

# The new machine economy will be valued at \$7 trillion by 2030

A new engine for growth, the machine economy and its intelligent systems will drive the expansion of GDP by 2030.\* Built around near-latency-free digital feedback loops from customers to products and back to the company, these intelligent systems – powered by AI, machine learning, 5G, and successful cybersecurity on the far edge cloud – will shape the evolution of six key industrial sectors.

## Six metatrends to drive your thinking

37%

believe that intelligent systems will be the dominant business model going forward

85%

of all corporations are actively building their intelligent systems now

13

characteristics drive intelligent systems success

#1

The number one need right now is to get true compute on the far edge

6<sub>of 7</sub>

needs for intelligent systems success in three to five years are being built for currently

2<sub>of 3</sub>

top barriers for success revolve around the lack of skills needed to build these systems and the capacity of a system to be safe, secure, and cyber protected

\*PWC OFFICE OF BUDGET MANAGEMENT: 70% OF GDP GROWTH WILL BE FROM MACHINE ECONOMY COMPONENTS LIKE AI, ML, AUTOMATION, DATA, COMPUTE ON THE EDGE

\*\*FORBES 2021: THE THIRTEEN CHARACTERISTICS OF INTELLIGENT SYSTEMS

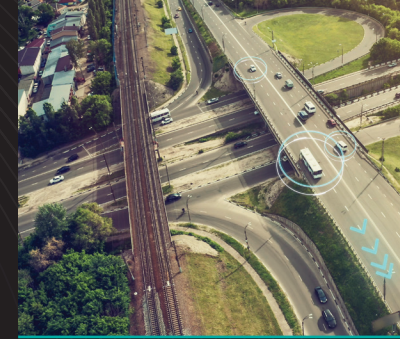
# THE SIX CHALLENGES AND OPPORTUNITIES FOR SUCCESS



**The full lifecycle** is essential to gain the benefits of intelligent systems. Digital feedback loops are critical in everything from inception to development, deployment, and operations.



**A common workflow platform** allowing teams to collaborate in near real time is one of the most important foundational needs for intelligent systems success, according to leaders polled in Forbes research. A single pane of glass generates the digital scale needed for complex collaborative work.



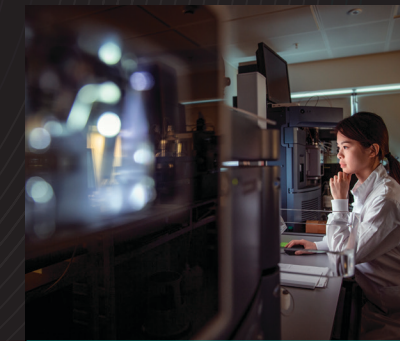
**The ability to sense, infuse, learn, and act** in near-latency-free real time requires an architecture that optimizes data, knowledge, and performance together in one process.



**Security through the lifecycle** is a priority for the most successful intelligent systems companies. This 16% of companies care about security, safety, and cyber protection 2.5 times more than their less successful peers, recognizing these qualities as a design priority, a development requirement, and an operational necessity.



**In a software-defined world**, where all companies want to be software companies, digital feedback loops that feed into product and service development will drive success because this is the most efficient, effective, and responsive way to design, deliver, and service customers' needs.



**In a data-driven, software-led economy, innovation is key.** The most successful intelligent systems companies (16%) see their future success as dependent on the application of data, AI, machine learning, and automation on the far edge.

# THE WORLD IS EVOLVING RAPIDLY FOR ALL OF US



**Aerospace & Defense:** New defense systems and applications, the interaction of cyber and the physical world, and the need for rapid, highly intelligent deployment and management systems are driving the adoption of intelligent systems on the far edge. In civil aviation, new operating and business models mean aircraft and fleets are being asked to work as intelligent systems.



**Automotive & Transportation:** In addition to autonomous vehicles, digital feedback loops from customer to product to manufacturer promise to revolutionize the full lifecycle of the vehicle for all parties as vehicles constantly evolve and new economic models transform the nature of these industries.



**Industrial Manufacturing:** Cobots, robots, and new business models based on digital feedback loops will change how we look at additive, intelligent, and adaptive manufacturing models on the far edge.



**Medical Technology:** The interconnections of various ecosystems of devices and applications on the far edge will enable smart health-care business models to rapidly advance for patients and systems. Digital feedback loops will help personalize care in the preventive stages in ways unimaginable five years ago.



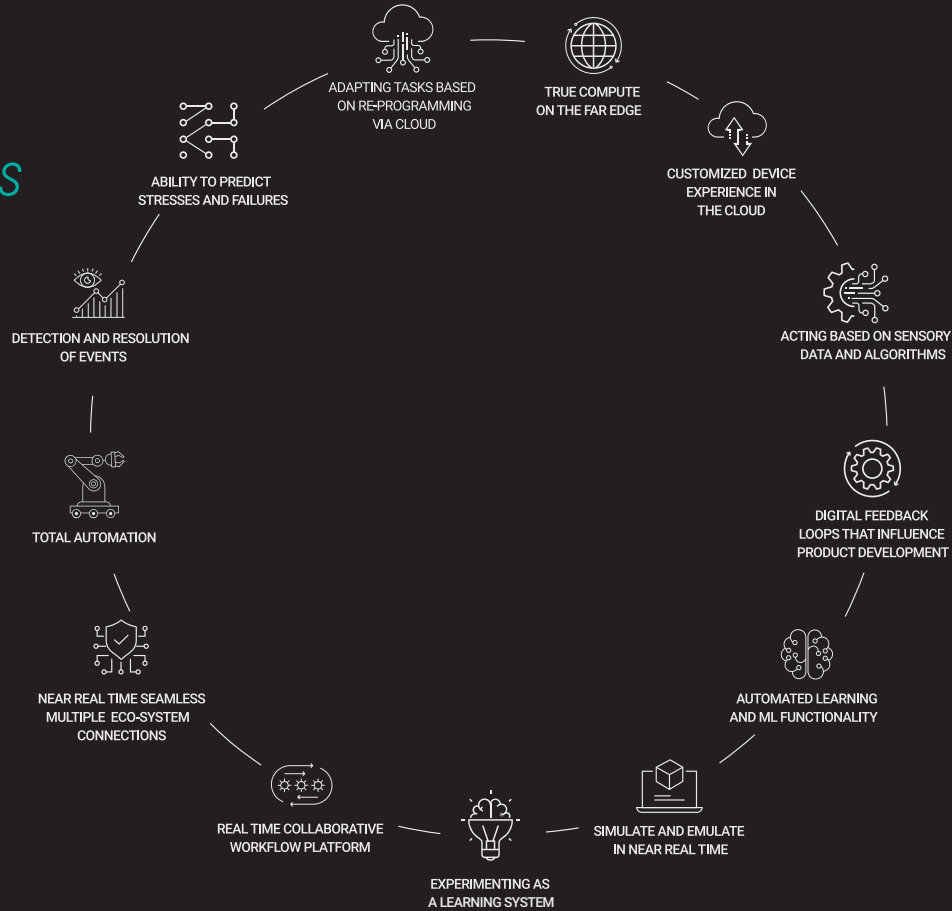
**Energy & Utilities:** We will consume nearly twice as much electricity by 2050 as we do now, and intelligent systems will increasingly monitor, manage, and adjust energy consumption and creation in near real time. New digital energy grids and user needs will drive whole new business models.



**Telecommunications:** New operational models and evolving business opportunities with 5G and the far edge mean carriers see the cloud as a catalyst for delivering services like robot fleet management, private 5G, and near-real-time, personalized digital consumer experiences at unprecedented levels.

# Thirteen key characteristics drive intelligent system success

Knowing when to invest in each characteristic requires a blueprint for building critical infrastructure, delivering core foundational needs, and much more.



## Intelligent Systems Blueprint: How to Sequence Your Build



An Intelligent System at Work



**ACME INDUSTRIES**

Customized, time-sensitive production run for new client begins with precision robotics in a remote factory [1].

**QUALITY ISSUES DETECTED**

Production challenges are detected [2], with robotics affecting the quality of a precision (low run) production line. These issues are fed back to the team [3].

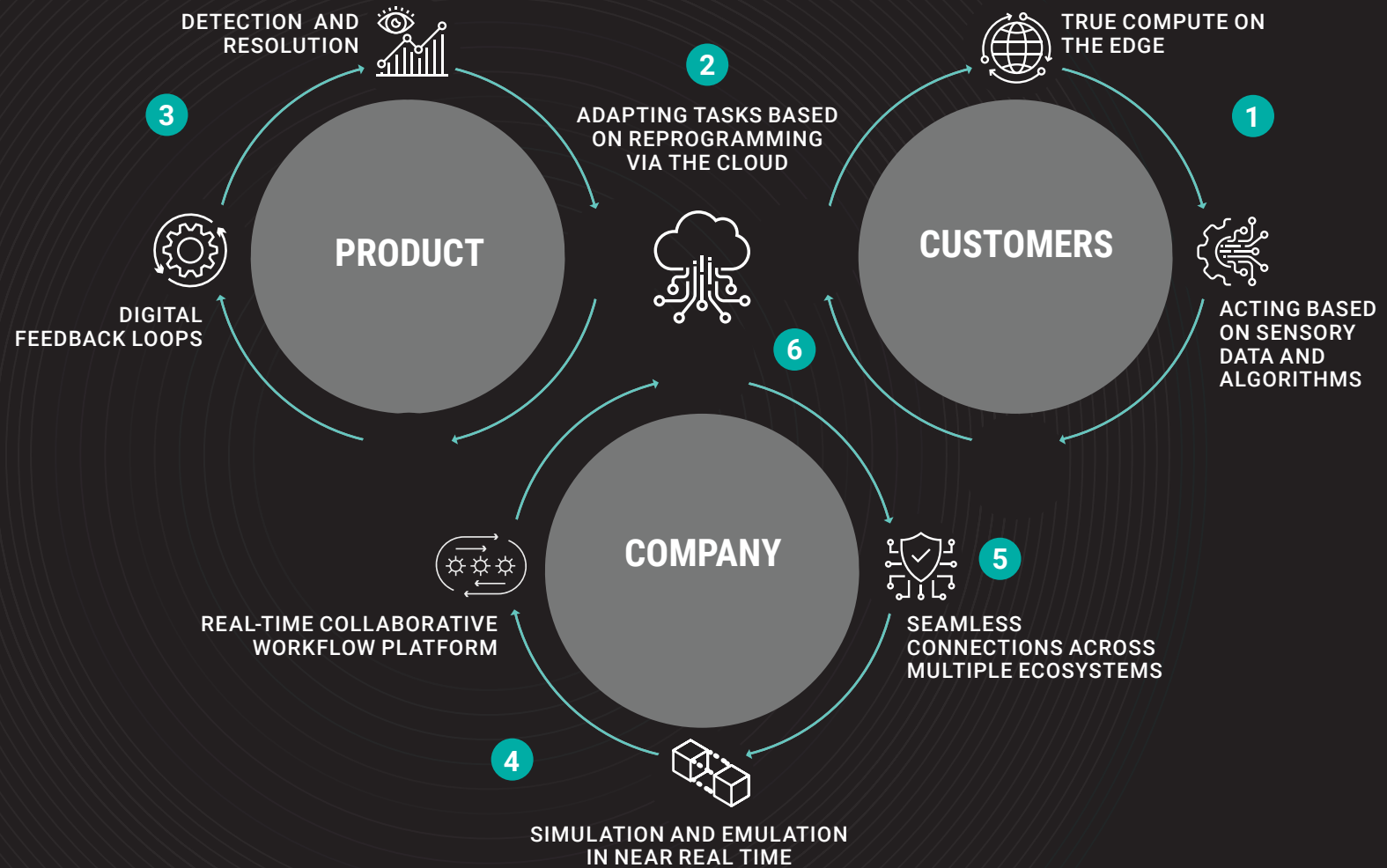
**SIMULATION BASED ON DIGITAL FEEDBACK**

New simulations show a better way to program robotics at a key step in the production process to increase quality and throughput [4].

**CROSS TEAM ACTIONS**

Knowledge is shared on the workflow platform [4] across geographies and new applications are recommended for increased performance [5]. Tasks are adapted through the cloud [6].

Production processes become more effective and efficient. The project comes in at target cost, TQM targets are achieved, and profit improved.





*Wind River Studio: The first cloud-native platform for mission-critical intelligent systems in the machine-led economy*

**Integrate** deployment, operations, and services through one cloud-native platform for near-real-time, latency-free orchestration capabilities across the cloud.

**Evolve** your capabilities to operate increasingly complex and business- or mission-critical networks, devices, and applications that will dominate the 5G, far edge, intelligent systems world. All through a single pane of glass for all your teams.

**Expand** control and the application of insights that span the lifecycle in order to discover opportunities and deliver additive services that let your company operate at digital scale on the far edge.

*Wind River Studio: The first cloud-native platform  
for the intelligent systems economy*



### EXECUTIVES

BUILD YOUR DIGITAL LIFECYCLE BUSINESS WITH STUDIO FOR THE FAR EDGE

- » **Lead** in the machine economy, where your products, your customers, and your company are constantly connected and working together through one platform and a single pane of glass for everybody.
- » **Realize** the economic advantages of applications and machines working together to compute, sense, predict, and run autonomously, often on the far edge, in the new digitally transformed world.
- » **Create** new business models and get digital scale through one pane of glass, so that ideas like automation and machine learning can be utilized in mission-critical use cases — safe, secure, and through the whole lifecycle of your products and services.



### OPERATIONAL LEADERSHIP

INNOVATE HOW YOU OPERATE YOUR BUSINESSES ON THE FAR EDGE

- » **Integrate** deployment, operations, and services through one cloud-native platform for near-real-time, latency-free orchestration capabilities across the cloud.
- » **Evolve** your capabilities to operate increasingly complex and business- or mission-critical networks, devices, and applications that will dominate the 5G, far edge, intelligent systems world. All through a single pane of glass for all your teams.
- » **Expand** your capabilities so that your control and your insights span from development through to operations and additive services that let you operate at digital scale.



### DEVELOPMENT

BOOST THE POWER OF TEAMS WITH A REAL-TIME COLLABORATIVE PLATFORM IN A MISSION-CRITICAL WORLD

- » **Collaborate** through a single pane of glass in the native cloud. Share expertise and apply it with digital scale for the full lifecycle of your mission-critical products and services. Use machine learning and automation and put the power of digital feedback loops into everything your teams do, no matter where they are located.
- » **Innovate** on one platform with curated applications, simulation, emulation, automation, security tools, and testing capabilities that get you scale and leverage in near real time.
- » **Modernize** with fully automated processes, full visibility, and easy configurability. Deliver on simultaneous builds and have a pipeline for platform and another for applications on one mission-critical, cloud-native platform.

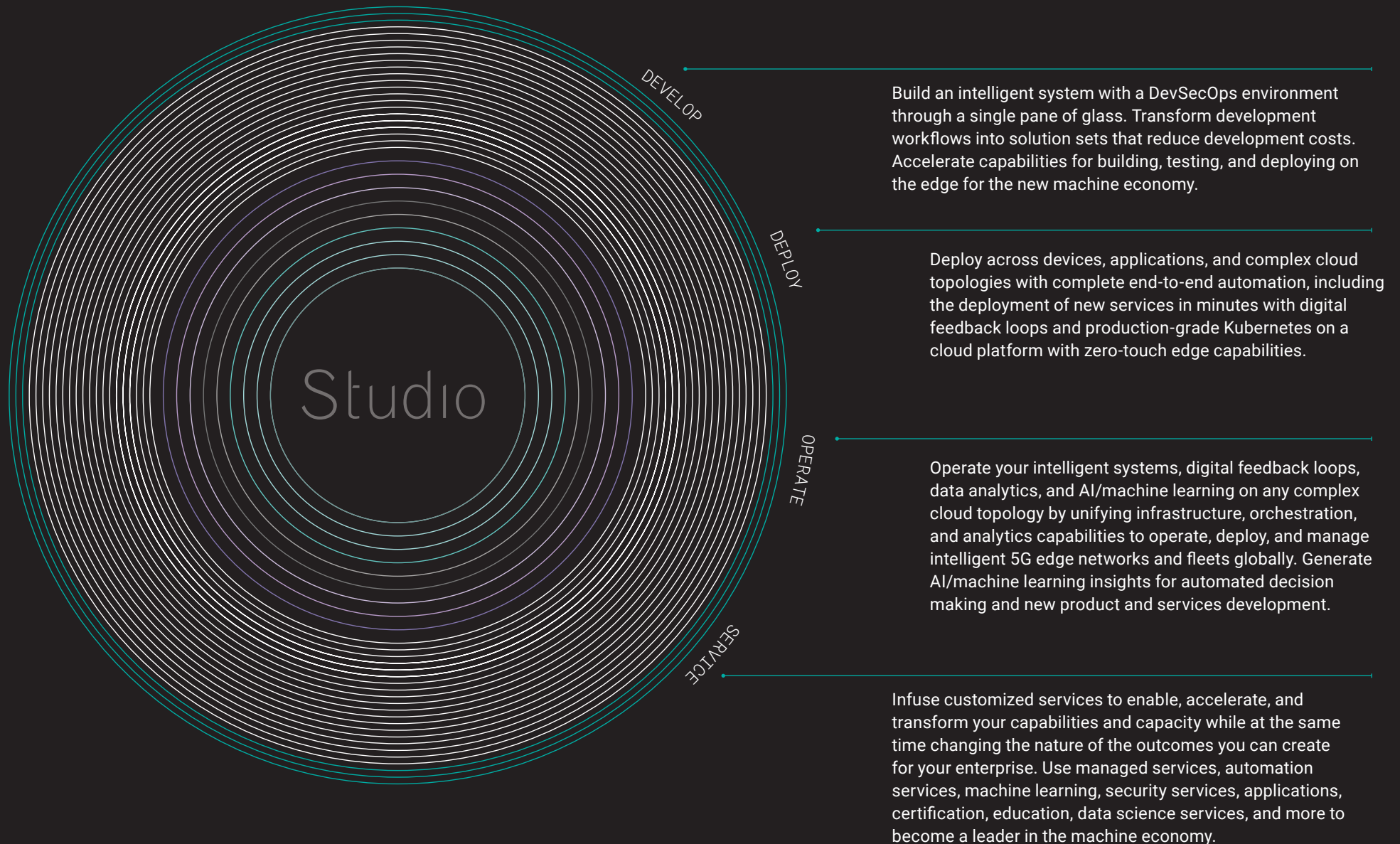


### PRODUCT MANAGEMENT

DEVELOP, OPERATE, LEARN, AND ADJUST YOUR INTELLIGENT SYSTEMS PRODUCTS AND SERVICES

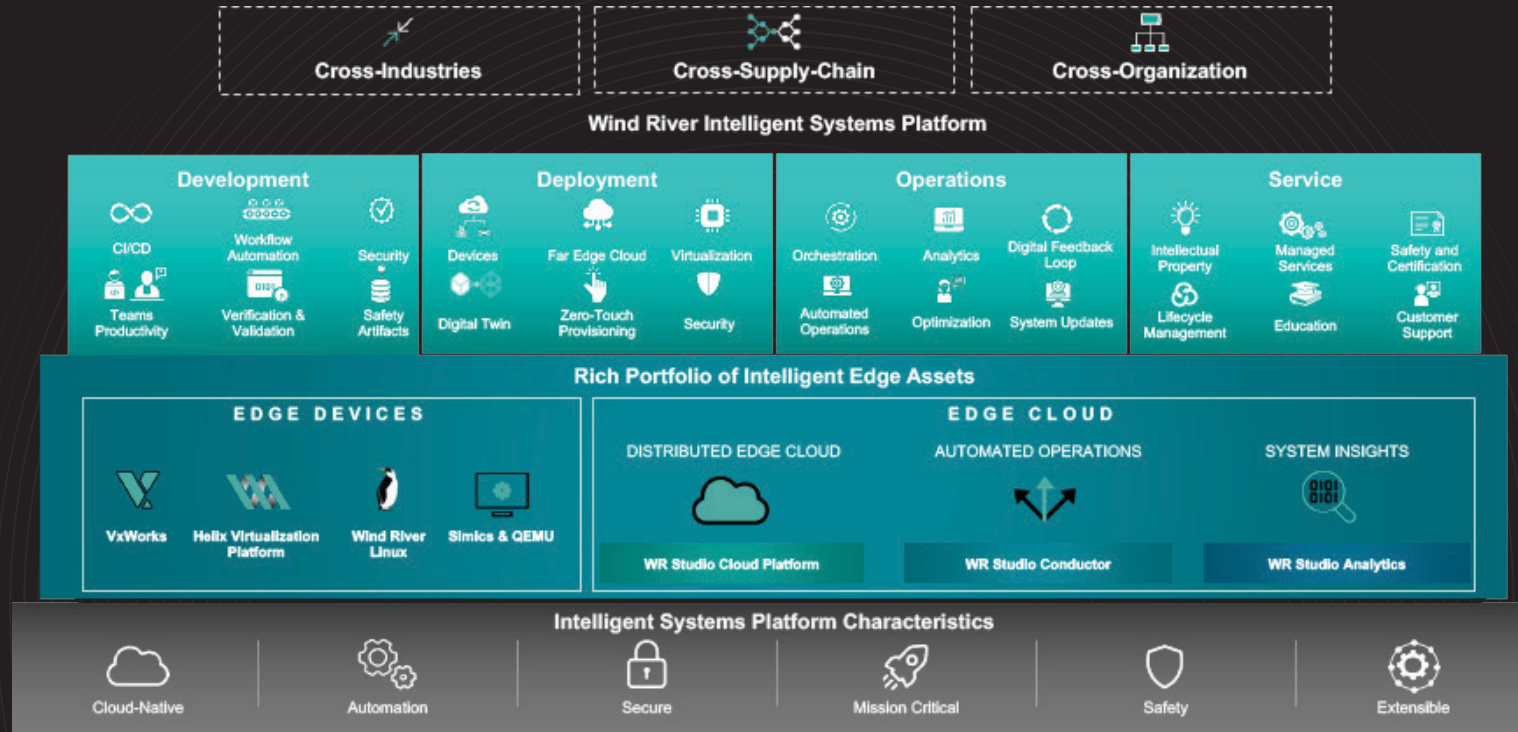
- » **Build** products and services in an iterative, mission-critical, safe, and secure manner throughout the lifecycle.
- » **Learn** from constant digital feedback loops throughout the full lifecycle of your products. Leverage the ability to infuse automation and machine learning in ways that could change the OPEX envelope by placing data at the center of your decision processes.
- » **Get** digital scale for your people, products, and customers as they share and learn in near real time together via a single pane of glass for the full lifecycle of your products. Add services (cybersecurity, certification) to the experiences you are creating from the start.

Full lifecycle management for a cloud-native world,  
where getting digital scale is key





INTELLIGENT SYSTEMS LIFECYCLE PLATFORM



Capabilities for Development/Deployment

- › Full lifecycle (development, deployment, operation, and services) for mission-critical intelligent systems
- › Cloud-based DevSecOps environment for developing and deploying intelligent edge devices
- › Single collaborative platform with a single pane of glass, advanced automation, and digital feedback loops
- › Designed around cloud-native software development techniques
- › The ability to infuse curated applications, machine learning, automation, software development, and simulation capabilities

Capabilities for Operation

- › Integrated cloud platform unifying infrastructure, orchestration, and analytics capabilities
- › Six-nines, near-latency-free operational capabilities
- › Automated deployment and management of the 5G edge cloud through a single pane of glass
- › Improved operations, reduced OPEX, and new service opportunities
- › Zero-touch edge operations
- › Automated deployment of new services, devices, fleets in minutes
- › Full orchestration capabilities on the far edge for thousands of clouds at the same time

Ecosystem Capabilities



## Wind River Studio Concierge Services

*Highly personalized, outcome-driven services program focused exclusively on the enablement, acceleration, and transformation of our customer's journey with Wind River Studio*

Concierge Services deliver a superior onboarding experience with Studio, while helping improve developer workflow, experience, and productivity. Get help modernizing the intelligent systems development lifecycle with:

- A customer success–centric approach focused on your desired business outcome
- A Customer Success Manager to act as your dedicated point of contact and orchestrate the activities required for your success
- Services tailored specifically to your needs
- Access to Wind River Engineering and SMEs as well as participation in product strategy discussions and previews
- Accelerated learning through the online Wind River Learning Subscription

### CUSTOMER SUCCESS MANAGEMENT

#### Enablement Services

Onboarding, installation, and workflow optimization

#### Acceleration Services

Improved adoption by integrating with customer tools and development environment

#### Transformation Services

Business outcome–driven approach, managed services or fleet

#### Dedicated Support

Elevated support experience

#### Engineering Access

Access to SMEs, product strategy influence

#### eLearning

Access to the Wind River Learning Subscription and Knowledge Forum

*Want to know more?*

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*What would you do with  
15,000 more hours each year?*

Calculate the benefits of digital transformation with Wind River Studio developer capabilities. With this calculator, you can see how your annual productivity and return of investment can improve.

[CALCULATE YOUR WIND RIVER STUDIO ROI](#)