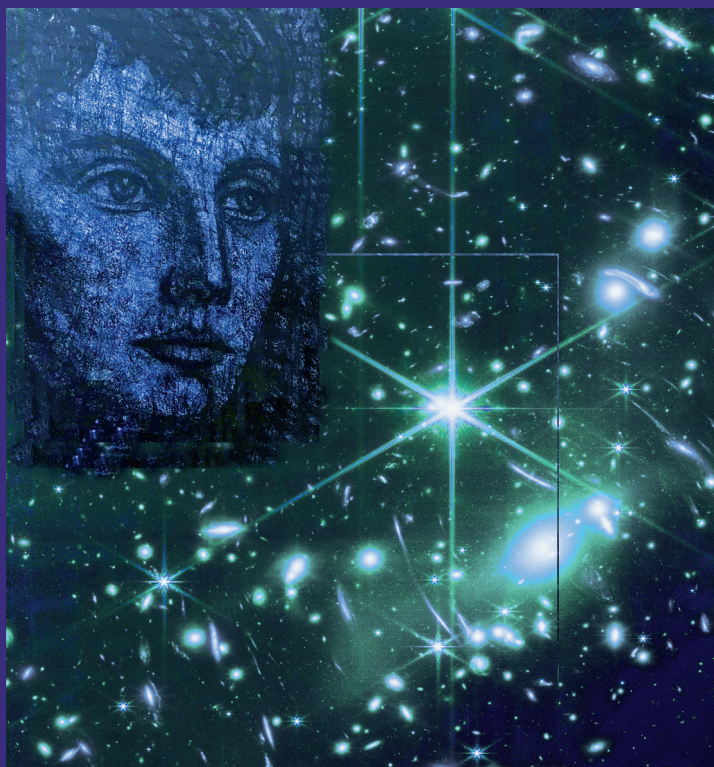


Visions

for Pulp and Paper Industry



Pekka Niku

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This book is dedicated to my wife Kaija

Pekka Niku

VISIONS FOR PULP AND PAPER INDUSTRY

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Introduction

*"The only constant in life is change."
Heraclitus*

In 105 Chinese Tsai Lun invented paper, which internet started to crush in the 1990s. Today's paper industry resembles "Wounded Angel", like in the famous Finnish painting by Hugo Simberg.

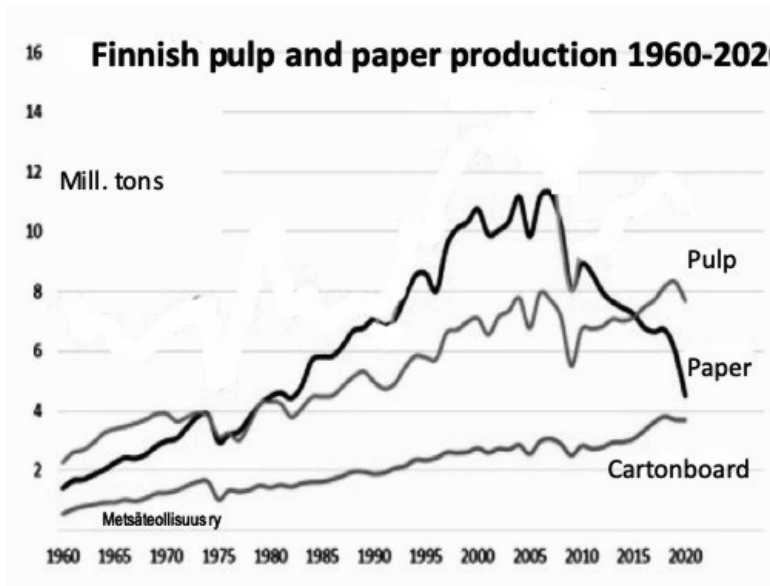


Wounded Angel by Hugo Simberg

The key topics discussed in this book are: what are the megatrends, specific trends and weak signals affecting the pulp and paper industry? How is the operating environment of global pulp and paper industry changing? What is happening in plastic-to-paper trend? What are the opportunities and risks of the industry in the future? The industry needs

visions, scenarios, resilience and strategic roadmap on how to navigate into the uncertain future.

The following chart illustrates the impact of internet on the Finnish paper industry. Especially graphic papers started to decline in 2006, whereas cartonboards and packaging grades (and tissue) in general have grown. Pulp is doing quite well, too.



After Helsinki Business School I worked over 40 years in the forest industry. First in the marketing departments of Ensi-Gutzeit (now Stora Enso) and United Paper mills, and then as a consultant in Pöyry and Ekono in Finland and the USA. I have travelled in over 100 countries and prepared over 300 feasibility and strategic studies, due diligence work, bank reports, etc. For this reason I have been in an excellent positions to follow up the development and trends in the industry and

markets. For the last seven years I have worked as an independent consultant for my own company.

The world is changing faster than ever before. We need gladiators, innovators, and re-evaluation of all things to survive and grow in the age of great uncertainty. Visions of the future are needed, and they need to be revisited continuously in the strategy and scenario building processes. There is nothing wrong in copying ideas from the world, if they can be further processed to suit companies' own needs. Uncertainties can be turned into opportunities.

Scenario building process based on visions helps companies identifying:

- Risks and opportunities
- Necessary changes
- Required shifts in strategy

Covid-19 and recent changes (in 2022) in energy prices, inflation, exchange rates and tensions in geopolitics are good examples on how fast things can change in the global operating environment. Investments in pulp and paper industries are capital intensive, and the economic life time of the projects is typically over 15 years. For this reason companies must have a long term planning horizon, resilience and a well prepared strategic roadmap.

There has been a lot going on in the forest industry in five decades - structural change towards larger machines and units, internationalization, declining demand for graphic papers due to the internet. Industry restructuring and consolidation has increased rapidly. This has led to closures of the paper machines and rebuilding some of the graphical paper machines to packaging grades. Recently, Industry 4.0 (Internet of Things), robotics, and 3D printing have been growth areas. Big data, artificial intelligence (AI), augmented reality and remote machine maintenance have found their way into assembly

shops and machine fleets. Sustainability, productivity and cost differentiation are of vital importance as in every global industry. Optimization of end-to-end value chain (from fiber to end product) by digital analytics can bring new opportunities for the industry. This has been interesting development to follow. It is clear that, at the same time, a large number of jobs, as we know them now, will be lost.

As the previous picture shows, the forest industry is cyclical in terms of production volumes. It is even more sensitive to prices. It is typical that investment decisions are made in an economic upturn at a time of high prices, and then the new capacity will start up in some two years in recession, in overcapacity situation and low prices. If profitability calculations have been made with the peak prices, then there will be problems. This pattern has been repeated for over 40 years.

Companies tend to focus on the quarterly results and forget the long term.

Scenario building – like thinking in general – is often considered as difficult, heavy and time consuming process, which requires a large number of participants to reach consensus. An opposite approach could be more fruitful. Discussions with a few selected industry experts and independent thinkers can lead to better results faster. Speed is of essence in today's turbulent world.

Meta-thinking, that is, thinking about thinking, is required in scenario building. Bad thinking produces bad decisions and disastrous outcomes, and good thinking leads to better decisions and desirable outcomes.

The results of the scenarios are not stone carved – every company needs to make their own scenarios based on their position and targets in the business; and revisit them frequently. "Rowing harder doesn't help, if the boat is headed in the wrong direction" (Kenichi Ohmae).

In this context, I would like to thank in particular my colleagues, partners and customers who have made the background for these visions possible. Special thanks to my wife Kaija for her continued support and patience. This book is available also as e-book from Amazon and other publishers.

Muurame, Finland, November 2022



Pekka Niku

www.pniku.com



Other recent books: "Memoirs of a Forest Industry Consultant" available in English and Finnish from Amazon and other e-book publishers.

We are living in turbulent times. The industry needs visions, resilience and strategic scenarios on how to navigate into the uncertain future. Uncertainties can be turned into opportunities. The key topics discussed in this book are: what are the mega trends, specific trends and weak signals affecting the global pulp and paper industry? How is the operating environment changing? What is happening to the plastic to paper trend? What are the opportunities and risks of the future? The book is based on Pekka Niku's over 40 years' practical experience as a forest industry consultant. Time span of the visions is up to 2035, and beyond.

