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Dynamics of Long-Life Assets

From Technology Adaptation to Upgrading the Business Model

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Foreword

The recent global financial crisis has underlined the importance of the real economy and a strong industry with industrial activities integrated in rich and complex value chains, linking multinationals to small or medium enterprises across sectors and countries. Economies with a solid manufacturing base focusing on high-tech or medium-tech activities and with integrated value chains have proved to be more resilient to the economic downturn and better placed to achieve higher growth in times of rebound.

A strong industrial base is of key importance for Europe's economic competitiveness. With scarce natural and energy resources and ambitious social and environmental goals, EU companies cannot compete on low price and low quality products. They must turn to innovation, productivity, resource-efficiency and create high value-added in order to compete in global markets. Europe's comparative advantage in the world economy lies and will continue to lie in high value-added goods and services. And for this, it will have to rely on innovation and technological advancement as its main source of competitiveness.

Use-it-Wisely, a EUR 8.6 million industrial project supported under the European Commission's Seventh Research and Innovation Framework Programme over the last 39 months, has attempted to achieve this. It has investigated tools and methodologies to help industries adapt to an environment characterised by constant change. The approach has built on the idea of a continuous, incremental upgrade process based on close collaboration between involved actors throughout the product life cycle. Managing this process requires a holistic understanding of the causal effects of various factors to support strategic decision making regarding technology upgrades, service development and introduction of novel business models. Solutions based on virtual and augmented realty and 3D scanning technologies were applied.

The tools and models developed in this project were implemented and tested in six different industries. They comprised service inspection of power turbines, modular upgrades of mobile rock crushers, space applications engineering,

production systems in truck production, marine vessel data management, and office furniture supporting a radical, circular economy approach.

The project's diversity has proved to be its particular strength: interacting with seemingly unrelated fields of industry has contributed to an unprecedented transfer of knowledge, experience and technological know-how amongst the involved researchers and industrial practitioners, providing fertile ground for new ideas and solutions.

The European Commission is happy with this project's outcomes and as the official responsible for the monitoring of this project's activities I recommend the study of the material contained in this book.

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