



COMPLIMENTARY WEBINAR

TRANSFORMING PEOPLE, PROCESSES, AND TECHNOLOGY FOR INDUSTRY 4.0





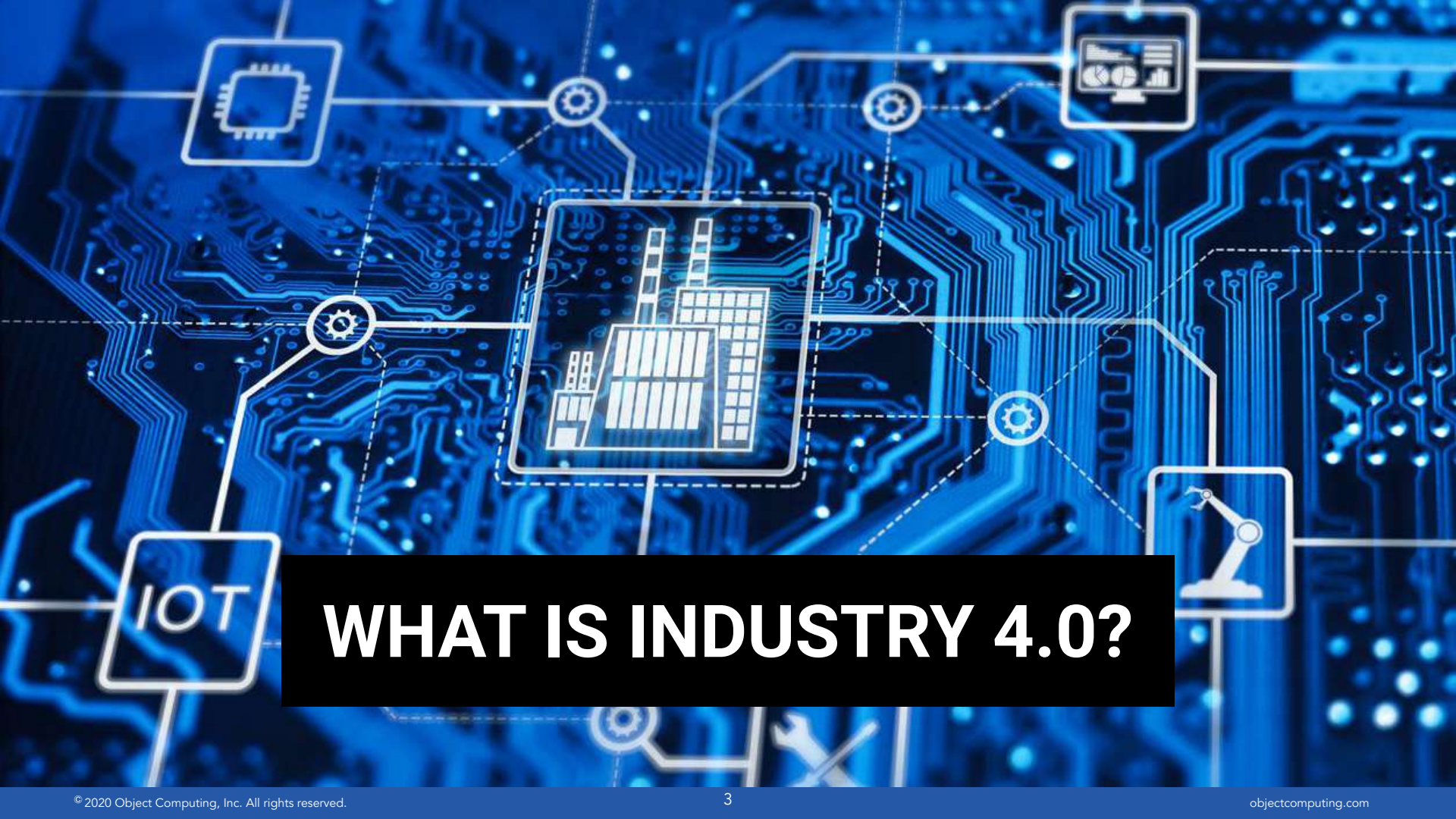
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OBJECT COMPUTING
REIMAGINE TOGETHER



WHAT IS INDUSTRY 4.0?



INTEGRATION OF DATA IS THE FUTURE

- Integration of management systems, data collection, and reports; the cloud will greatly influence this.
- Many food and beverage lines do not have a lot of extra space; this is especially true for contract manufacturers/packagegers.
- Integrating marking and vision systems into packaging machines may be increasingly desired.
- Manufacturers eventually have to meet standards; it makes sense to achieve this with one machine upgrade, as opposed to buying and integrating separate vision, marking, and packaging stations.
- Industry is moving irrevocably towards more traceability integration at every stage of the supply chain.



OBSTACLES



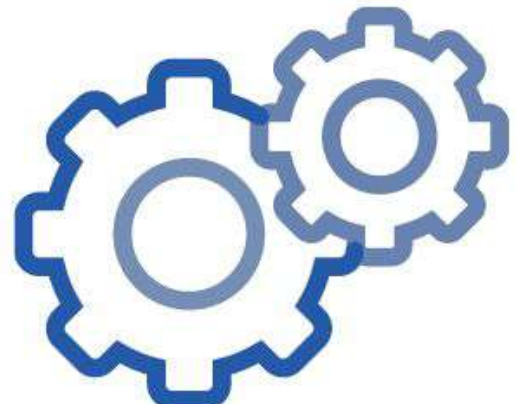
CULTURE



PLANNING



EQUIPMENT





Enterprise Level



PC - Controller

Control Level



PC - Controller
Controller - Controller

Device Level

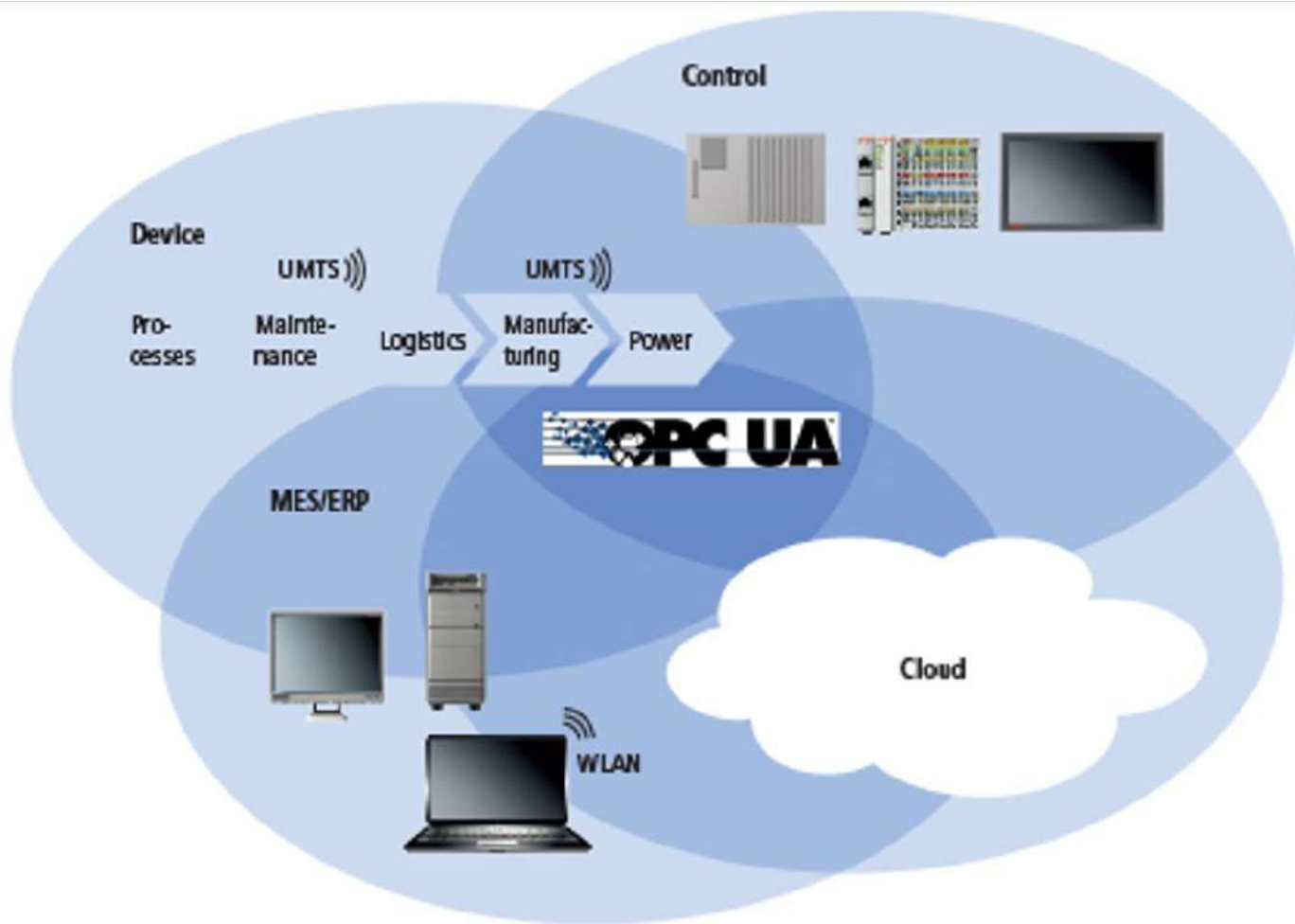


Controller - Device
(HMI, I/O, VFD, Servo, etc.)

Sensor Level



Sensors,
Valves,
etc.





The importance of "Digital Trust"

USING THE CLOUD FOR DATA MANAGEMENT



While all companies interviewed are capturing and tracking data in a software system, only a handful of companies are using the cloud.



“Use of the cloud is all about ownership of the data and who controls access to the data – who sees it and how is it controlled outside of the plant walls?”

Project Manager, Food




























































“Pharma companies are dealing with sheer panic to incorporate local and international regulations and selecting partners that can address aggregation needs, while the cloud remains a huge concern.”

Manager, Protective Life Sciences, Supplier



BEST VALUE OPTIONS ANALYSIS

ATTRIBUTES	DIRECT VPN	CONVERGED NETWORK	CELL MODEM ACCESS	BLACK BOX	TECHNICIAN ACCESS	EXTERNAL MANAGED SECURE NETWORK
IT Skills required to select, install and train	   	   			N/A	   
OT Skills required to maintain update and support operations		  			N/A	SUBSCRIPTION
Acquisition Cost to acquire and install hardware & software (one time, existing IT network)	\$	\$ \$ \$	\$	\$	N/A	\$ \$
Operating Cost to maintain and update thru staffing (internal or outsourcing) licenses and hyper-care	\$	\$ \$	N/A	N/A	\$ \$ \$ \$	\$ \$
Reliability of Method is the stability and robustness of means of access	  	  		  		  
Operational Protection to technically secure the factory floor (Operational Technology)		   		   	NONE	   
Business Protection to segregate the OT network from the IT network	 	   		  		

TOP TAKEAWAYS



Determine the main objective/outcome in adopting Industry 4.0 concepts.

- What challenge are you trying to overcome?
- What is the significance of the data you are getting?
- Will this influence change?

Incorporate the right groups and people when interconnecting systems.

- It's not just an IT thing.
- Wireless vs. wired; proprietary vs. open?
- Don't cut corners when purchasing equipment.

Understand your options when sharing data.

- Cloud vs. edge computing?
- Some things are better when managed by others.
- "Ft. Knox model" is not a solution.



TOP TAKEAWAYS (continued)

Use industry standards whenever possible.

- Reducing the amount of standalone software prevents lost or ignored data.
- Migrating to a standard makes data transition and management easier.

Understand and accept upfront and annual costs.

- Review current layout and plan for upgrades in your network and systems.
- Review all costs for your solution; plan an annual budget to cover costs.
- Remember all the savings by not managing this data in house.

Achieve your vision in small manageable bites.

- Rome wasn't built in a day.
- Start with easy successes and use those successful deployments as a catalyst.
- More is not always better.



THANK YOU!

LET'S CONNECT



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