



Summary

Villigen, 9th March 2017

Notes from the breakout sessions

Round 1: Best and worst process innovations

The introduction of computational chemistry in the drug discovery process, the use of robotics and the introduction of standard operations procedures (SOPs) were given as specific examples of successful process innovations from professional experience. Particular attention was paid to communication technologies allowing companies to do business on an international level without leaving the country and enabling knowledge sharing.


In general, the majority saw the implementation of new technologies as a positive experience in process innovation, even though at the very beginning it could slow down the production (adaptation / learning period). In terms of negative experience, participants named some administrative process innovations such as open space shared desk organization (the reason why might be the type of department where it was introduced, not convenient for R&D), the wrong KPIs or wrong best practices, as well as too detailed processes and bureaucratically driven processes. In conclusion, administration and project management should be seen as an enabling and regulatory “technology”.

Besides big, company-level process innovation, participants discussed the minor personal process innovations that facilitate their everyday tasks: use of smartphones, remote work, communication technologies. However, each of the above-mentioned points can also have a negative effect on personal productivity: misuse of the smartphone, difficulty getting one’s mind off work and replacement of person-to-person interaction. One of the brightest examples was email “ping-pong” replacing the phone call. One of the participants even shared his experience at work: if, within one hour, two team members exchange more than 10 emails, the system notifies them and suggests setting up a conf-call. (Darya Bachevskaya)

For further reading: <http://cmmiinstitute.com/capability-maturity-model-integration>

Round 2: Competency management

Companies deploy web-based knowledge management systems, for example, to define and describe technologies and related competencies with different competence levels and career paths. There is still a need to implement additional methods and tools to find the right competencies and people when required, for example, in a Quality Handbook. But networking and getting to know people and their competencies, in



particular from other functions, was considered the best practical approach. Some companies successfully run social events like Friday Beers to facilitate this networking.

Cross-functional work on projects and processes is becoming more and more important, and it is very important to be able to identify the right people and competencies as part of a resource management system. Also for academic institutions like the PSI, cross-proposal work and competence management development are key. The fact that it takes ten years to build up the right competencies for a professor was quoted as an example, and it is important to focus on the right competencies from the beginning.

The Chief Data Officer (CDO) was mentioned as a new competence which requires innovation in data analysis, very relevant in today's environment. On a lighter note, the Chief Fun Officer was mentioned as a typical role in start-ups.

Driven by digitalization, the like and cooperation of the IT function and the end user seems to be challenging in many companies. But one suggestion to solve this was to bring IT competence and the end user together on the same project team.

In any case, the outsourcing of skills and competencies should only take place for skills we fully understand and that are not core to the business. (Andreas Rülke)


For further reading: <http://www.swissinstitute.ch/methoden-tools/methodik-system-engineering.html>

Round 3: Business model innovation

The question was not about business model innovation (BMI) at all, but about the possibility to initiate it in a structured manner. What often starts as a well-structured initiative, based on thorough analysis and backed by strategic thinking, for some reason results in arbitrary changes or – in a best-case scenario – minor improvements.

This brings us to the triggers for BMI, and consequently to the underlying metrics. Not being met two times in a row is, for one, a clear sign to review the actual business model and potentially initiate a change. All in all, metrics (or KPIs) seem to be a highly problematic field, since the message of a well-defined KPI can vary significantly depending on the recipient's perspective. This becomes more likely the bigger an organization is.

A general notion: small companies outperform the bigger ones. But not always, as stated by one who performed three business model innovations in one company in only seven years, with the company doing better year after year. And by the way, there have been some magnificent BMIs in the past (we only need to mention Nokia, who changed from a paper producer to a rubber maker to a leading telco ending up as a network provider and software provider for navigations systems, or IBM, or Apple, or Alstrom...)



But what value do these well-known stories have for the normal small or mid-sized company that has no strategy department or funds for external consulting at hand? How can you guide BMI in the right direction when it is happening all the time and everywhere? Job rotation can be a lever. But the rotation must be cross functional to deliver value, which is at least putting internal functions in contact with the outside world. Reality is, by the way, the most important trigger for BMI. And then it's all about execution. (Nils Gebhardt)

For further reading: <https://strategyzer.com/canvas/business-model-canvas>

Round 4: Digitalization and Industry 4.0

Digitalization and Industry 4.0 are topics that concern all participants despite their background as it has an impact on all types of processes – from a pure manufacturing line to administration.

The possibility to automate and control certain tasks represents a huge gain in speed and flexibility. It allows us to streamline processes, automate boring tasks, and remove waste. It also offers a wide range of new possibilities either for more standardization (e.g. SAP) or for more customization (e.g. Kärcher).

Digitalization and Industry 4.0 are happening fast, and every structure must adapt. However, it is not so easy to change: on the one hand, larger established companies might have resources, but often lack agility. Smaller structures, on the other hand, might be more agile, but lack resources... Opportunities are visible, but there is still a long way to go, a lot to learn and to develop in all types of processes.

However, despite the obvious advantages, it is also a double-sided sword. Some important threats have been identified and discussed in all the groups, including: data safety (cloud location + data transfer), data mining (privacy), threat to jobs (Artificial Intelligence), etc. One threat discussed was the fact that digitalization is a threat to innovation. With more algorithms being used to funnel choices, it might limit diversity, narrow chances for random find, and eventually kill creativity (e.g. Google search engine). Great thought: innovations killing innovation...

Good or bad, it seems that digitalization and Industry 4.0 are happening and coming out at a very fast pace. But is progress in all its forms always good? Should we keep pushing to see what is possible to do, or should we do what is needed?

Since the invention of printing with Gutenberg or, still later, the industrial revolution, it seems that we have always been both concerned and amazed regarding the possible outcome of process innovation. The big difference might be ethical: despite the power of machines, the human factor must be taken in account. (Guillaume Jung)

For further reading: <https://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf>