Lean Innovation – Recommendations for a Successful Implementation

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The success of many companies is closely related to their ability to innovate. Apple, Amazon or Phonak are just a few companies that right away come to mind as successful innovators. Yet, to date, there is no correlation between investments in R&D activities and company success across industries when comparing operative results (Fig. 1). This understanding brings to mind the question of how investments in innovation can be successfully managed, and what factors are needed to implement a successful Lean Innovation strategy.

Lean Innovation is not just a topic for innovation leaders that can often expend large amounts of their budgets on R&D. Lean Innovation furthermore enables all companies to utilize their current resources with focus. Such a focus increases the efficiency of developments, and secures and improves the relative competitiveness of the company. Our experience shows that four basic prerequisites should be met in order to realize a significant increase in the productivity of R&D activities.

1. The Basic Understanding – Create Customer Value

The implementation of Lean Innovation and its methods can be understood as a holistic approach. The overall goal lies in creating a lean and innovative culture, in order to ensure the efficiency of innovation and competitiveness within the global market place. The foundation for above-average innovation is the concentration of development resources on products and services

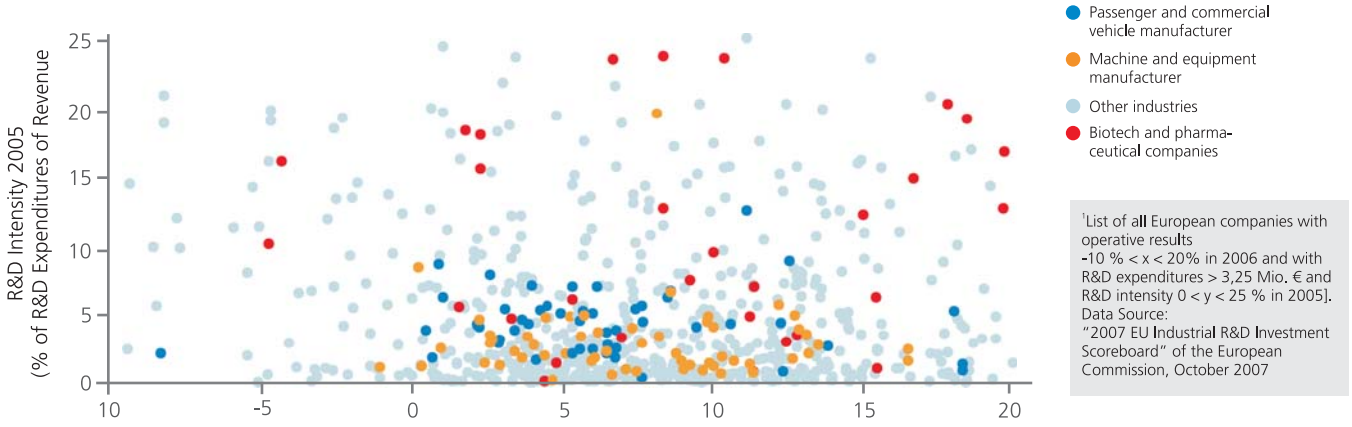

Figure 1: Correlation between R&D Intensity and Achieved Company Results [Compare Schuh 2009][1]

that create value for the customer. Lean Innovation advances the company's customer orientation and only accelerates innovation that drives customer value. The successful implementation of Lean Innovation relies on the employees' ability to always reflect their work with regards to the customer orientation. All decisions and developed solutions should live up to the demand of maximizing customer benefits. Each employee, project manager and leader should ask the two questions below when performing day-to-day development work, project management or portfolio management: "Am I familiar with the precise requirements of the target group?" and "Do I work on fulfilling the customer requirements without compromise?"

The central starting point for the implementation of Lean Innovation lies in the absolute alignment of all development activities and product features. Everything that does not directly add customer value should be questioned. Two abilities become the focal points: The main customer segments have to be identified, while at the same time the customer segment's utilization of the product has to be precisely known. As the degree of innovation in the product increases, the uncertainty of making an accurate prognosis about customer purchasing decisions increases as well. Our project work shows that under this circumstance, it is beneficial to rely on alternative solutions for such products. The ability to choose a final concept at a late stage of the development process is critical and therefore reduces the risk of wrong choices that do not meet the exact customer requirements.

Innovation does not automatically stand for resource intensive new developments. An optimal arrangement between the existing offerings and the customer needs is a basic prerequisite for improved development efficiency. Focus is often more important rather than just new development. Establishing an understanding of a customer oriented innovation culture requires that every employee works towards reaching the predicted consumer behavior. Creating additional value for the customer can only be achieved in such a manner.

2. The Right Methods – Structure and Synchronize

The approach of "design for process" integrates the internal processes of product development and value proposition with the analysis of customer behavior into a continuous method. An extensive examination of the product utilization by the customer, enables the development team to draw conclusions about the customer behavior. The necessary product requirements for the products and services can then be deducted. The customer often cannot precisely articulate new requirements and innovations. A deep understanding about how the resulting product requirements are applied by the customer is therefore vital in order to identify requirements that exceed customer preferences. In an additional step, these requirements need to be translated into product features and functions.

Use cases are one way to translate the requirements. They can be based on lead user surveys, conjoint analysis and other information that is available about the market success and use of the product. In addition, a consistent and systematic product program, combined with the previously mentioned information about the markets, allows for an increase in the accuracy of forecasts about market requirements for the future products (Fig. 2).

The next step, after defining the customer requirements as part of the "design for process", is to structure and manage the solutions. The different customer requirements are acknowledged and their configurations are outlined as standard or optional features. In our experience, this step should be performed during the early phases of the development project because the determination of standard and optional features of products influences the cost structures to a large degree. When assessing the product functionality, it should always be reflected to what extent the customer needs are fulfilled. Not all configurations are successful and lead to more customer interest or elevated product sales.

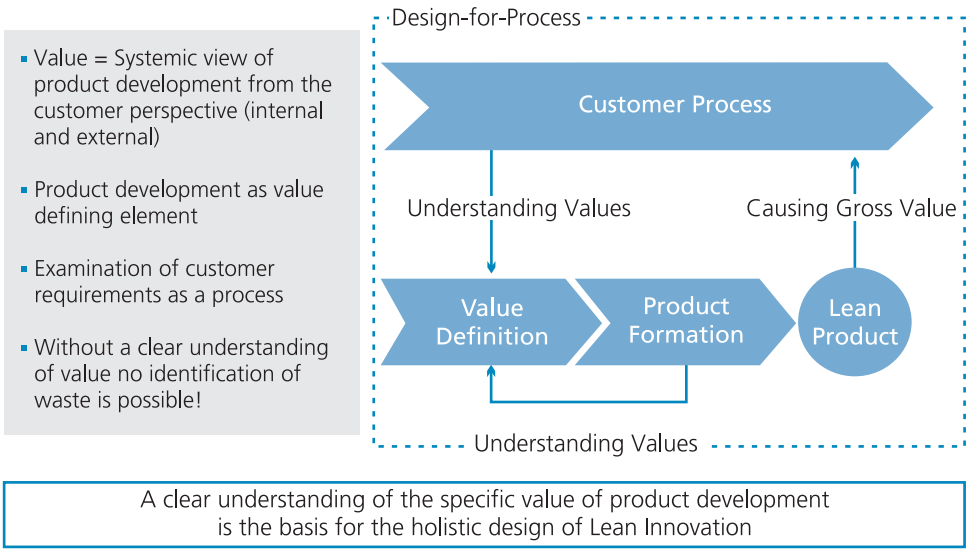

Figure 2: Design for Process as Core Element for Lean Innovation

Existing functionalities are to be reviewed and new ones should only be offered when a customer need was clearly identified. Besides structured solutions for development projects, the synchronization of the development processes is of major importance. This holds true with regards to two perspectives. One aspect concentrates on integrating different development projects to realize synergies across product lines and lifecycles. Two tools have worked well for companies; planning the scope of the development work and complying with defined synchronization points. The other aspect centers on the synchronization of customer requirements in accordance with the value stream analysis in order to gain efficiencies. The focus is on defined processes, data streams and information flow within the development process. Weaknesses are optimized in accordance with value-adding elements and the ensuing realignment of the value stream aims for a continuous increase in process efficiency. This step also identifies possibilities to standardize recurring activities of change processes for example. A success factor for the value stream analysis of development processes is the constant synchronization between development competences and capacities and the innovation demanded by the market.

3. Strong Leadership – Align Employees with Project Goals

Utilizing the right tools is not the only success factor. Another main success factor is the right awareness of the development team about their contribution to the company success. As long as the sole task of the developer is the development of products and he is only focused on finding new ways to the problem, it is not surprising that not all innovations face the same customer demand. It is therefore important to develop the right awareness within the development team. Whether the product adds customer value should not just be checked at certain milestones, but it should become part of the development cycle itself. Every workshop, team meeting, and discussion should consistently address

adding value for the customer. Achieving this focus is part of the leadership task and is ensured by specifying, checking and continuously and clearly communicating project goals. The leadership should adjust activities (what is developed) and behavior (how it is developed) if necessary (Fig. 3).

After aligning the team towards one uniform goal, an adequate information exchange and discussion of different topics needs to be organized. New ideas are generated by bringing together different teams such as purchasing and development. Multiple observations of problems enable different perspectives. The establishment of topic specific committees is ideal for a working and interdisciplinary dialogue, as well as to ensure a balance between the different parties. These committees are held in a neutral style in order to enable discussions and communication that eliminate differences between the different team cultures. A constructive contribution towards the innovation process is only achieved by allowing such open communication.

Development projects that diversify the existing product range need to be constantly focused on the requirements of the market that should be tapped. Many companies struggle with developing products with specifications that are below the current offerings. Coined by previous experiences, the development team has a hard time in hitting entrance requirements. Especially in this case, strong leadership and constant reference to the project goals are necessary.

4. Continuity for Success – Step-by-Step Implementation

To anchor the achieved improvements over the long-term in the company culture and to achieve a continuous improvement, the described activities should be embedded in an initiative that follows the model of Lean Innovation maturity. Such a maturity model illustrates the different steps towards full implementation. The development of R&D processes follows a path of continuous improvement along five steps. While at the beginning level "ad hoc" no orientation towards lean management principles in R&D is noticed, a gradual increase of the lean orientation up to the final step "lean optimized" can be observed. In this fully optimized state, the R&D culture is completely focused on lean innovation guidelines and continuous improvement is truly lived.

Operative and Strategic Innovation Management Problems	Technical Problems	Employees and Competence Problems	Interface Problems
▪ No timely creation of product support services ▪ Open legal questions ▪ Problems collaborating with external partners ▪ Difficulties with market access	▪ Unexpected technical or technological need for adjustments ▪ Difficulties with the use of new technologies	▪ Lacking employee competence (functional or personal) ▪ Problems of motivation for the employees involved in the projects ▪ Lacking integration of existing competences	▪ Unclear goals at project start ▪ Product specification unclear or changing ▪ Project management and planning deficits ▪ Problems collaborating with the project team or within the company

Figure 3: Preventing Common Problems Can Significantly Reduce the Duration of Product Development

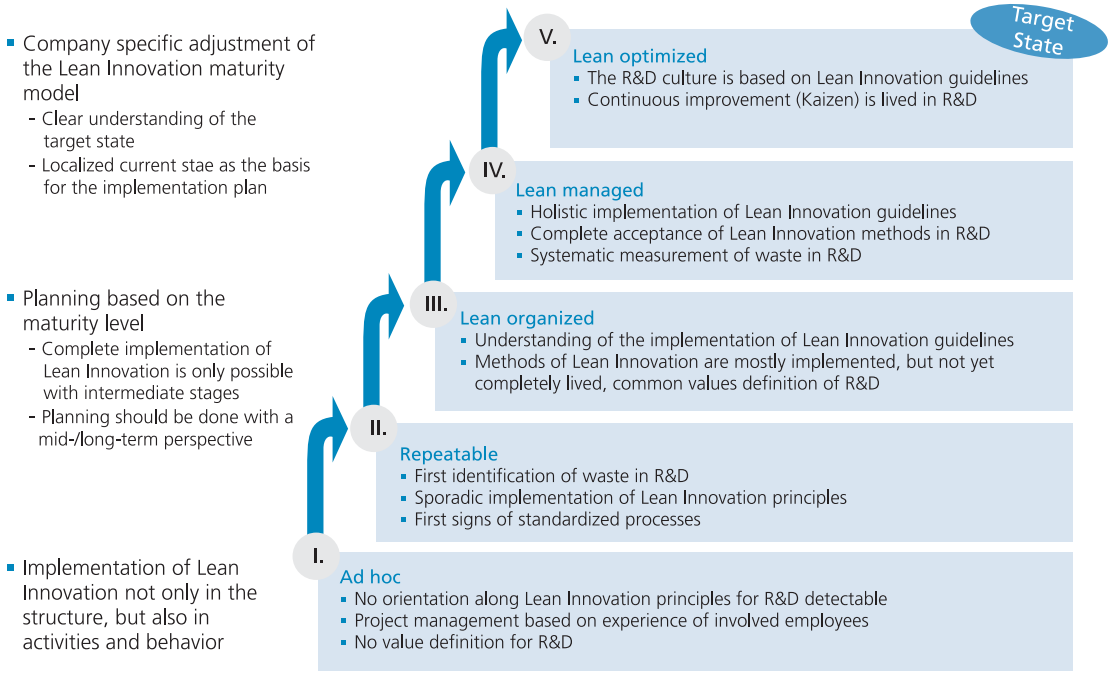

Figure 4: Recommended Actions "Plan the Implementation According to the Step Model"

For each one of these five steps, a company specific adjustment of the maturity model is performed in order to achieve a holistic fit for all different levels. (Fig. 4).

Conclusion

Overall, it shows that the path towards an innovation efficient company can only be generated by an intensive and comprehensive examination of the customer segments. The path has to be supported by methods, and consistently lead and lived by management at each step along the process.

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