

# KOMATSU



## CONEXPO-CON/AGG 2023 Press conference



**March 14, 2023**

# Featured speakers



**Rod Schrader**  
*Chairman and CEO*  
Komatsu North America



**Rod Bull**  
*EVP – North America Region*  
Komatsu North America



**Tim Tripas**  
*Sr. VP CE/Forest Division*  
Komatsu North America



**Mike Gidaspow**  
*VP – Products, Service and Solutions*  
Komatsu North America



**Doug Morris**  
*VP – Forest Products Division*  
Komatsu North America

# Our operations



## Headquarters

Tokyo, Japan



## Founded

May 13, 1921



## Employees

62,800



## Countries

140



Manufacturing  
operations

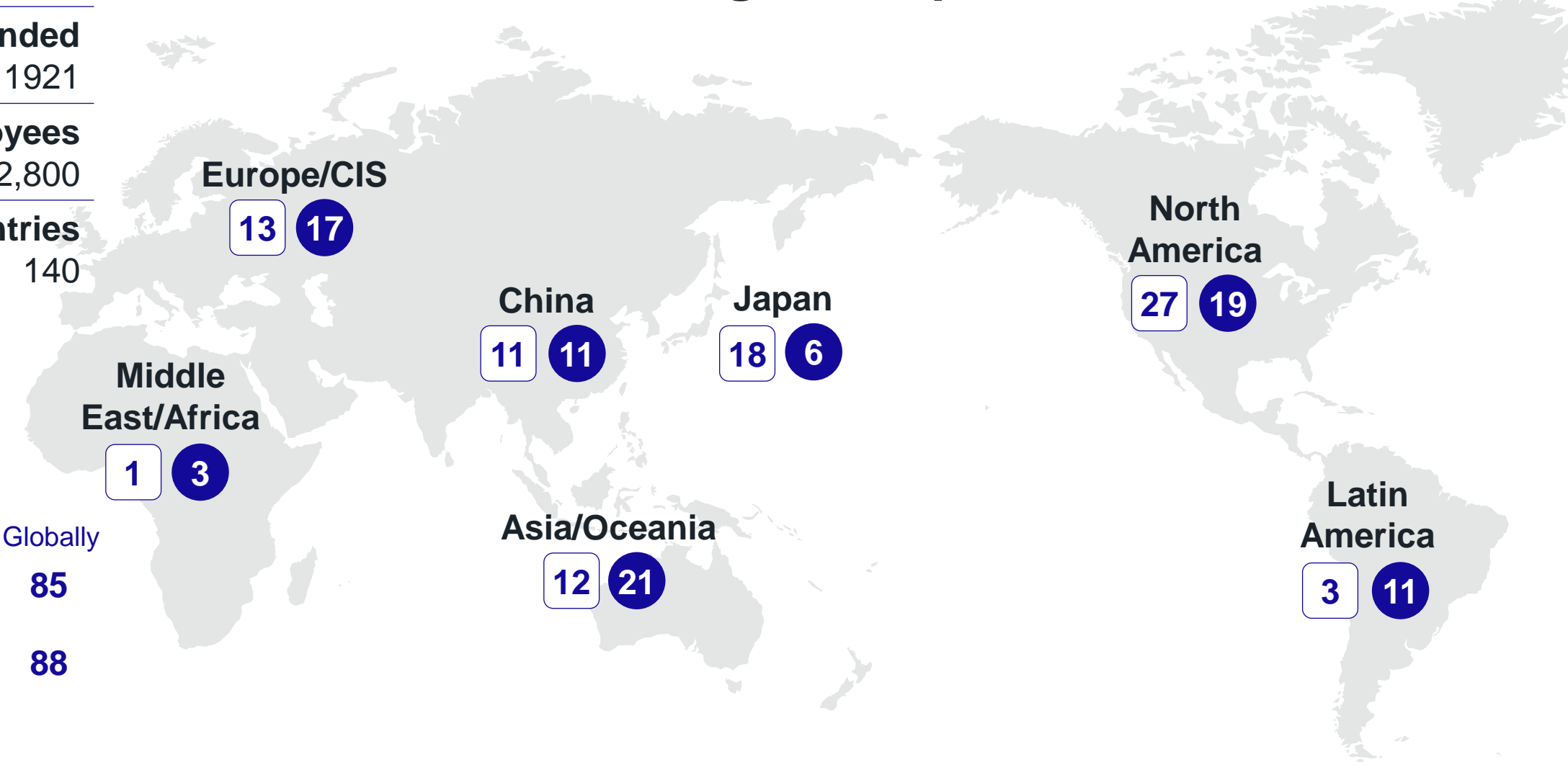
85



Sales  
operations

88

# Komatsu global operations



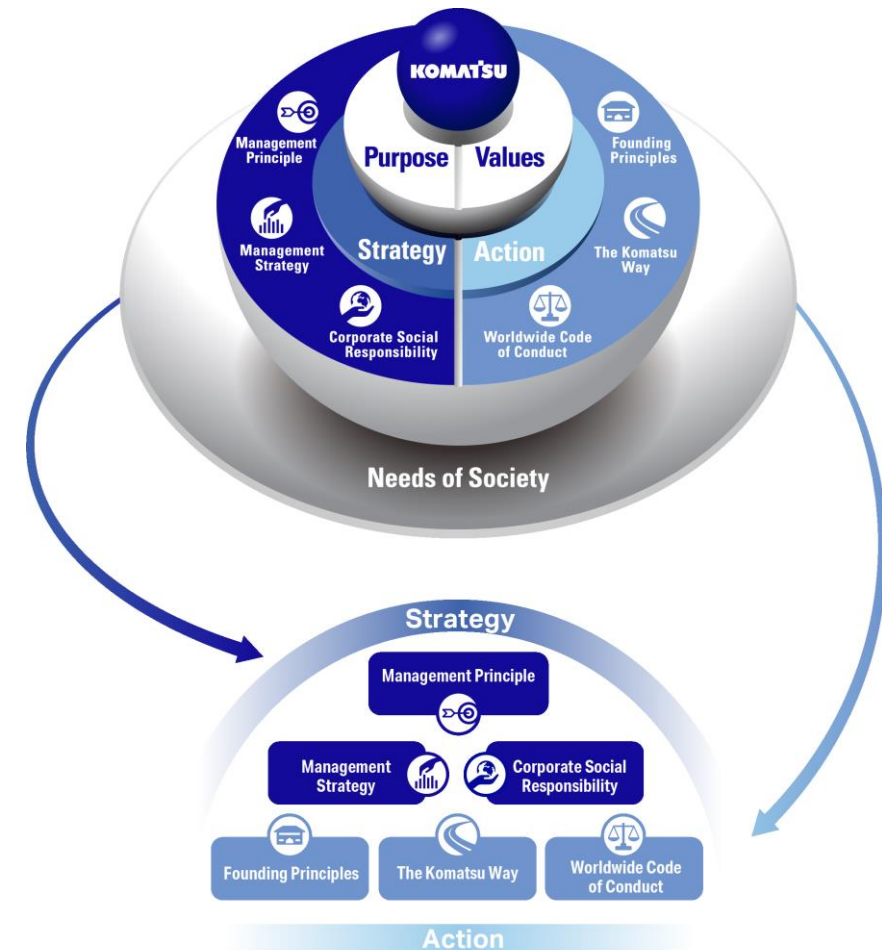
# Our purpose and brand promise

Our purpose

**Creating value through manufacturing and technology innovation to empower a sustainable future where people, business, and our planet thrive together.**

Brand promise

**Creating value together**





# Our equipment and technology solutions

Komatsu's global range of offerings for construction, mining, forestry, aggregate, waste, energy and other related industries provides quality, durability and reliability to help our customers meet their business goals; improving production, lowering operation costs and prioritizing safety.



Dozers



Excavators



Motor graders



Trucks



Wheel loaders



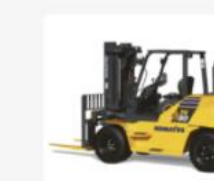
Forestry forwarders



Forestry harvesters



Forestry feller bunchers



Forklifts



Crushing



Entry development



Longwall



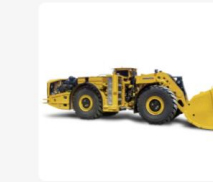
Room and pillar



Underground hard rock bolters



Underground hard rock drills



Underground hard rock haulage



Crushing



Blasthole drills



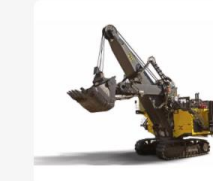
Draglines



Electric rope shovels



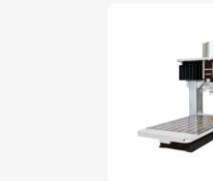
Electric Drive mining trucks



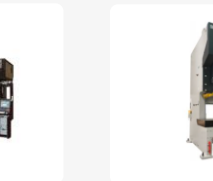
Hybrid mining shovel



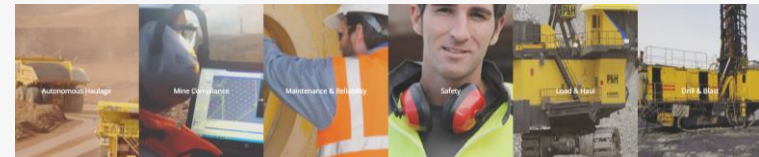
Surface mining excavator



Laser Cutting



Presses



Mining Technology Solutions



Smart Construction



Smart Quarry



My Komatsu



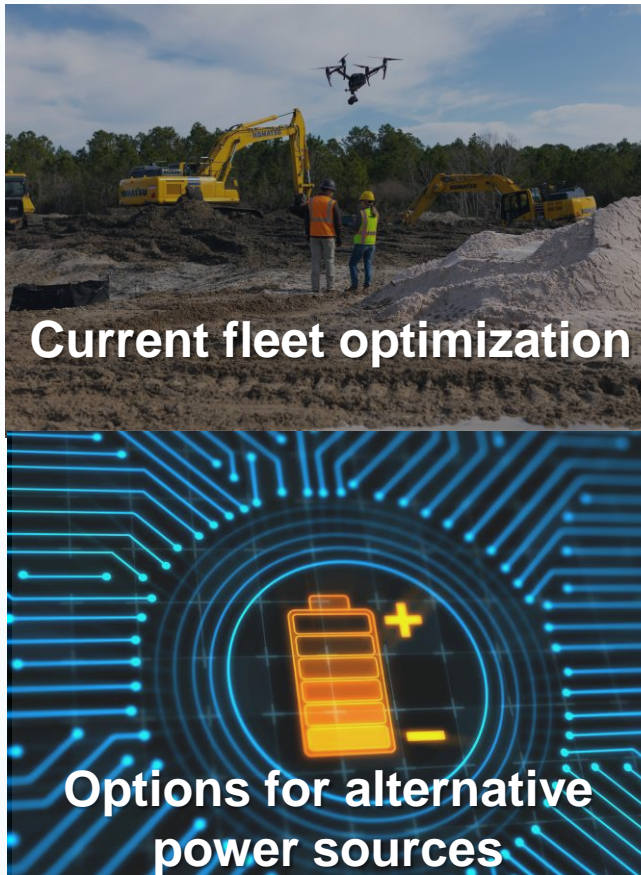
Komatsu Care Plus

# Trends shaping our industries

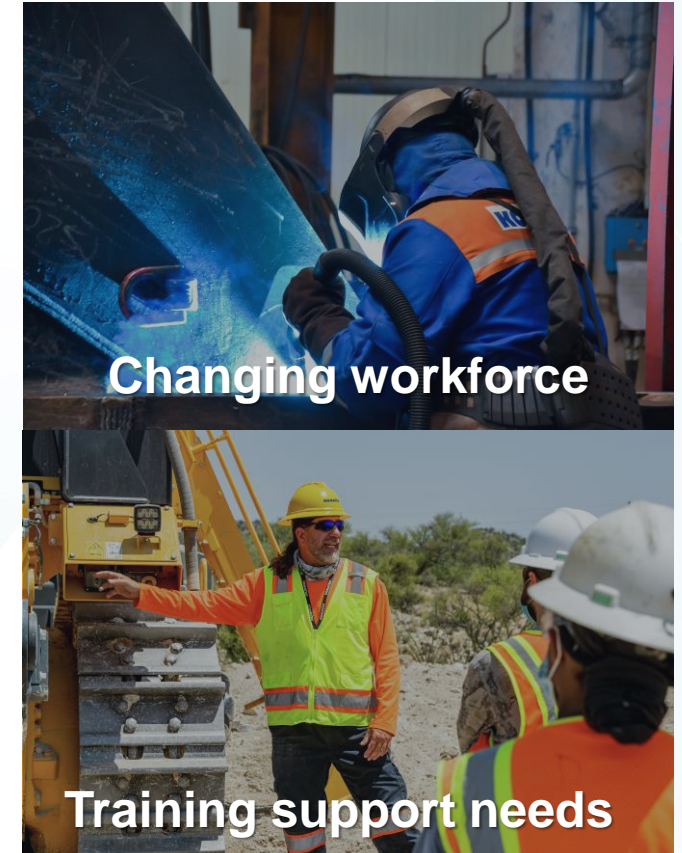
## Technology utilization



## Sustainability goals



## Labor challenges





## Komatsu's strategic response



## Implementing technology

- Instilling predictability with digital
- Plan and produce more effectively



## Sustainability/ electrification

- Optimizing use of current fleet
- Providing power source options



## Workforce optimization


- Help upskill and retain talent
- Virtual training



  
**Implementing  
technology**



  
**Sustainability/  
electrification**

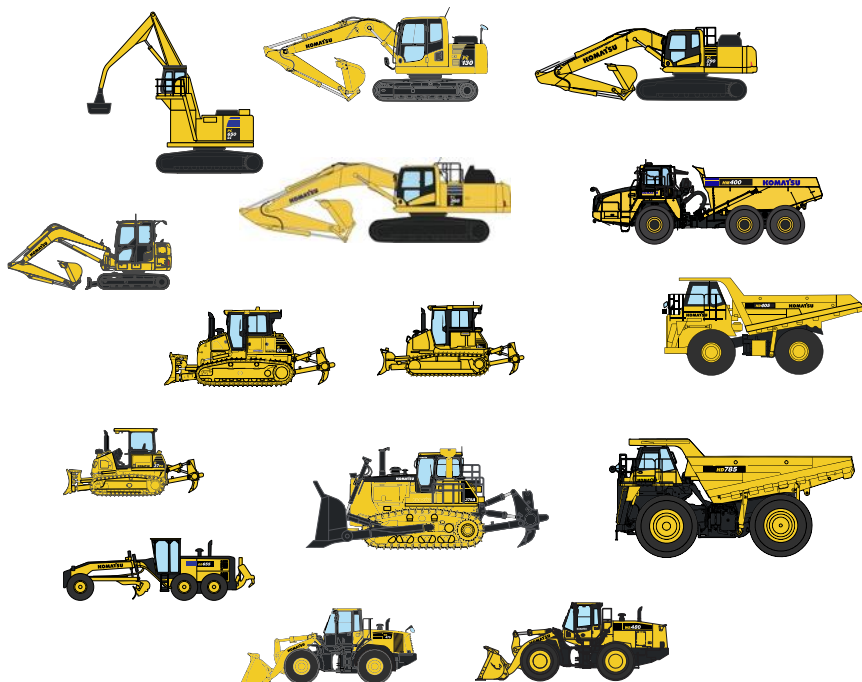
  
**Workforce  
optimization**



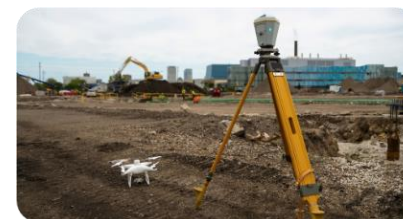


The **Smart Construction** vision brings a fundamental shift: we are putting ourselves in the customer's shoes

## OEM's typical perspective of customer's operation



## The digital perspective of customer's operations



**Digitalization**

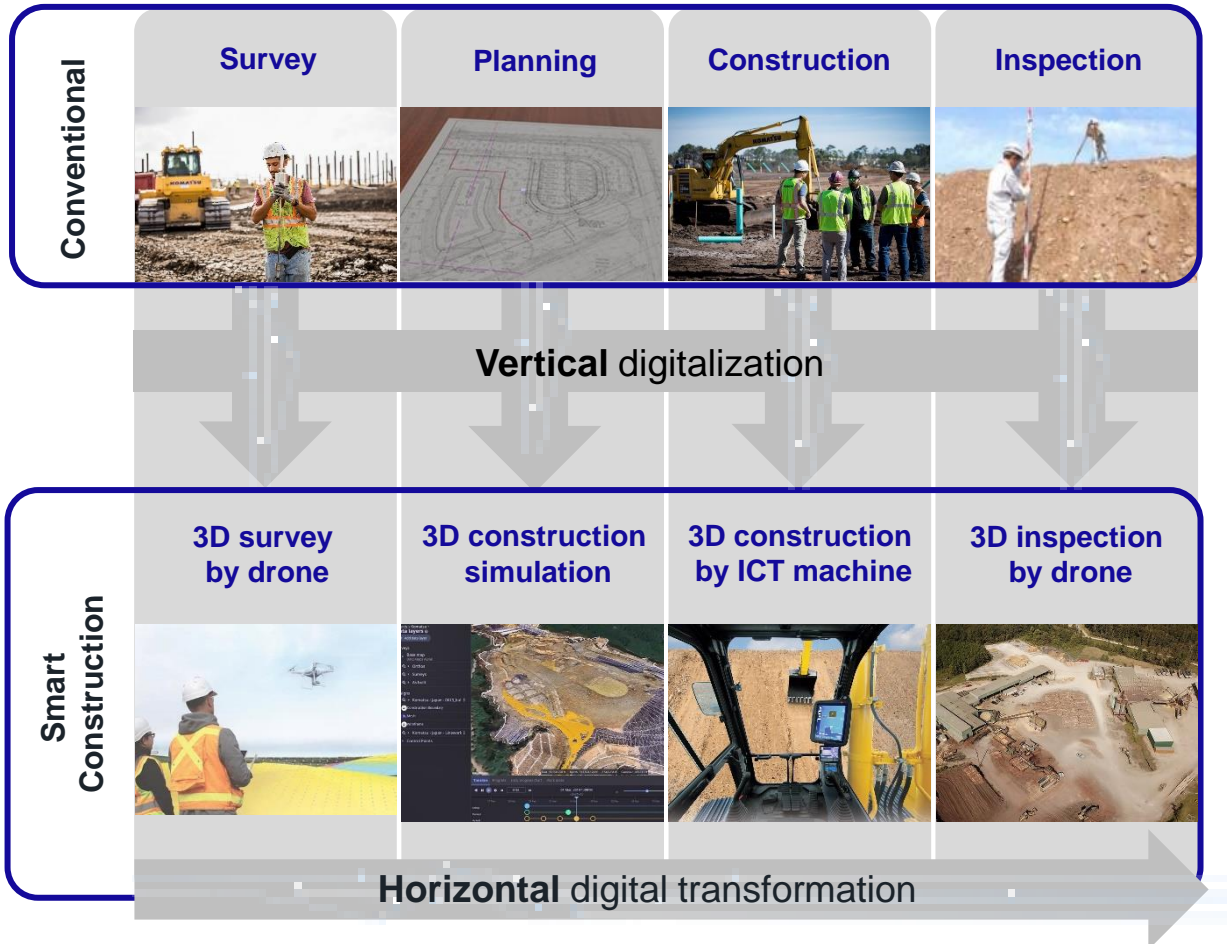
**Automation**

**Sustainability**

# The Smart Construction transformation



Focusing on **changing processes**, not just individually, but linked together through **Smart Construction** and **intelligent Machine Control** solutions.



## Smart Construction

Our suite of solutions leveraging advanced automation, integrated technologies and simulation capabilities:

**Smart Construction Dashboard**

**Smart Construction Drone**

**Smart Construction Field**

**Smart Construction Office**

**Smart Construction Design**

**Smart Construction Remote**

**Smart Construction Retrofit**

• Telematics via **My Komatsu**



# Creating value for quarry customers



Through our **Smart Quarry** solutions, we are helping to **remove the guesswork** from planning and production for customer operations.

## Predictability



**Remove the guesswork from selecting the right equipment for your job site**

- Site analysis by Komatsu experts
- Custom reports include vital details of a customer's operation

## Fleet management



**Manage mixed fleet load counts and analyze hauling performance**

- Easily track load counts
- Visualize cycle times
- Optimize haul routes

## Site management



**Site management tool focused on fleet production, health and safety**

- Brand agnostic
- Real-time monitoring of jobsites via cloud
- Supports continuous improvement



# Forestry full-cycle approach



For forestry customers, we have **expanded our offerings** to cover the **entire cycle of forestry operations**



Acquisition of Bracke Forest in 2022:



- Application-specific attachments for land preparation
- Accelerating the mechanization process for reforestation



# Empowering the customer through digital tools

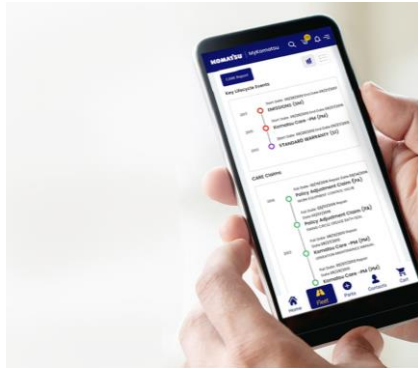


Through **My Komatsu**, customers have access to telematics data, parts ordering, warranty information, our Smart Construction suite of digital solutions, and more, **right at their fingertips, 24/7.**

**KOMATSU**  
**My Komatsu**



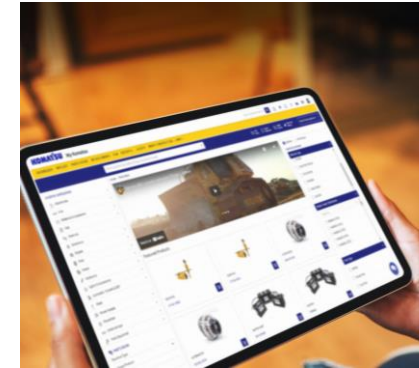
Telematics



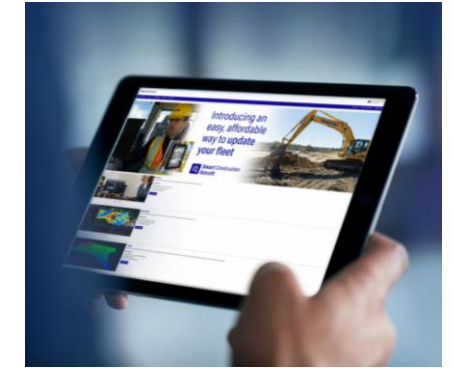
Warranty coverage



Publications




E-commerce




Smart Construction Marketplace



  
**Implementing  
technology**



  
**Sustainability/  
electrification**

  
**Workforce  
optimization**



# The path toward a more sustainable future



We've set a goal of achieving **carbon neutrality by 2050**, a journey that began years ago in how we design and produce equipment and continues through the life of our products and solutions.

**Optimizing existing fleets:** reducing emissions and waste with technology and training, reman services

**Providing hybrid and emission-free equipment** that leverage our cross-industry learnings

**Offering flexibility** in how we get to a carbon neutral future, including development of new power sources





## Technology

- Leverage **3D design data** to plan and operate effectively
- Track **project progress in near real-time** to identify opportunities for reducing waste
- Pinpoint inefficiencies through **direct line of sight** on projected vs. actual



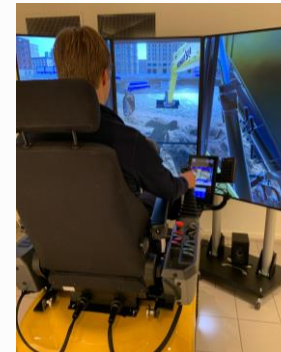
**KOMATSU**  
My Komatsu

Intelligent Machine Control



## People

- Get **new operators up to speed quickly** with virtual training solutions
- Digital learning providing **on-demand, self-paced learning**
- Simulators with **real-motion technologies**
- Less training on the equipment supports **reduced fuel burn and lower emissions**



**KOMATSU**  
Academy

**ORYX**  
SIMULATIONS

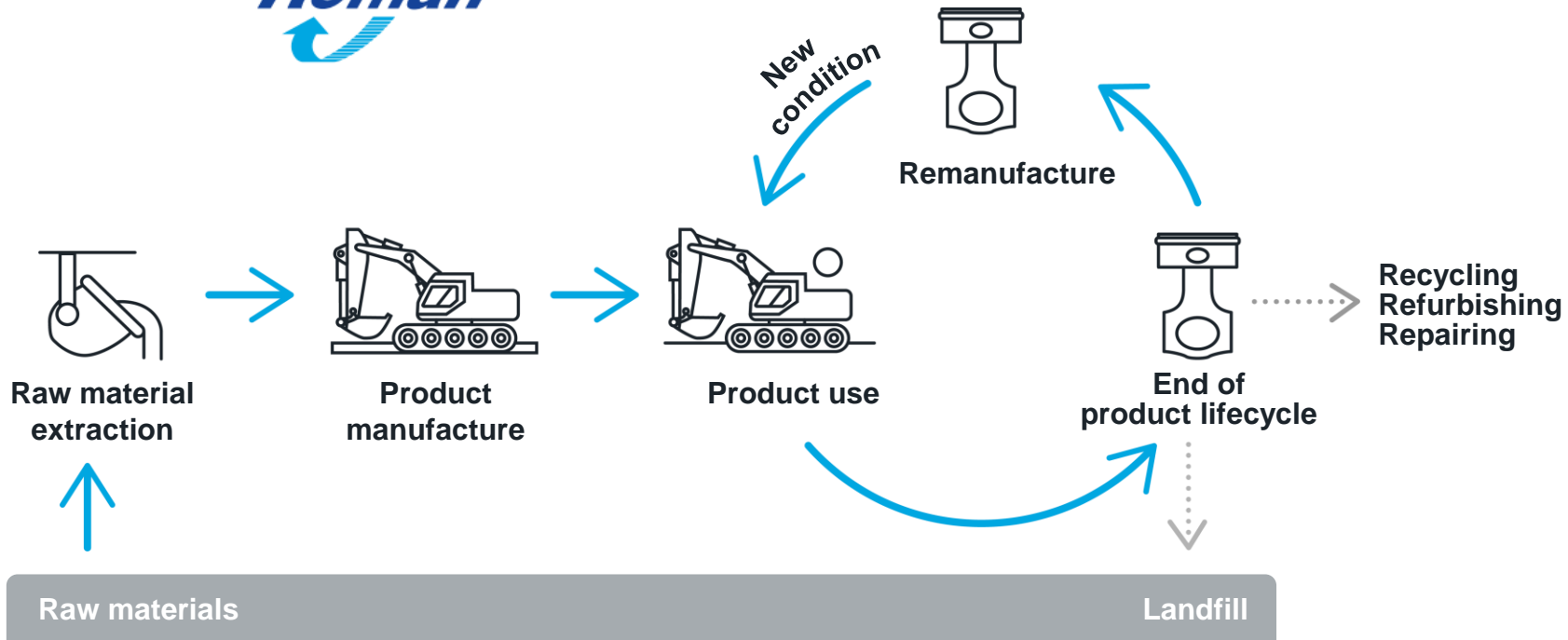
Reduce fuel consumption and curb emissions, and operate with increasing precision, with the goal of only moving material once.



# Remanufacturing of existing fleets



Our reman services restore used or broken parts to original specifications while **reusing more than 85% of the raw materials** used to manufacture the original part. More than 4,000 reman component units are available.

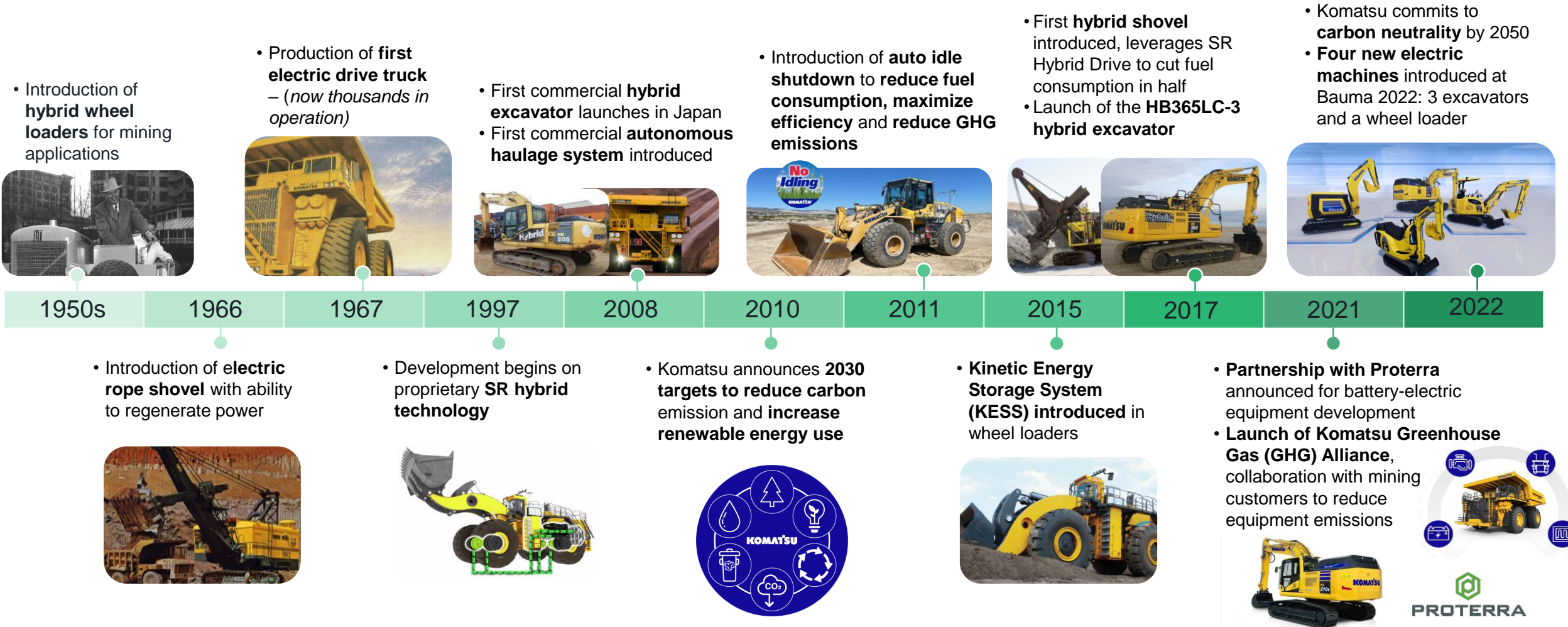




# Steady advancement: hybrid and electric equipment



For more than 70 years, we've been innovating our product lines for core industries to break new ground with electrification and hybrid technologies. In that time, our products have helped customers move more than 100 billion tons of material with electric drive technologies.



# Prioritizing fuel efficiency and performance



In our equipment offerings, we've focused on scalability and performance alongside fuel efficiency.



Our **hybrid HB365LC-3 excavator** offers:

- **15% increase in productivity** rate with a high-performing swing and high-response engine
- **20% greater fuel efficiency** (compared to same class PC360LC-11)



Our **WA475-10 wheel loader** with auto idle shutdown and Komatsu hydraulic mechanical transmission:

- Increases operator control
- Minimizes power transmission loss
- **Increases fuel efficiency up to 30%**





## The electric PC210E excavator

- Proterra's lithium-ion battery technology with 451 kWh of battery capacity
- 5-to-9-hour operating time



## The PC30E electric mini excavator

- **35 kWh** battery and a **17.4 kW** electric motor
- Batteries can be fast-charged
- Quiet and simple operation without vibrations and zero emissions



## The PC01E electric micro excavator

- Powered by a swappable battery system, developed in partnership with Honda
- Hydraulically driven
- Great for work in confined spaces



Launched March 2022 in Japan



## Electric wheel loader concept

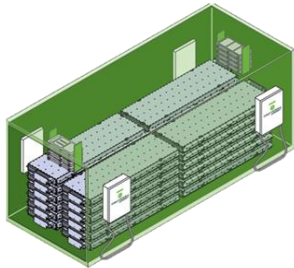
- Electric traction motor, lift, tilt and steering cylinders, power electronics, system control computer, battery and battery management system.





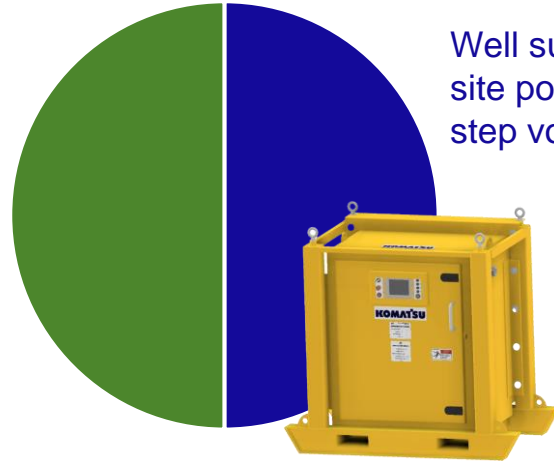
To provide flexible charging solutions for varying applications and customer needs, Komatsu is exploring **high-power charging solutions** and developing **multiple power source options** including batteries.

Designed for use in “off grid” locations or where site power is inaccessible or unreliable



### Proterra portable charging concept

- +2 MWH of energy
- 5-6 machine charges
- 20' ISO shipping container
- Transportable



Well suited to adapt varying site power voltages and step voltage up or down

### Komatsu Generation 2 charger:

- 400-1140V input range
- 300-900V output
- Universal CCS (AC/DC) charge plug
- Transportable



### Komatsu portable charging concept for mini-excavator:

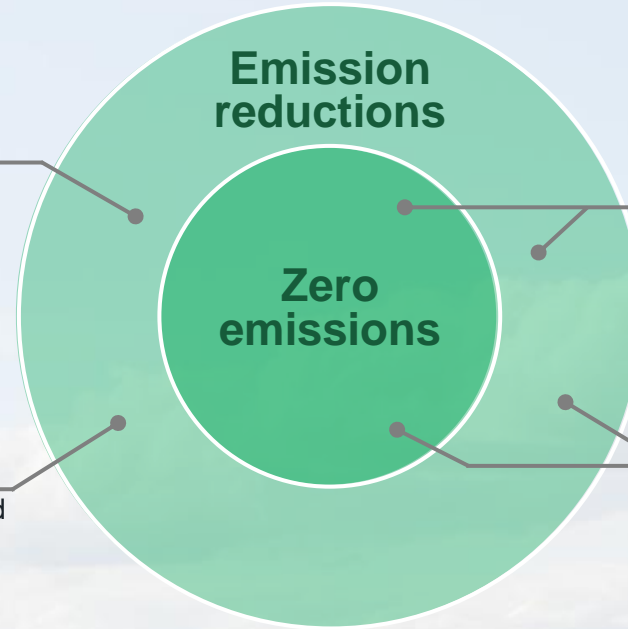
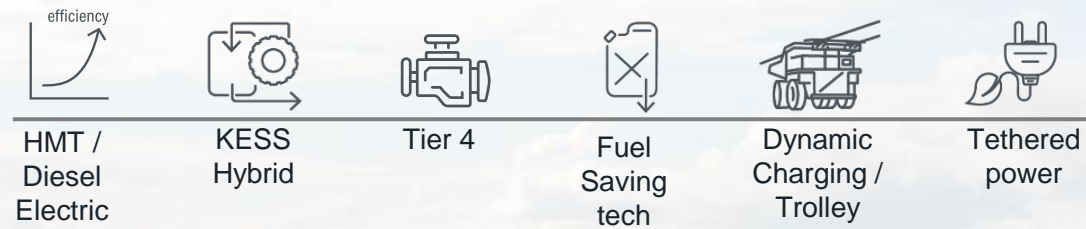
- Exhibited as a concept for environments without a power supply
- Compact for easy transportation
- Can also be used to charge other electric equipment on the work site.

# Pathways to product decarbonization

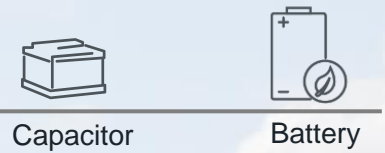
## Efficient use of equipment



## Equipment improvements




## Energy storage



## Alternate fuels





**Implementing  
technology**



**Sustainability/  
electrification**



**Workforce  
optimization**



# An industry in transformation

There are many enablers to **attracting new generations of talent**: technology, automation and more sustainable practices that align to the interests and skillsets of future generations

## Digitalization



Integrating technology and product offerings to provide customers data-driven guidance real-time

## Automation



Empowering safer and optimized sites by leveraging increasingly automated equipment and processes

## Low-emissions solutions/sustainability



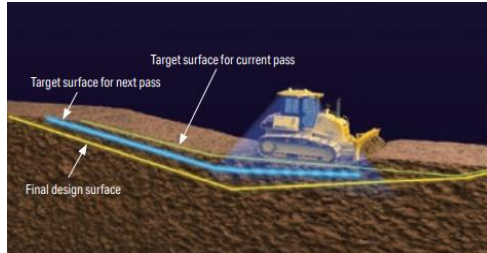
Connecting customers with both product level and job site level technologies to minimize carbon emissions and improve efficiencies



# Closing operator skill gaps

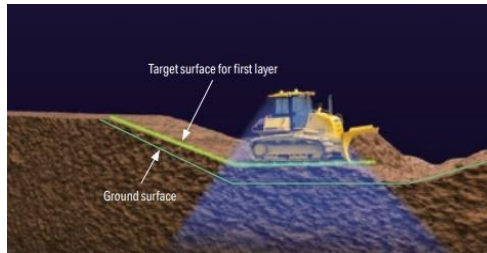
For customers struggling to find qualified workers and train the ones they have, our **integrated iMC technologies** and **digital Smart Construction solutions** help optimize their workforce, automating machine functions and guiding operators.

Automatic  
levelling



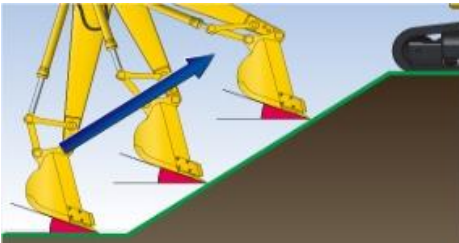
Move the  
material  
per plan

Protect  
grades

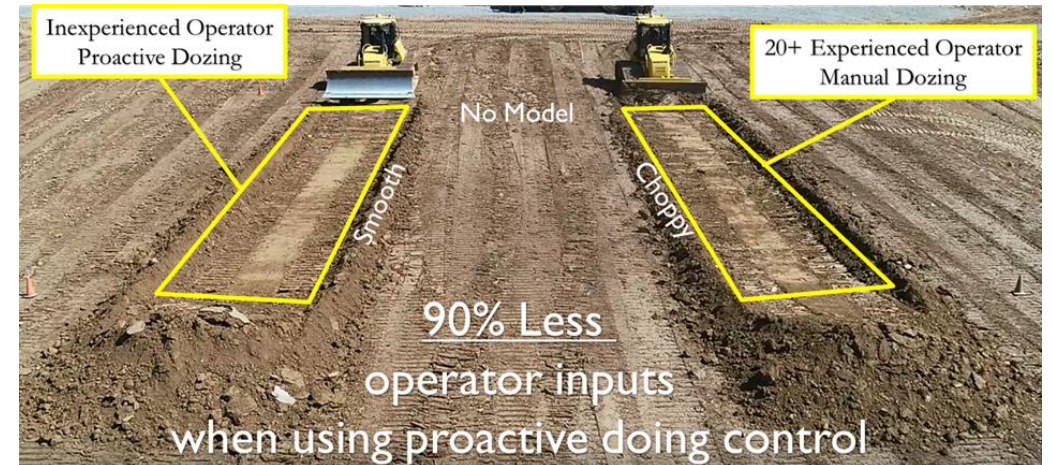


Optimize  
machine  
productivity

Construct it  
right the  
first time



Guide the  
operator in  
work to be  
performed



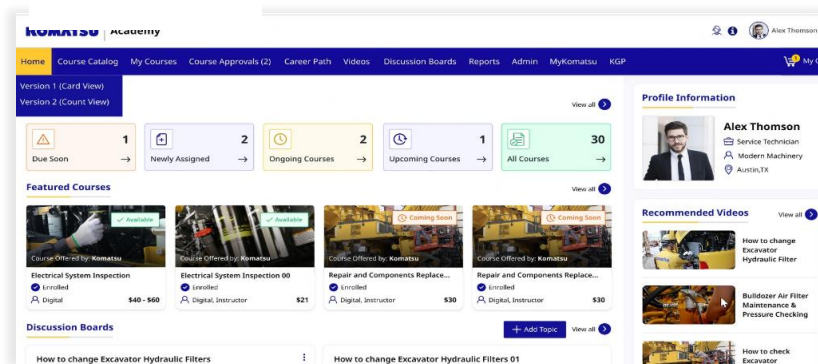
# Leveraging technology for training



From online learning communities with 24/7 access to self-guided trainings, to the latest simulators, we are also using technology to support high demand for operator training that reduces wear and tear on machines, saves fuel and helps upskill workers faster.

## KOMATSU Academy

- 24/7 on-demand self-guided access
- Micro learning and personalizing landing pages
- Enhanced learning paths and certifications
- Learning records and personal data privacy
- Creation of learning communities



Currently in use by our Mining Technology Solutions (MTS) customers and in development for a wider customer launch planned for Sept. 2023

## Simulators for off-machine learning

- **Real-motion technologies** provide realistic training focused on operator safety and productivity
- Identify a range of specific operator errors and events enabling maximum operator safety
- Provides machine operations training to help minimize equipment damage and eliminate potentially life-threatening scenarios.
- Interchangeable machine modules for training on a wide range of equipment



**600 series**  
single screen variant



**600 series**  
triple screen variant



**60 series**  
compact type



# Discover more

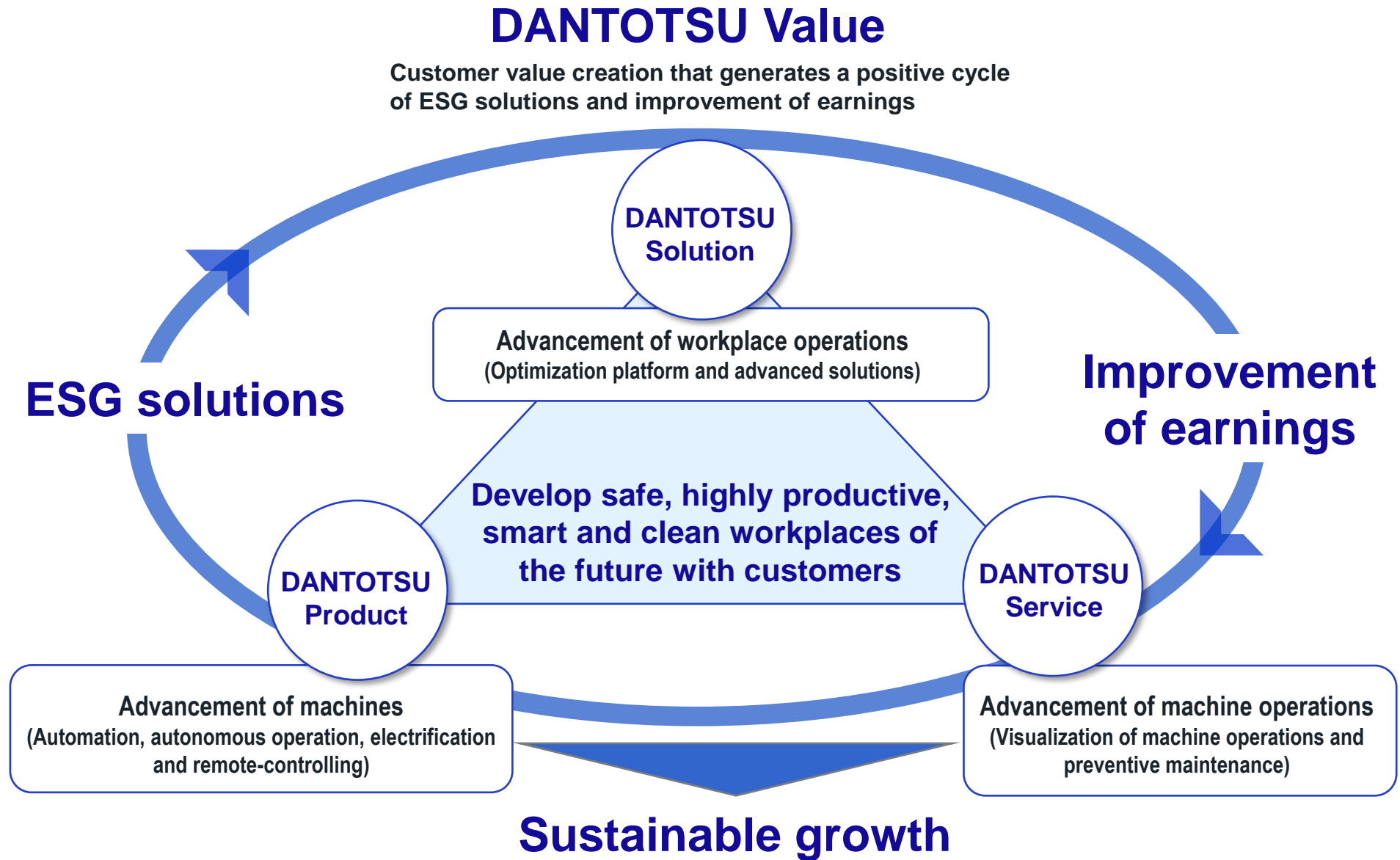


- Visit us at **booth W42044** to experience our equipment and solutions in person
- Join the **educational session** hosted by Jason Anetsberger, Director, Customer Solutions:
  - Digital Transformation of the Job Site: Friday, March 17, 10:45 - 11:30 a.m., West Hall 206
- **Questions** after the show? Contact Director of Corporate Communications: [caley.clinton@global.komatsu](mailto:caley.clinton@global.komatsu)
- Follow **Komatsu Construction North America** on social:



# Appendix

# Komatsu's mid-term management plan





# Mid-term management plan (FY2022 - 2024): 3 Pillars of growth strategies



Common tasks among the three pillars

- Expand partnerships
- Promote DX in all areas

# Our commitment to sustainability

Since Komatsu's founding more than 100 years ago, we have been committed to the sustainability of people, communities, business and the environment. Our founder, Meitaro Takeuchi, was an entrepreneur with an extraordinary humanitarian vision, committed to enhancing the community's quality of life, developing future generations and growing with society's needs.

## Empowering a sustainable future



### With people

- Safety, health and wellbeing
- Employee engagement
- D&I
- Skills development
- Human rights



S (Social)



### With business

- Product safety and quality
- Provision of solutions
- Governance compliance
- Community support



G (Governance)



### With the planet

- Carbon reduction
- Renewable energy use
- Recycling and remanufacturing
- Forest conservation



E (Environment)

## Our sustainability priorities and goals:

- **CO2 reduction:**
  - Decrease by 50% by 2030 (from 2010 levels)
  - Challenge goal of carbon neutrality by 2050
- **Renewable energy use:**
  - increase to 50% of total energy use by 2030
- **Water conservation**
- **Waste reduction**

