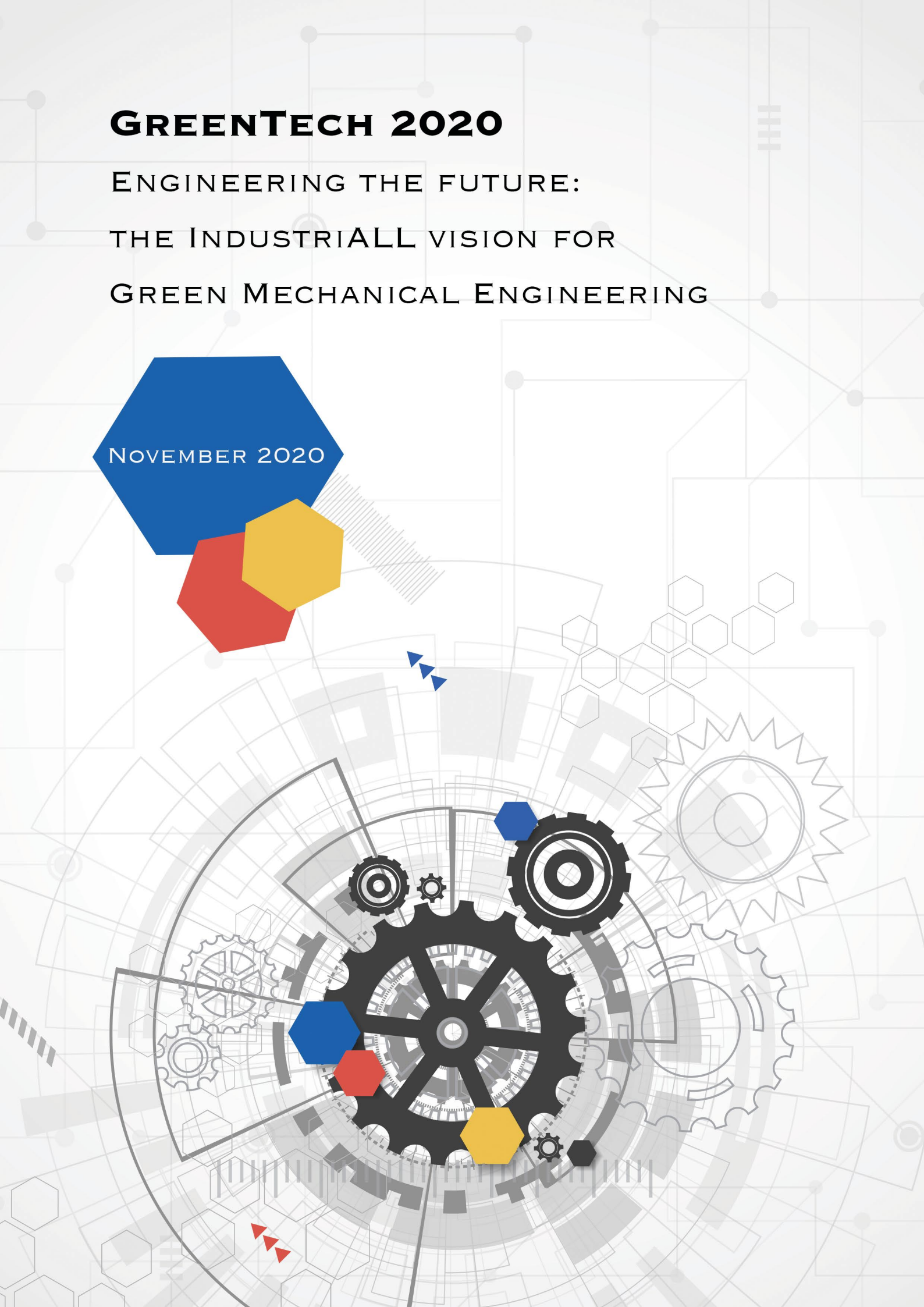


GREENTECH 2020

ENGINEERING THE FUTURE:
THE INDUSTRIAL VISION FOR
GREEN MECHANICAL ENGINEERING

NOVEMBER 2020



Preface

Our world faces a perfect storm of crises: a crippling global pandemic, threats to democracy, imminent climate change, and technological shifts in production that threaten to decimate jobs. These forces could overwhelm and destroy us, or be the crucible that forges a better world. Our response now will determine the legacy our children will inherit.

This storm cuts to the core of our sector: we are deeply affected, and deeply implicated, in the crisis as well as in the solutions.

Green technology - **GreenTech** - is any technology that promotes one or more of the 17 Sustainable Development Goals adopted by the UN summit in 2015, specifically clean water and sanitation, affordable and clean energy, green industry, innovation and infrastructure, responsible consumption and production and climate action.

Mechanical Engineering must be part of the solution. GreenTech is one of the major drivers of our sector worldwide. This is our chance to engineer a better future.

At IndustriALL Global Union's first workshop on Mechanical Engineering and GreenTech in Gothenburg, Sweden in December 2018, Rainer Wimmer, President of Austrian trade union PRO-GE and co-chair of our sector, said:

“As mechanical engineers and trade unionists, technology is the most important contribution we can make to mitigating climate change. We need hydro, we need wind, we need solar, we need biomass. And we need strong unions to ensure that energy transition is just.”

The Covid-19 pandemic has added new urgency to these words: we are in the midst of a global health crisis, and its impact on the economy has overshadowed other challenges. Mechanical Engineering, an export-oriented industrial branch, has been hard hit by the pandemic.


To build back better after Covid-19, we need investment in innovative technologies: to support a shift to sustainable industrial recovery, to tackle climate change and secure the survival of our planet.

We see visions of a shiny new reality, but there is a lot at stake - for workers, trade unions and society. GreenTech involves digitization as part of the shift to Industry 4.0, with new and different skills required, and less manual work. GreenTech is not social by default: without strong trade unions, the profits go solely to the companies, mostly multinational corporations (MNCs).

Green jobs will not necessarily be good jobs unless we fight for them to be. Without us, GreenTech is blind to social justice, gender equality, education that meets skills needs, or fair working conditions and living wages. A green world without social justice is possible, where the rich become richer and the poor become poorer. As the latest crisis has shown in the most dramatic way, social justice and democracy are at stake. As workers' representatives, we have a vital role in steering policy to ensure that good industrial jobs are created, transformed and maintained.

GreenTech and Mechanical Engineering

This vision must be our compass to guide our efforts. But GreenTech goes beyond the production and maintenance of energy generating systems and installations. Mechanical Engineering provides the tools, machinery and expertise to fulfil the green turnaround to improve regenerative products, with cradle-to-cradle design. Up to 80 per cent of a product's environmental impact is determined at the design phase. Mechanical Engineering, in combination with digitalization, enables a change from the old linear pattern of take-make-use-dispose to real cradle-to-cradle production, with recycling, re-use and re-manufacture for the circular economy of the future.

 **GreenTech in Mechanical Engineering must be part of the solution to the climate crisis and recovery after the pandemic - not only in energy generation systems, but also in cradle-to-cradle design and the development of products, tools and machinery towards a circular economy.**


We need trade unions - opportunities and challenges

Mechanical Engineering is a changing sector in a changing economy and business environment. Both small and medium-sized enterprises and MNCs are focusing more and more on environmental and resource-saving design and production systems. In combination with digitalization, the working environment and working conditions of mechanical engineers is changing dramatically.

Blue-collar work is transforming and becoming a merged form of blue- and white-collar employment, combining the design, manufacture, maintenance and re-engineering tools, equipment and machinery. The worker as operator is surrounded and supported by artificial intelligence, robots and the internet, and has to fulfil numerous requirements.

The knowledge of how to interact with these new digital co-workers and with customers is a crucial new skill, for both employees and companies. The road towards a circular economy needs flexible and highly skilled workers who are able to merge different jobs into one. This is both a challenge and an opportunity for workers and their trade unions.

Traditional craftsmanship will not disappear: it will remain an essential element of a more flexible workforce in a digitized environment that contributes to circular economy. These changes will also affect trade unions and their approach. If trade unions were traditionally strong in blue collar crafts and trades, we will have to adapt to the new working reality of our current and future members.

 **IndustriALL and its affiliates must adapt to the changes in the workplace. We have to strive for new and better ideas to win these new workers and open their minds to collective action. Organizing and recruiting is key. This must meet the evolving needs of these new workers. We cannot afford a paternalistic approach: we must be ready to listen and to open our ranks to men and women with changing needs, to make them part of our collective struggle to protect and advance their working and living conditions.**

Conclusions

GreenTech is not just fashionable branding of normal change. There are existential threats facing humankind in the 21st century. The climate crisis is the most acute. GreenTech, with Mechanical Engineering, the Energy sector and Electronics coming together to engineer solutions, will be key to managing change.

To defend the working and living conditions of men and women in the sector, trade unions must be part of the solution. IndustriALL Global Union and its affiliates need to be alert and present so that green jobs become good jobs with appropriate working and living conditions.

To this end the participants at this IndustriALL Global Union GreenTech virtual workshop resolve to:

- facilitate exchange between affected affiliates in the sector over new trends, especially focusing on GreenTech, digitization and related developments
- organize training for trade union organizers and works councils to develop new methods, strategies and services to approach and recruit new employees at green workplaces
- involve especially young workers and women in our work
- intensify our efforts to increase trade union power in the affected sectors through organizing and recruiting

