
Press Conference

Information tour 2023

**International construction
trade press**

LIEBHERR

Liebherr-International AG

50 years of Press Tours – Back to 1973 in Biberach a.d. Riss



Liebherr Group

From a small business to an international Group

Liebherr has grown from a small **family business** based in Southern Germany into a **group of companies with a global presence.**

The seeds of the company's success were sown

- in 1949 in Kirchdorf an der Iller, Germany,
- when Hans Liebherr developed the **world's first mobile tower crane**, the TK10, for his small construction company.
- The rapid success of the **first patented Liebherr crane** formed a solid base on which the company could grow.
- Hans Liebherr's invention also laid **the foundation for what would become a family business.**



Strong diversification and decentralized structures



Earthmoving



Concrete technology



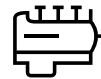
Refrigerators and freezers



Mining



Maritime cranes



Components



Mobile and crawler cranes



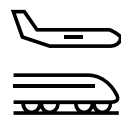
Deep foundation machines



Hotels



Tower cranes



Aerospace and transportation systems



Material handling technology

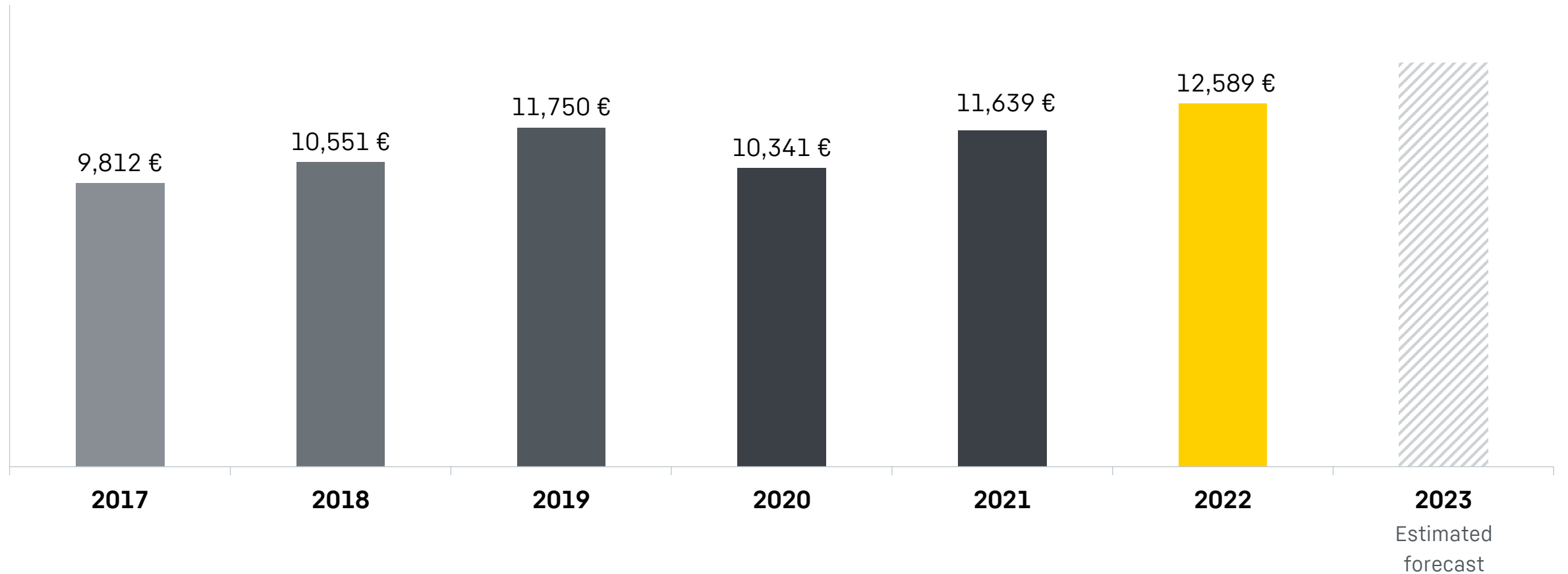


Gear technology and automation systems

-
- In organizational terms, Liebherr is a **technology company** that is divided into independently operating divisions.
 - Each of the 13 product segments is divided into manufacturing, sales and service companies, which are managed and operated by their divisional parent companies.

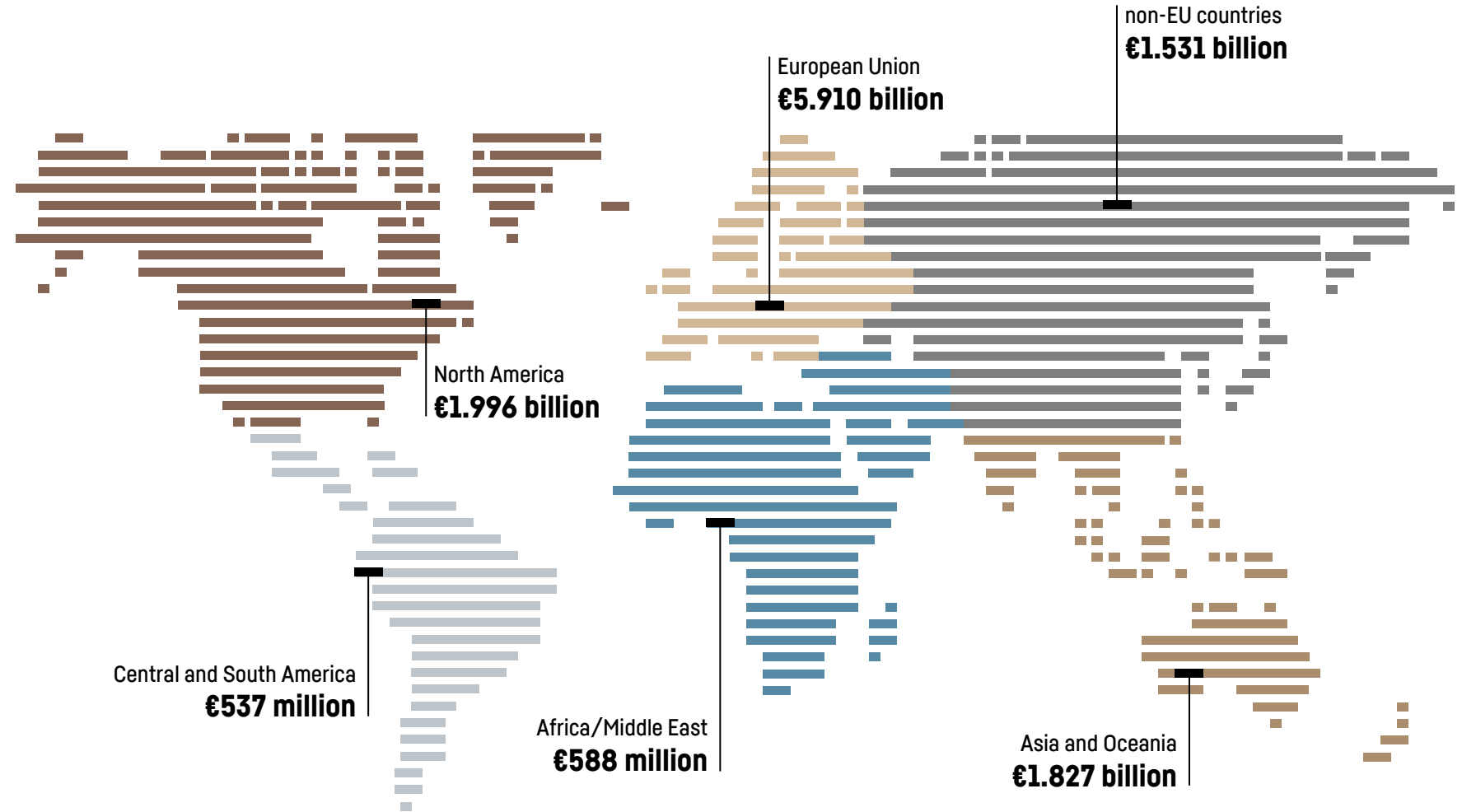
Turnover development

in € million

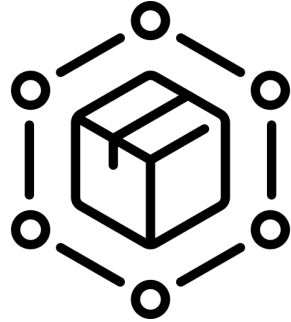


Turnover worldwide 2022

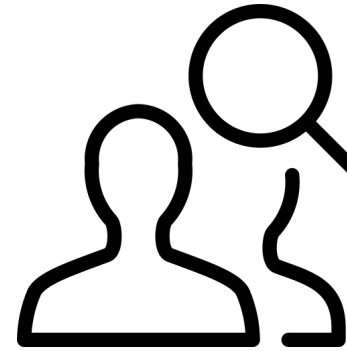
Total turnover 2022
€12.589 billion
+€950 billion
(+8.2%)*
*compared to 2021



Macroeconomic challenges 2023 / 2024

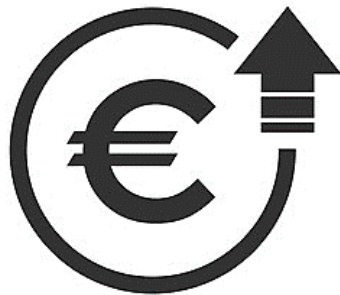


Inbound / outbound logistics
(supply chains, procurement markets)



Shortage of skilled workers

Price development /
inflation



General market conditions /
cooled economy



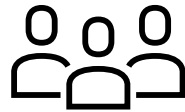
The Group's strengths

13 Product segments



Above-average capital resources

Equity ratio of over 50%,



51,321

Employees

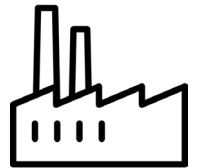


> 50

Countries on **every continent**

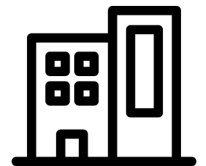
100 % family-run technology company

40



Production sites

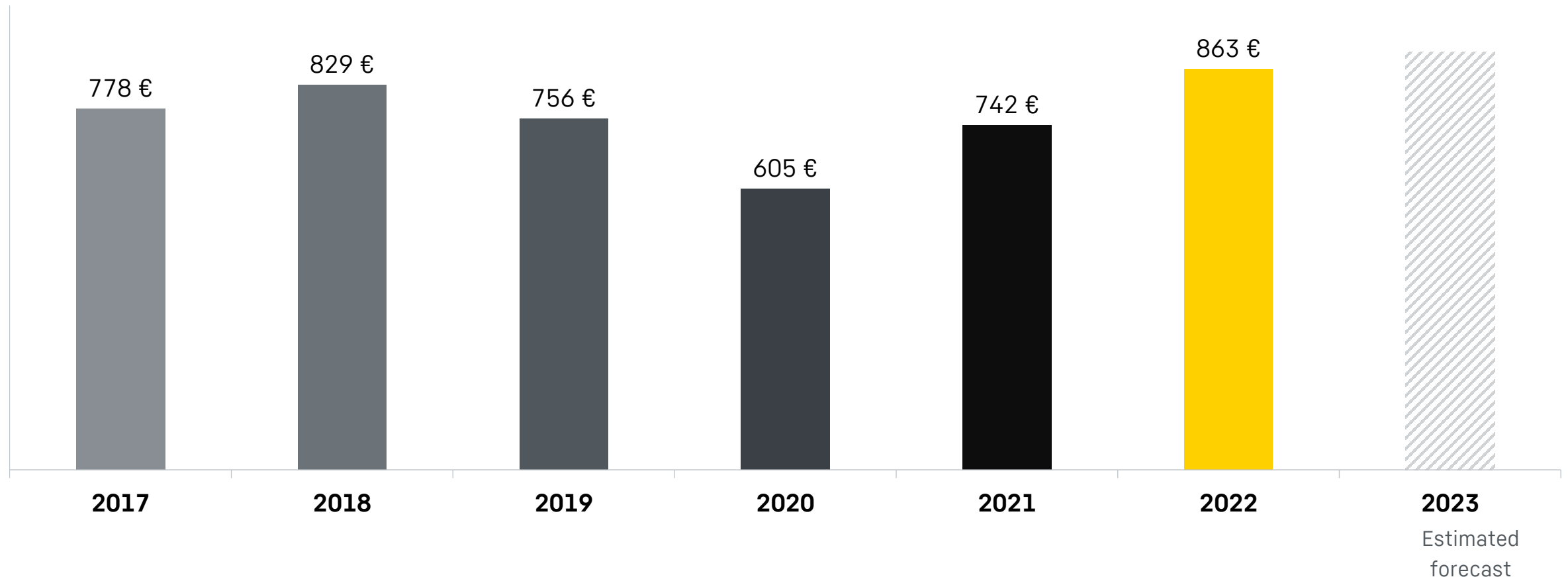
> 140



Companies

Investment development

in € million



Investments in a state-of-the-art network of facilities



Oberopfingen, Germany: expansion of the hydraulic cylinder plant and central logistics



Echingen, Germany: Plant expansion for mobile and crawler cranes



Namsheim, France: new manufacturing site for welded components, (pre)-assembly work for cabs

Liebherr Group

A future-facing company



Pioneering



Leader in R&D



Trend-setting



Average annual **investment of**
> € 800 million

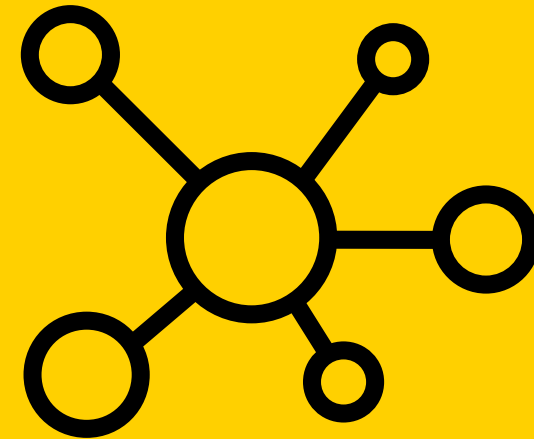


LIEBHERR

What's driving technology development at Liebherr?



Decarbonisation



Digitalisation

Decarbonisation – The role of our machines in the world

The role of our machines in the world: infrastructure projects and the energy transition.



Liebherr's approach to drive technology development

01

Holistic

02

Systematic
and
analytical

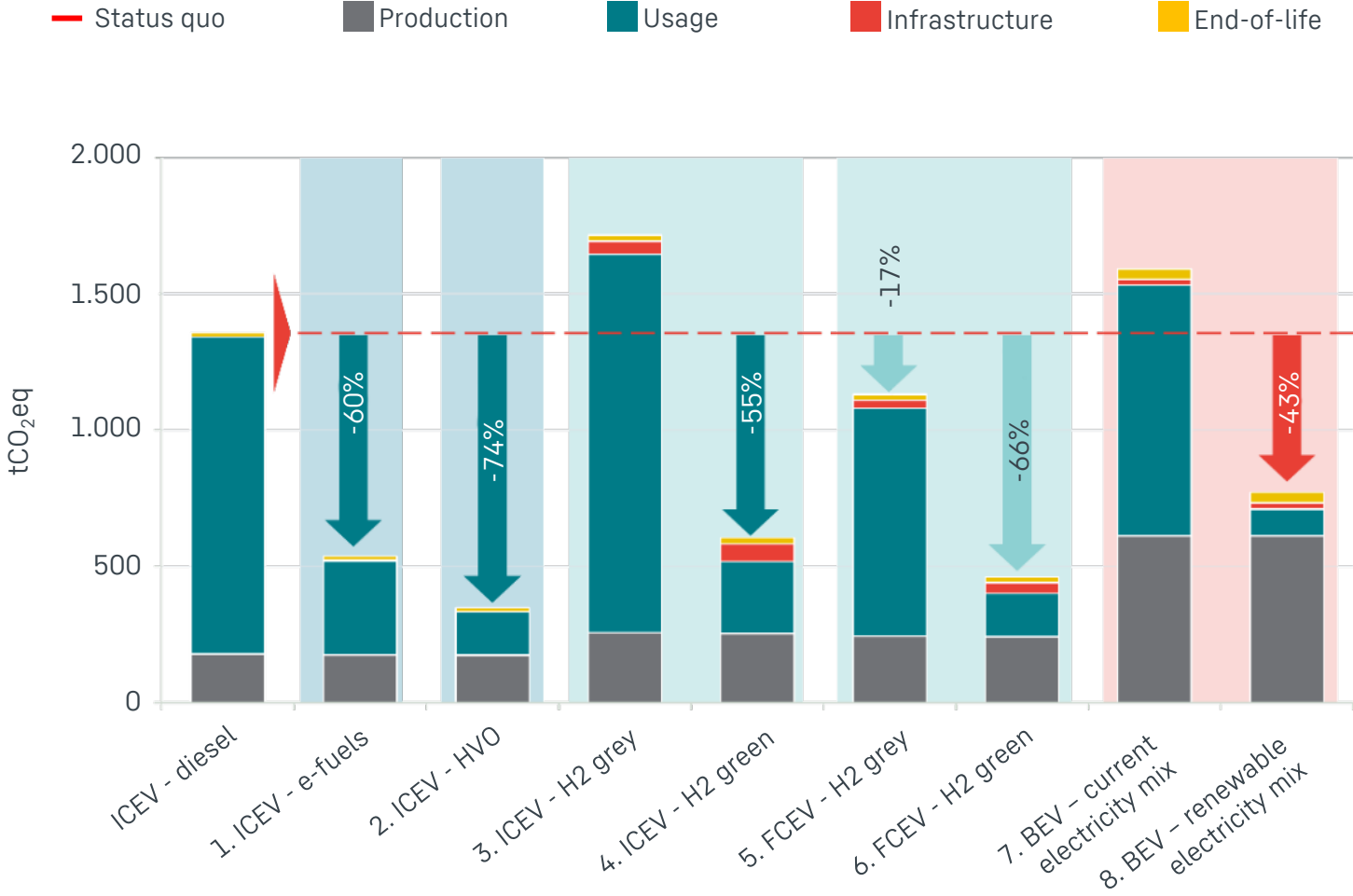
03

Technology
neutral



Liebherr Group

Frontier Economics: Lifecycle assessment of a mobile crane LTM 1160-5.1



Liebherr Group

Liebherr low and zero-emission technologies

Electrification

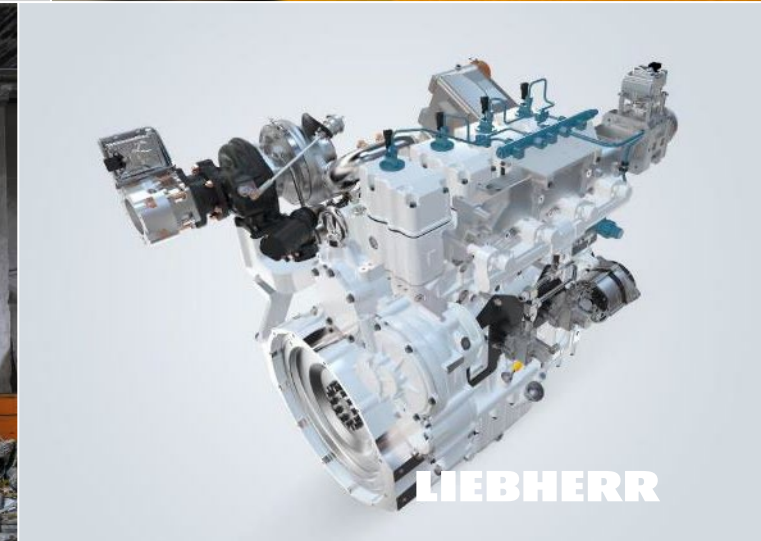
1. Electric: Grid
2. Electric: Battery
3. Electric: Grid + Battery
4. Fuel Cell

Clean combustion (ICE)

- HVO and E-Fuels
- H2
- Hybrid: ICE + Electric

Other pathways...

- Improved efficiency of existing power trains



Outlook: drive technologies and machines shown at the press tour



ETM 905 E from the ETM truck mixer series



L 507 E battery-electric wheel loader



Liduro Power Port LPO



A 916 E battery-electric wheeled excavator

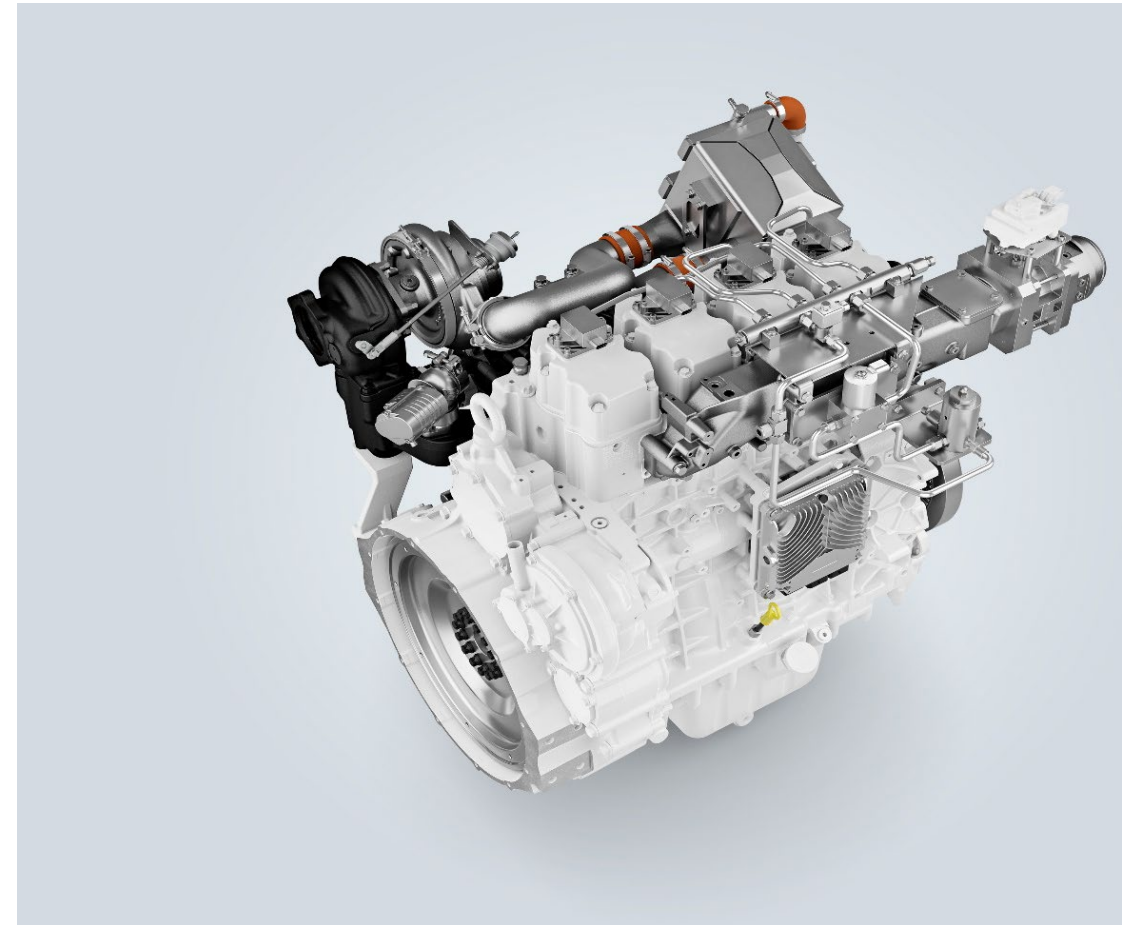


LTC 1050-3.1 mobile crane
with electric power unit

Outlook: drive technologies and machines shown at the press tour



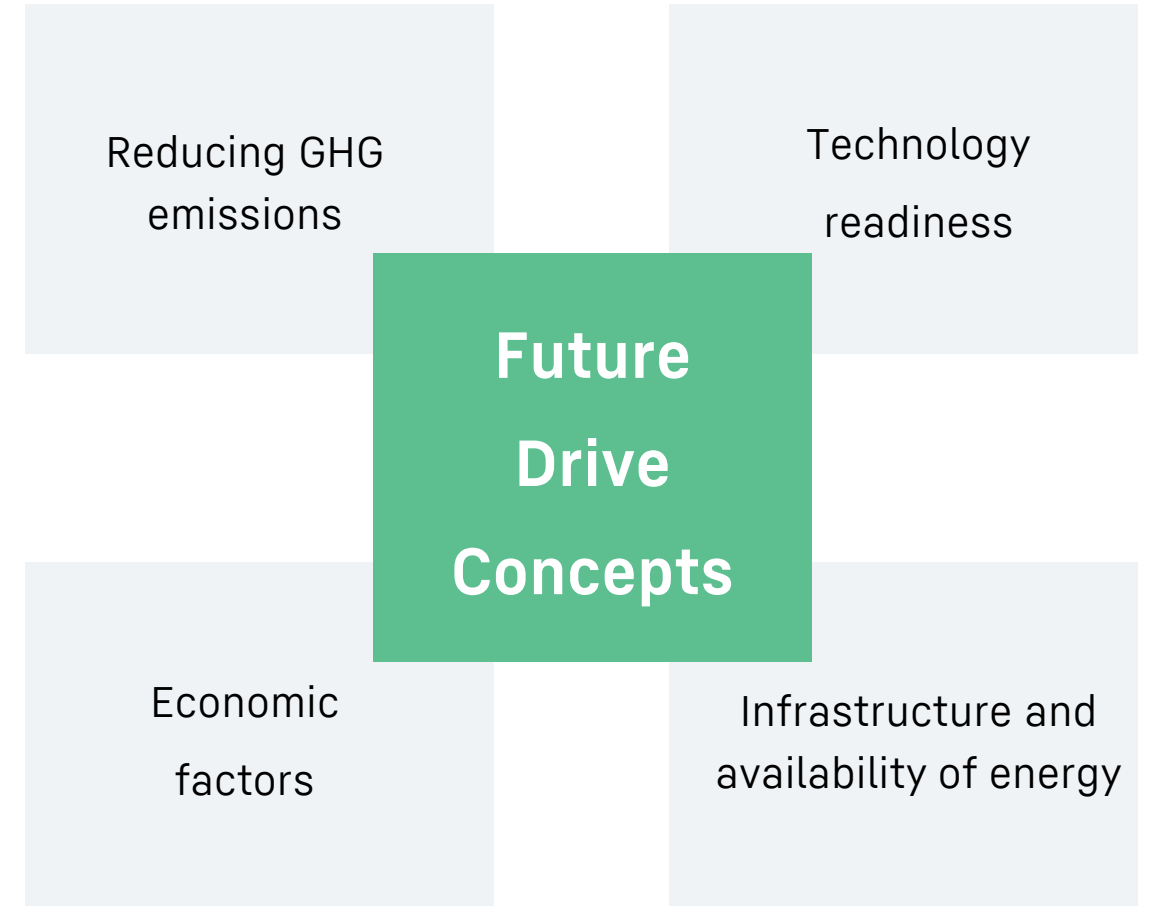
Technology carrier: R 9XX H2 with hydrogen combustion engine



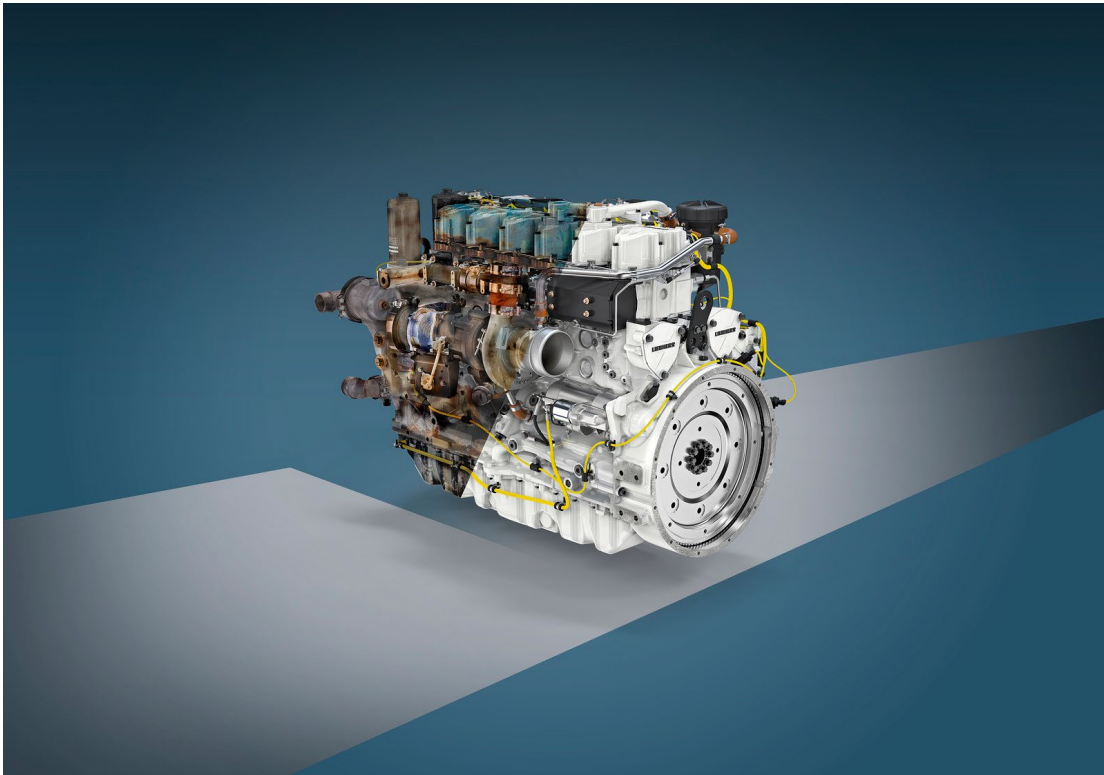
Liebherr hydrogen combustion engine H966

Conclusion on drive technologies

A holistic and technology neutral approach is required for future drive technology development.



Liebherr Remanufacturing Programme



This programme remanufactures components, such as engines, hydraulic components and gearboxes, to the highest quality standards in order to offer customers a greener alternative to new parts.

It can save up to 75% in raw materials and energy and up to 60% in carbon dioxide.

Insight into our core values as a 100% family-owned business

**We are a
trustworthy
partner**

“We aim to maintain our consistency and trustworthiness for many years to come.”

**We accept
responsibility**

“We aim at all times to fulfil our responsibility to society in general and to the environment.”

What's driving technology development at Liebherr?

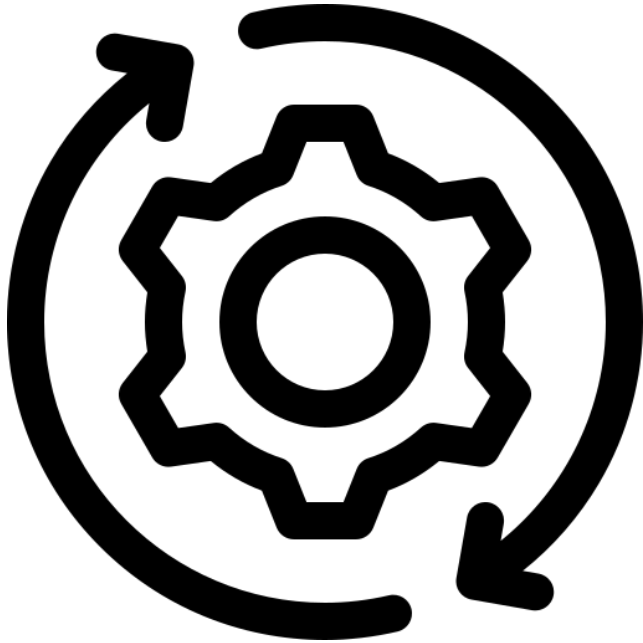


Decarbonisation

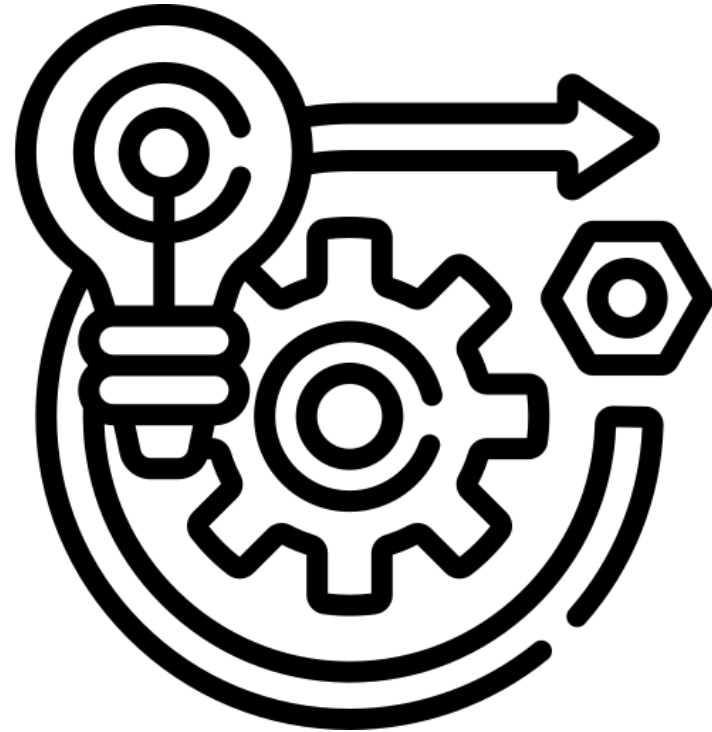
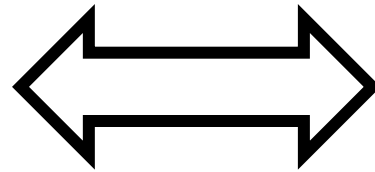


Digitalisation

How Liebherr supports customers when it comes to digitalisation



Increased efficiencies in existing processes



New ways of approaching business / processes

Digital solutions and digital communication channels



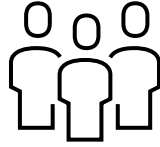
Remote Service

Digitalisation as a general attitude: Generate measurable added value on different levels



Organisational level

Implementing agile working, a fail fast approach, rapid prototyping, **data-driven decisions** to **improve our production processes.**



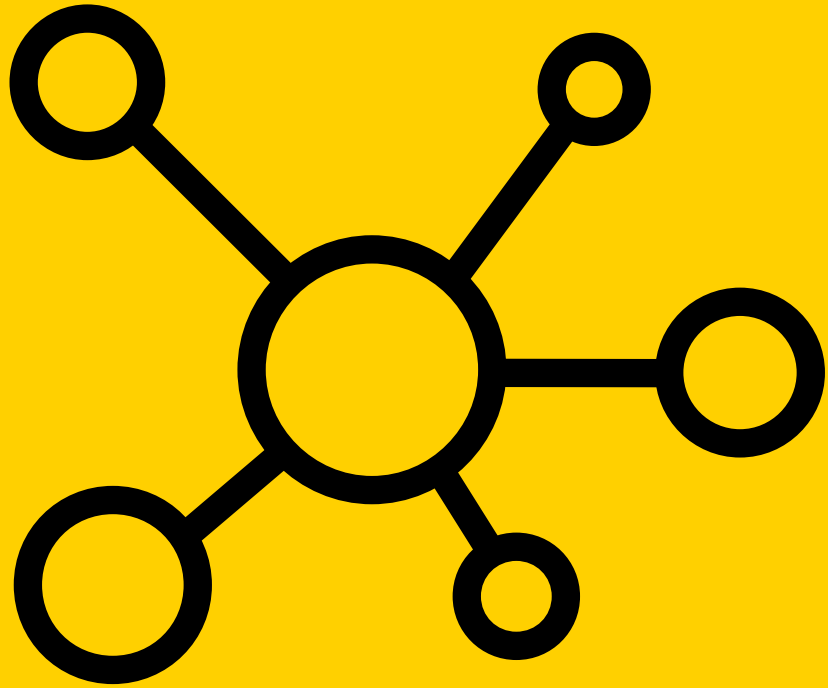
Relationship level

Having a good reputation as a **reliable partner.**
Deepening our customer relationships and integration with suppliers and forming new partnerships in cross-industry networks in our digitalization work.



Product level

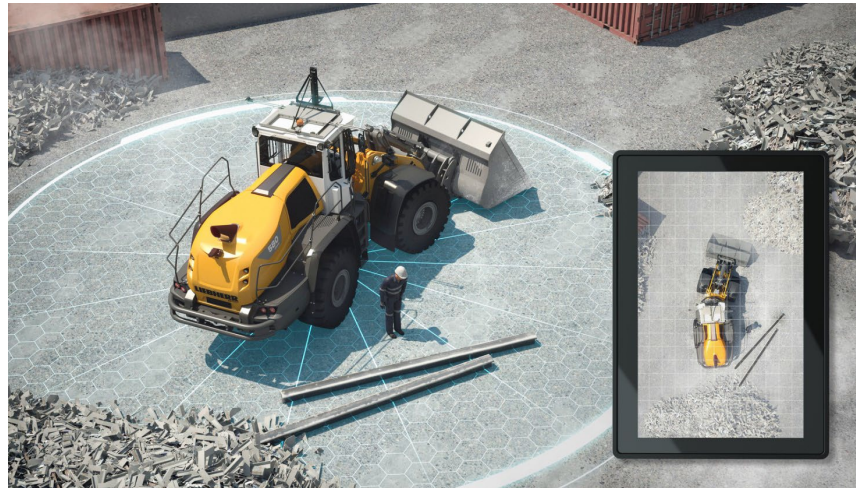
Developing **smart products** that can be optimally **integrated into our customers and partners' eco-systems** and business processes.



Liebherr Group

Smart Products

- Advanced assistance systems
- Remote teleoperation
- Autonomous operation



LIEBHERR

Digital Development Center

Information tour 2023
International construction
trade press

Liebherr-Digital Development Center
GmbH

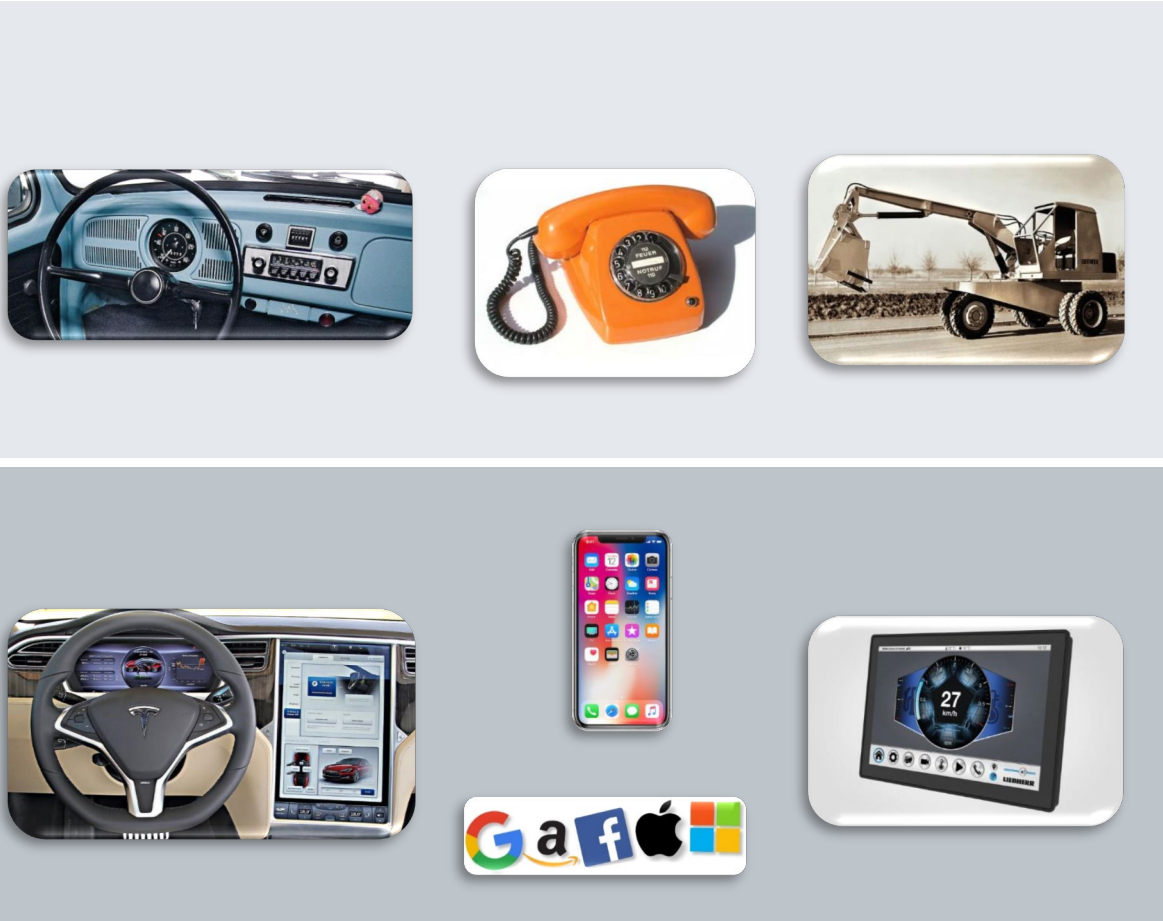


Liebherr-Digital Development Center (LDC)

- Established in July 2020
- Leads holistic digital development and support transformation across all divisions in the Group
- A place where ideas and digital solutions for the future are created



Software



“**Digitalization** and **connectivity** are fundamentally changing our world. **Software** has become the **central design element** that determines how people will experience their environment.”



Liebherr-Digital Development Center

Purpose and responsibilities

Purpose

- Improve the speed and efficiency of digital development in the Liebherr Group.
- Support digital technology standardization.
- Improve the ability to attract and retain talent in the area of digital development.

Targets

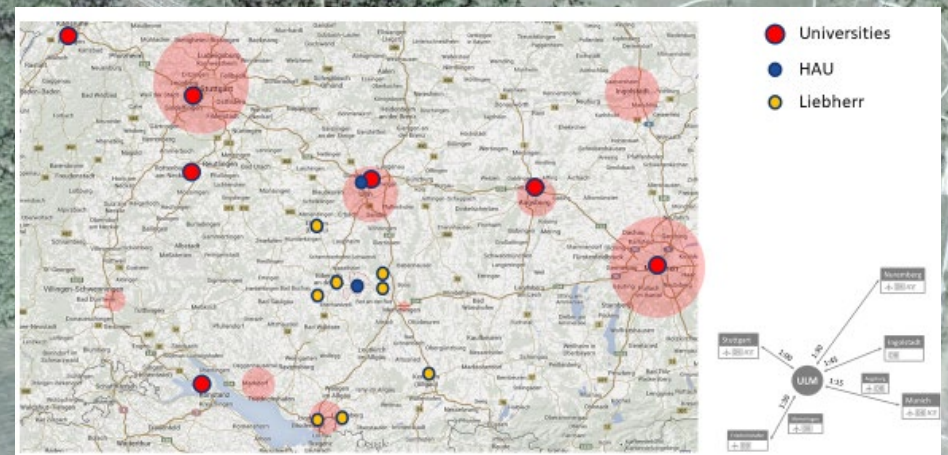
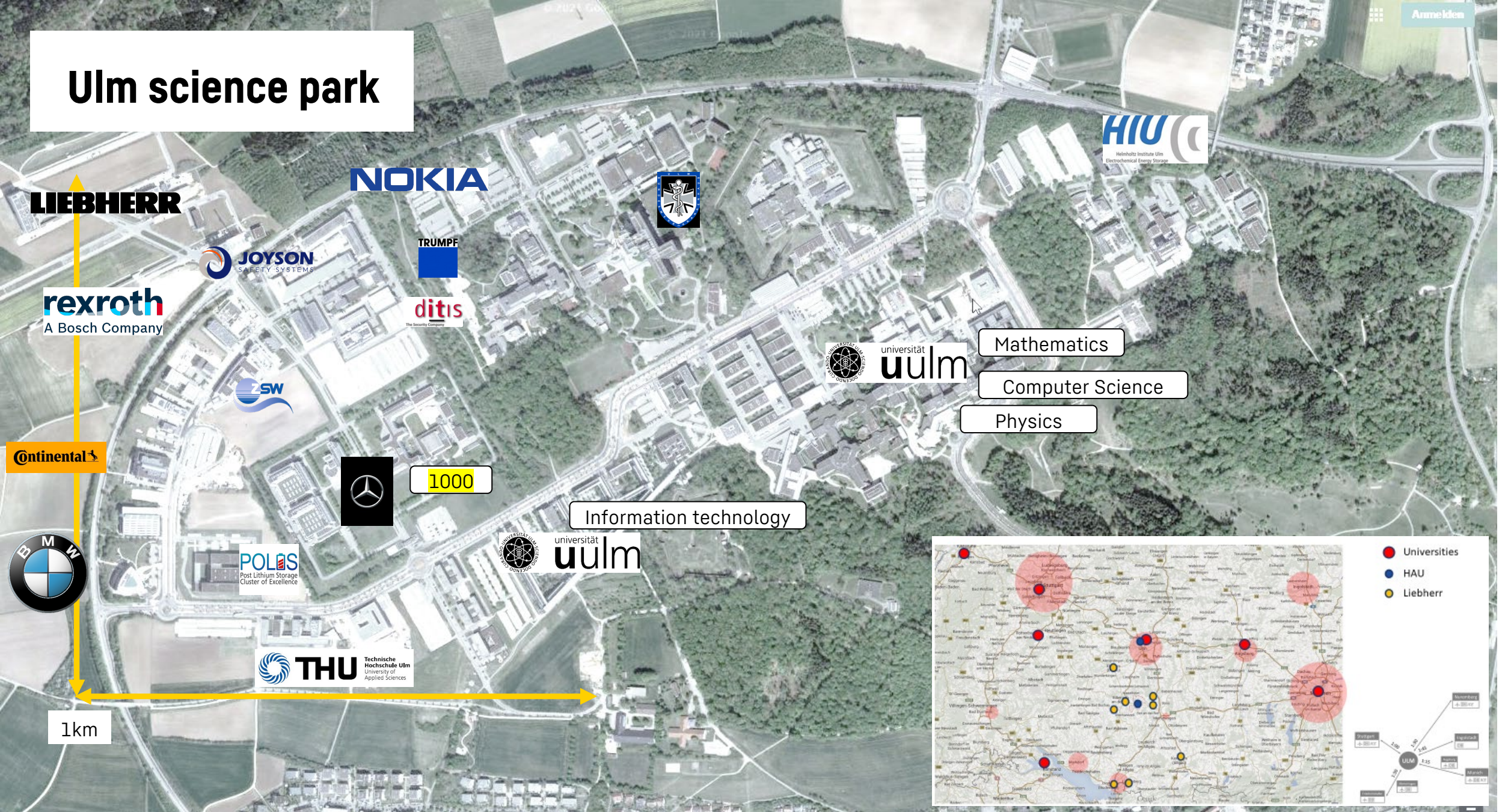
- Establish a transparent and competitive cost structure with the oversight of the digital governance board
- Establish an organization that can serve all divisions.
- Ensure the availability of relevant infrastructure to develop and operate the digital products and services.

Team

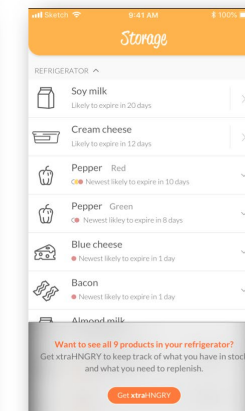
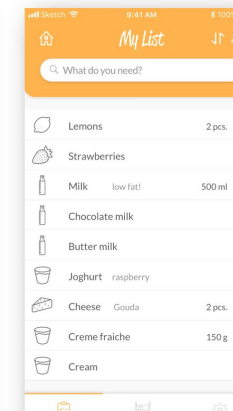
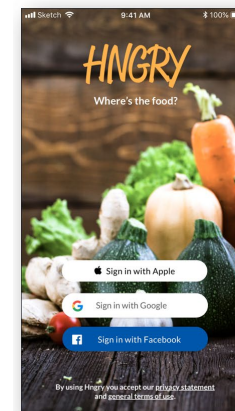
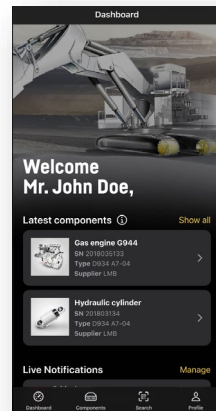
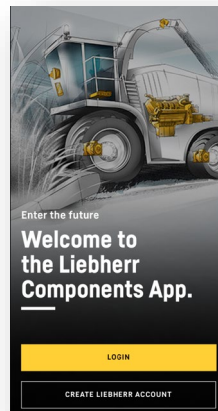
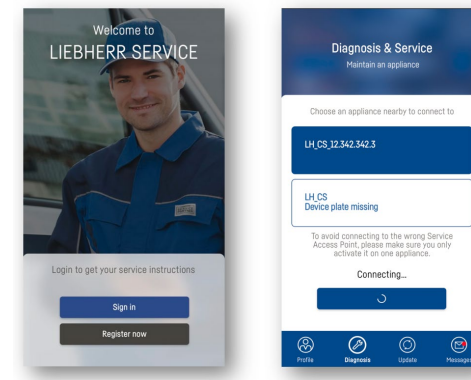
- software experts and managers with 10-25 years experience across various industries
- we have the skills, the determination, and the vision to achieve greatness
- collective aspiration to compete at a high level in the field of digitalisation

```
printDEVJobs(wantsANewChallenge: Boolean, lovesSoftware: Boolean) {  
  val opportunities = listOf(  
    "Mobile APP/UX",  
    "Cloud Applications",  
    "IoT/Embedded",  
    "Artificial Intelligence")  
  if (wantsANewChallenge && lovesSoftware) {  
    println("Join us at Liebherr to work with: ")  
    println(opportunities.joinToString(" "))  
  }  
}
```

Ulm science park



Current projects



The future of LDC

- double down on collaborative working across the Group
- ensure knowledge is shared across the Group
- Fields of Cloud and AI are enablers
- Our role: support the divisions in embracing AI tools and digital solutions in the most effective way



**We are already working
now on the solutions of
tomorrow**

**Thank
you!**
