?

Smart manufacturing has been defined as the fully-integrated, collaborative manufacturing systems that respond in real time to meet changing demands and conditions in the smart factory, the supply network, and customer needs.

iscoop.eu

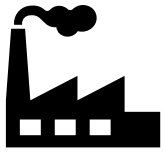
Also known as Industry 4.0 or industrial IoT, smart manufacturing enables manufactures to maximize the yield from existing production capabilities and develop the next generation of production capabilities necessary to compete in a digital economy

IDC

Observe, Optimize, and Operationalize

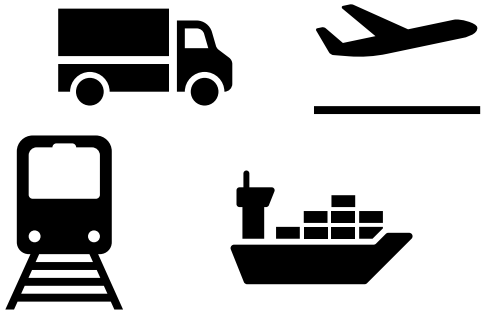
Observe – Collection of information about product, process, production, transportation, ..
Optimize – Compute solution(s) for improved quality, cost, logistics, ..
Operationalize – Drive change / control back into planning, production, logistics, financials, ..

Observe



Manufacturing
Mining
QC, Volume, ..
(semi, aircraft, food, petro, ..)

Agriculture
Weather
Livestock
Input / Output



Operational
Tracking
Events

Food & Service
Food safety
QC / standards
Ordering

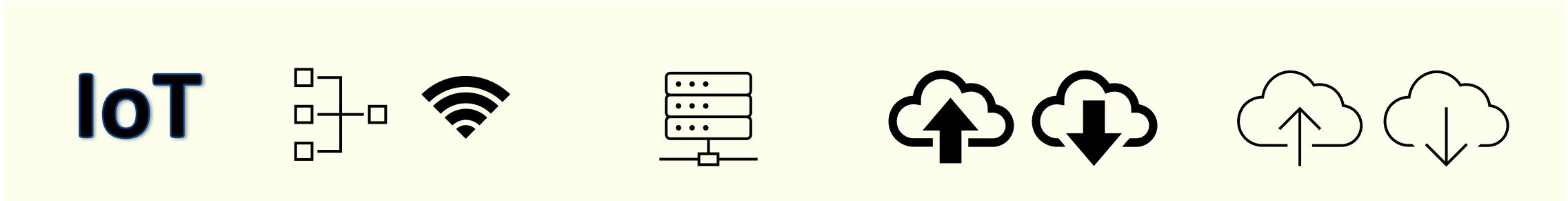
Consumer goods
Sourcing, recycle, ..
QC / standards

Inputs from any and everything – very diverse types of data and use cases, data rates, and value

Manufacturing systems / networks for parametric measurements, Drone and sensor data for crop health, sensors for environmental conditions, air quality, Container tracking, engine / operational data, security and behaviors, Computerized food kitchen / operations, Production, sourcing, and recycling of consumer goods

Data usually exists, but needs to be collected real-time / near real-time, organized, and be reliable

Optimize



All of those
End-points

Networking

Compute & Optimize
AI/ML, rule-based, ..

Store / Retrieve
Active data

Archival type
Store / Retrieve
Future what-ifs

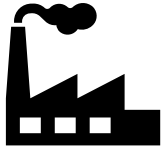
5G technologies provides flexibility, coverage, and performance across all types of end-points

Compute & optimization can be performed on the edge, in data centers, or in the cloud

Distributed communications, compute, and storage are made possible with 5G technology

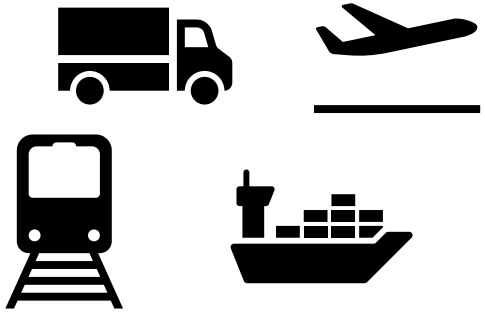
Real world examples: Yield optimization in manufacturing, optimization / reduction of work-in-process materials, energy reduction, detection / modeling of previously unknown underlying factors

Operationalize



Order materials,
Optimize settings,
Anticipate / prevent
Work stoppages

Fine-tune harvest,
Irrigation, feed,
Pest management,



Optimize operations,
Enhance routing,
Fine-tune operations

Improve quality,
Reduce waste,
Anticipate demand

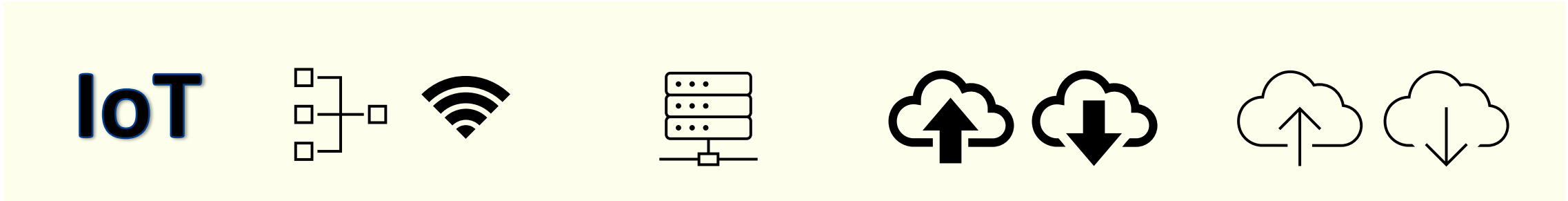
Consumer goods
Sourcing, recycle, ..
QC / standards

Outputs / control any and everything – very diverse types of data and use cases, data rates, and value

Requires that information is reliably delivered in a timely fashion

Coverage, quality, and cost are critical metrics

Challenge



Cost & Deployment Integration Best practices?	Network Design Trade-offs Cost & Deployment	Storage & Compute Local / Distributed / Central / Cloud ? Technologies ?	Active Cloud Storage How to organize, How to manage, Options?	Cloud Deep Archive What needs to be..

Optimized solution design can provide major cost benefits - e.g. >70% cost savings

Proper overall solution design can greatly improve performance, provide higher network reliability, and reduce costs

How to design, acquire equipment, and maintain across all the equipment and services?

Solution: Digitalization as a Service

Solution architecture and design for Smart Industry / Industry 4.0 / IoT / Edge Compute

Hardware, software, and service partners working together to deliver the right solution

As much or as little as required to complete and fine-tune your operation

Delivered as..

Consultive design project

Upfront capital purchase / software licensing + optional services

Digitalization-as-a-Service Monthly / Annual subscription service

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Thank You

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