



Tech Talk Emerging Technologies

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Current/Known Technologies

for operators...

Terminal Operations

Autonomous Vehicles
Big Data
Electric Vehicles
Smart Devices
IoT

Operational Efficiency

Big Data
Cloud
Intelligent Optimization

for vendors...

Training

Big Data
Smart Devices
IoT

Deployment

Cloud

for industry...

Transparency

Big Data

Efficiency

Big Data

A man with a beard and curly hair is wearing a VR headset and holding a controller, smiling. He is wearing a denim jacket over a dark shirt. The background is a blurred indoor setting with a brick wall and a window. A teal diagonal overlay is on the left side of the image.

Virtual Reality (VR)

“Digital environments enable a proactive mode of safety design in which we no longer need to draw conclusions only on the basis of estimates and statistical data.”

Kalmar



Video: ITI VR Crane Training



Radius: 59.6'
Angle: 38.5°
Length: 82.5'
Capacity: 15,300
Load: 300
Wind: 0.0 mph

Augmented Reality (AR)

Approximate time to reach 50 million users

Telephone	75 years
TV	13 years
Internet	4 years
Pokemon Go	19 days



Chatbots

“The chatbot receives both voice and text-based queries from a broad range of input sources, recognizes the request, searches for the answer, and sends the answer back as a text response in real-time.”

Dr. Eva Savelsberg, SVP at INFORM

A complex background graphic featuring a central square with the words "BLOCK CHAIN" in white capital letters on a dark teal background. This central element is surrounded by a network of white lines and dots, resembling a circuit or a blockchain network. Various icons are integrated into the design, including a padlock inside a hexagon, a Bitcoin symbol on a smartphone screen, a factory with a Wi-Fi signal, a hard hat, a gear, a dollar sign, and a cloud with binary code. The overall color palette is teal, grey, and white.

BLOCK CHAIN

Blockchain

“While blockchain was popularized by the fact that digital currencies like Bitcoin operate using its technology, blockchain has many applications that have nothing to do with finance.”

Jack Filiba, eXeBlock



Edge Computing

“In most scenarios, the presumption that everything will be in the cloud with a strong and stable fat pipe between the cloud and the edge device - that’s just not realistic.”

Helder Antunes, Senior Director of Strategic Innovation at Cisco



Digital Twins

“Digital twins are becoming a business imperative, covering the entire lifecycle of an asset or process and forming the foundation for connected products and services. Companies that fail to respond will be left behind.”

Thomas Kaiser, SVP of IoT at SAP

Practical Applications

for operators...

Terminal Operations

Augmented Reality
Chatbot
Edge Computing
Virtual Reality

Operational Efficiency

Augmented Reality
Edge Computing
Digital Twins
Virtual Reality

for venders...

Training

Digital Twins
Virtual Reality

Deployment

Blockchain
Edge Computing

for industry...

Transparency

Blockchain

Efficiency

Blockchain
Edge Computing

The background of the slide is a dark, teal-colored abstract image. It features a central point from which several glowing, wavy lines radiate outwards, resembling a stylized star or a network of data paths. The lines are composed of small, bright white dots. The background is also filled with a dense, slightly blurred pattern of binary code (0s and 1s) in a light gray color.

Artificial Intelligence (AI)

“We are seeing artificial intelligence being introduced more and more in the manufacturing industry and also in logistics.”

Dr. Ulrich Dorndorf, CTO at INFORM



Machine Learning (ML)

“Companies are increasingly beginning to use Machine Learning to predict future events, based on large numbers of explanatory variables, as opposed to traditional approaches where they would just try to project the past behavior into the future.”

Dr. Ulrich Dorndorf, CTO at INFORM



Future Considerations

“Millennials will comprise more than one of three adult Americans by 2020 and 75 percent of the workforce by 2025.”

[Forbes](#)

Thank You

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