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Dear Readers,

as in the last Quarterly, the *Ideenwerkstatt* (Dream Factory) Team at the ICV (see imprint) is currently grappling with the topic of **"Staying Ahead of Boom and Crisis – Designing Controlling to Withstand Volatility".** Over the past few months we have used the draft concept we had previously presented as the basis for gathering first scientific insights and for carrying out expert interviews on how to deal with the increasing volatility of today's business world.

At this very moment, the findings of these efforts are being collated in our third "Dream Car Report". We are confident we will be able to present them to you in the coming Spring.

Today, however, we would like to use the current edition of the *Ideenwerkstatt* Quarterly to give you some insights into our work. Manfred Remmel, who was the ICV President for many years, presents his thoughts on internal volatility from the special viewpoint of the automotive industry. In comparison to the volatility induced by external effects, internal volatility is a subject far to often ignored or forgotten.

Additionally, we shed light on one aspect of a possible reaction to increased volatility: The cost assessment of versatile production systems.

We wish you interesting and informative reading.

Yours,

Péter Horváth and Uwe Michel

Green Controlling Prize | Hansgrohe wins 2012 award

Hansgrohe SE has won the Green Controlling Prize 2012 of the Péter Horváth Foundation for its concept "Green Controlling - Green Profit - Green Future". The prize, which comes with a €10,000 endowment, stems from work of the Dream Factory on "Green Controlling" and is awarded this year for the second time. It recognizes innovative and effective "green" controlling solutions aimed at designing and implementing ecologically based strategies, programs and projects.

At the award ceremony on November 29, 2012, at the 10th Controlling Competence Stuttgart congress, the founder of the Foundation, Prof. Dr. Dr. h.c. mult. Péter Horváth, explained the main reasons which convinced the jury that Hansgrohe SE's concept was worthy of the prize: First, the initiative for the controlling solution must mainly be the work of controllers themselves and form a complete system which manages all environmental activities and is aligned with the company's overall corporate strategy. Of necessity, this includes the definition of clear KPIs. Second, the concept must also be implemented, maintained and continuously developed. According to Horváth, these requirements were satisfied by Hansgrohe SE "outstandingly".

Siegfried Gänßlen (Chairman of the Board of Hansgrohe SE), Dr. Carsten Tessmer (Press Secretary) and Daniel Ette (Controlling) were delighted at winning the award, saying that at Hansgrohe SE the issue of sustainability was at least as important as innovative strength. According to Gänßlen, today more than 25 percent of the company's total net revenue is already generated from water- and energy-efficient products.

"Sustainability is not seen as a cost at Hansgrohe but as an opportunity to remain viable," said Gänßlen. He regarded Green Controlling as a "business partner" which played an important role and would become even more important in the future.

Internal Volatility | Examples from the automotive industry

Alongside the external volatility of a company's environment, corporate management should not neglect the volatility which stems from internal company aspects. Manfred Remmel, member of the core team of the *Ideenwerkstatt* and former ICV President has gathered examples of this from the automotive industry.

Volatility is not always volatility. Different types of volatility influence companies on very different levels, generally with different effects and possibilities to react. Figure 1 shows an overview of the possible types and their associated conditions, according to the *Ideenwerkstatt*. We have to differentiate between internal and external causes as the sources of volatility.

"Internal volatility", i.e. where the source of the volatility lies within the company, should describe the degree and frequency of fluctuation of relevant internal company parameters as part of the real economic process. The ability to predict and influence this volatility and design measures to deal with it can vary considerably from case to case. In the following, we would like to present some examples from the automotive industry of causes of internally induced volatility.

Predictability	secure		risk	uncertain
Source	company-intern		company-extern	
Controllability	none		little	intense
Level of impact	economy	industry	company	business units
Level of action	real economy		financial economy	
Type of action	"bounce" (Changeability/ flexibility)		"absorbe" (Resilience)	"control"

Figure 1: Categories for classifying volatility and the possible states.

The development of the automotive markets and technological development, especially that of drive trains, are very difficult to predict. Errors in judgement, e.g. in the importance of combustion engines in comparison to hybrid and electric engines, can be massive drivers of volatility.

Quality problems in production lead to complex and costly recalls with considerable impact upon capacity. Not only is it not possible to predict these, repetitions lead to image problems and falling demand.

A product lifecycle strategy which doesn't fit market patterns or unforeseen delays in new product development due to technical problems increase the risk that what you offer is no longer what the customer wants. This leads to deviations from planned market targets.

Delivery bottlenecks from upstream suppliers, for example due to production problems arising from higher reject rates or bottlenecks in raw materials, can cause volatility in production. Production management is interrupted and you can no longer meet the production schedule.

Each of the causes used as examples here can lead to considerable financial losses in the companies affected. For obvious reasons, companies only provide very limited information on both the real costs and the consequential costs, e.g. in the form of lost profits, but in many cases the costs arising from internal volatility are many times higher than those resulting from external volatility.

The extent to which we can influence internal volatility depends on our ability to generate versatility, i.e. the ability to change, in the company's strategy, business model, processes and structures and to implement resilience management.

The Price of Copper: Business Cycle Indicator for the Economy | A volatile raw material

Among investors on the financial markets, copper is seen as an economic indicator. As it is so important in both industry as a conductor of heat and electricity and in construction, the price of copper rises regularly when the economy grows and falls when growth stalls.

Like the price of most industrial metals, the price of copper is extremely volatile as shown in Figure 2. Price fluctuations of over 15 percent in only four weeks are not uncommon. For those companies which need copper for one reason or another, this is a serious challenge much the same as the impact of kerosene price fluctuations for companies in the aviation industry.

According to many bank analysts, as long as the economic boom in China continues we can expect price increases in the first half of 2013 as a result of copper shortages. Increased production should, however, turn this around towards the second half of the year. This, in turn though, will lead to excess supply resulting in a sharp downturn in prices. The volatility of copper prices will remain high.

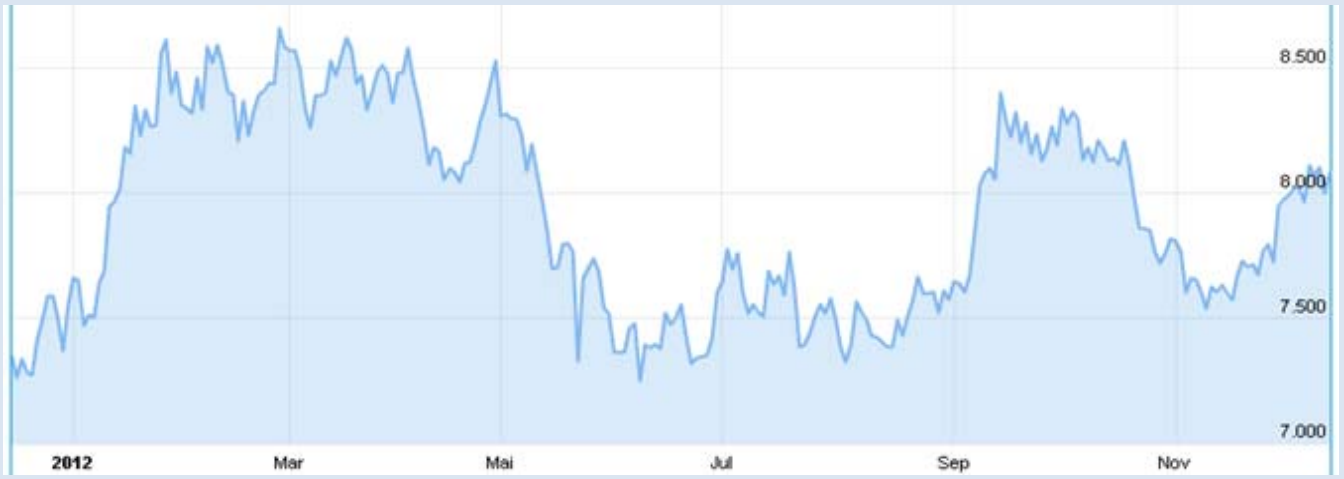

Figure 2: Development of the Price for Copper in the last twelve month.

Source: Deutsche Bank

Getting a Grip on Volatility | Cost assessment of versatile production systems

Versatility in production systems is an important competitive advantage in volatile environments. But versatility also always goes hand in hand with costs which have to be included when assessing economic benefits.

Simulation-based cost and liquidity management of versatile production systems

Manufacturing companies operate increasingly in a turbulent environment (see Westkämper/Zahn 2009). Dynamic disruptive factors such as the internationalization of markets, fluctuating demand for goods or permanent changes in customer behavior often have a direct impact upon these companies. These externally induced volatilities – in the form of change drivers – create pressure to change. In order to be able to react swiftly to this pressure, we need to ensure the whole order handling process, from order processing and construction through to assembly, is versatile. Naturally, this necessity is accompanied by the question of which costs are associated with making a company able to adapt to changes (versatile). The objective of the state-funded collaborative research project WPSlive is to develop a simulation-based cost and liquidity management system and thereby provide support when deciding between versatile alternatives which might potentially compete with one another or indeed be mutually exclusive

Identifying Impacts and Developing Design Options

The ability to react to a change requires you to have an understanding of the impacts of that change upon your company and its environment. Based upon the impacts, you can specify the areas affected and prepare them for change. This preparation occurs through the medium of so-called *change facilitators* (e.g. versatile assembly layout due to the possibility of additional assembly stations). In order to ensure the production system is able to react appropriately to the change drivers (e.g. fluctuating order entries), it must have design options which were created internally and which facilitate change (cf. Heinen et al. 2008, p. 26 f.). The alternative forms of the change facilitators are known as *change facilitator alternatives* (CF alternatives).

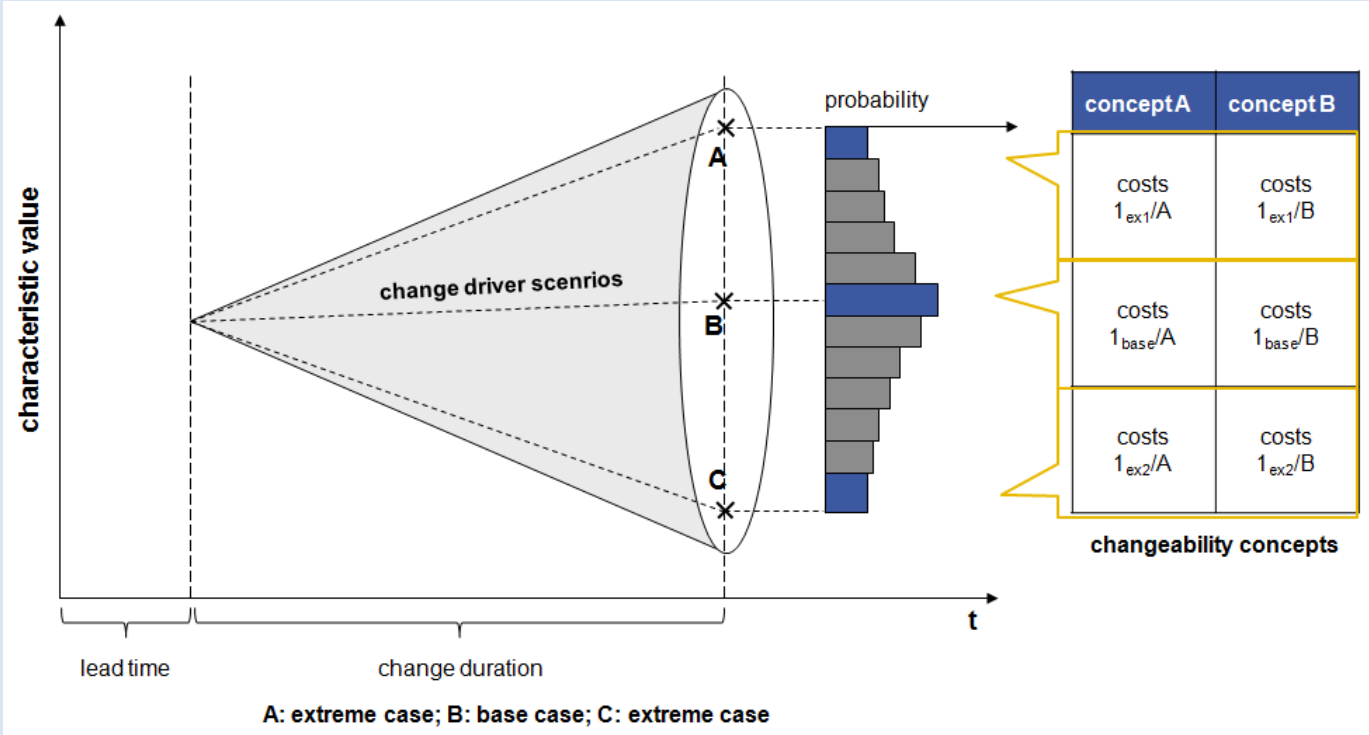

Figure 3: Concept of Cost-Simulation

Keeping Costs under Control - Versatile production systems need cost management

The question of economic benefit is a k ey aspect when it comes to versatile corporate orientation. The answer lies in assessing the costs of the design options. The change costs involved across the lifecycle can be broken down into the following cost types (cf. Heger 2005, p. 131 f.):

- Change object costs (one-time costs to set up the change option).
- Direct change process costs (one-time costs to exercise the change option).
- Indirect change process costs (costs arising once the change takes place).

In order to assess the benefits of change facilitator alternatives should that change occur and to project those costs into the future, they are confronted with different change driver scenarios (CD scenarios), i.e. with differing futures for the change driver (figure 3). The goal is to prove the structural economic benefit of different alternatives (with an implicit comparison to the alternative of doing nothing) within varying future scenarios.

This article was written as part of the research project "WPSlive – A versatile socio-technical production system". This project is funded by the German Federal Ministry of Education and Research (BMBF) as part of the framework concept "Research for the production of tomorrow" and is supervised by the Project Management Agency Karlsruhe (PTKA). The article contains extracts from the statement of intent by IPRI - International Performance Research Institute gGmbH in the collaborative project WPSlive.

References

Westkämper, E., Zahn, E. (Eds.), Wandlungsfähige Produktionsunternehmen - Das Stuttgarter Unternehmensmodell, Berlin/Heidelberg 2009.

Heinen, T., Rimpau, C., Wörn, A., Wandlungsfähigkeit als Ziel der Produktionssystemgestaltung, in: Nyhuis/Reinhart/Abele (Eds.), Wandlungsfähige Produktionssysteme, Heute die Industrie von morgen gestalten, pp.19-33.

Heger, C. L., Kosten der Wandlungsfähigkeit in der Fabrikplanung, in: Wiendahl/Nofen/Klußmann/Breitenbach (Eds.), Planung modularer Fabriken, Vorgehen und Beispiele aus der Praxis, München/Wien 2005, pp.129-140.

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