

Creative participation through hackathons

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I. INTRODUCTION

Many start-ups have recognised the importance of sharing knowledge via networks for organisations, companies and microcosms. Various new formats of communication are emerging as a result of advancing digitalisation. A wide variety of opportunities for participation are already developing, which ultimately depend significantly on the personal motivation of each individual to "join in" and their individual interests.

II. HACKATHON

A. *Hackathon process and implementing –*

Established approaches, from matching, gamification, cross-functional to discussion and teaching formats, are combined in hackathons across generations and cultures within events lasting approx. 8 to 48 hours. The prerequisite is a more generalised, open definition; Hackathon as a type of an event where a larger number of people come together to work on tasks in a given timeframe and space. (1)

Following the basic idea of a hackathon of interests and offers, participants should be motivated to get to know and take part in topics and projects in the form of so-called challenges that correspond to their personal areas of interest.

Introductory short presentations by the "challenge owners" serve as an impulse for the events, which are limited in time. Via social media tools, platforms and messengers, participants can enter into direct dialogue within the framework of a moderated workshop process and implement joint projects at a distance.

The framework of the workshop process is based on agile project management models. Here, manageable work packages are integrated in short learning loops and adapted to the overall duration of the hackathon.

Through a loosened-up situation, a so-called engagement loop (2) is created in this process, which the participants experience in four stages, according to Amy Jo Kim:

- Motivate emotion
- Call to action
- Re-engage
- Feedback and reward

The participants experience a competitive approach to dealing with and identifying topics through a certain team affiliation within the challenges, the final presentations and a possible award. Edward Cell underlines a similar approach to experience in 1984: All significant *experiential learning* is a change in the learner—a change in behavior, in interpretation, in autonomy, or in creativity, or a combination of these changes. (3)

B. *How can lean management help loosen structures and speed up processes at hackathons? –*

In order to draw the right conclusions from a project monitoring and impact analysis, it is not only necessary to evaluate results. Above all, it needs a creative, entrepreneurial and learning-promoting framework.

Great progress in the entrepreneurial framework conditions requires unison in the development of the respective project. The faster the cycles and the associated timetable, the faster the necessary adaptation, the more comprehensive the changes, the more fundamental the necessary transformation.

Change becomes the only constant and the future belongs to organisms that have developed their strength precisely in this. A project with a culture geared towards the constant further development of each individual and thus of the institution as a whole, of perpetual further learning, a learning-culture-community does not come into being by itself. This is the core task of the entire team and depends on the personal commitment of each individual who acts and lives in an authentic, responsible and forward-looking way.

Digitalisation is above all an expression of a mind-set and the readiness for personal further development with the inclusion of all meaningful and appropriate instruments, methods and formats, which are not only based on technical development, but also on it.

Lean management or lean production are terms that have become firmly established in everyday business life. Lean is supposed to be an expression of "lean" procedures that are intended to break down and optimise classic tasks flexibly and very cost-effectively.

III. PARTICIPATION

C. Creative participation and lean management –

Derived from the approach of lean management, the following ideas and methods should be considered for the implementation of hackathons:

DIY

DIY (short for Do It Yourself) refers to activities that are implemented without professional help.

Open Source

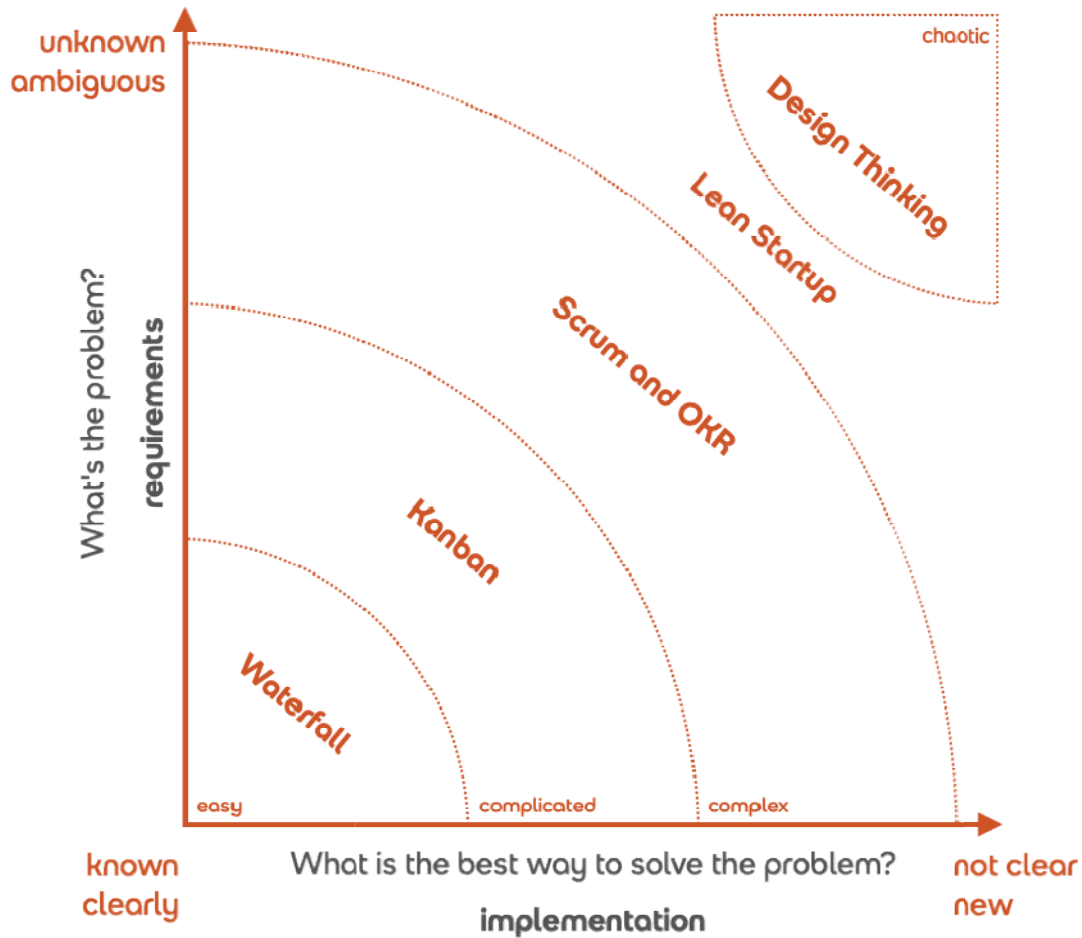
Open Source basically opens up the possibilities for developments of any kind. The idea of open source gives rise to approaches such as open data, open hardware or open standard.

Open Design

Open Design provides blueprints and design principles to develop a collaborative design culture and democratise the design process. An important prerequisite here is also the possibility of using "Free and Open Software", FOSS for short, and open source hardware.

Stacey Matrix

The Stacey Matrix developed by Prof. Ralph Douglas Stacey deals with the organisational theory of complex systems. In this context, this matrix is also used to select suitable project management approaches and the use of agile methods. (4)



Stacey Matrix – Illustration (SRH_Stacey_20221117.tiff) © 2022 Benjamin Zierock (5)

Prototyping

By using prototypes, low-cost test versions that require little effort, designs, functionalities or techniques can be developed and expanded step by step, e.g. in order to identify weaknesses and problems earlier.

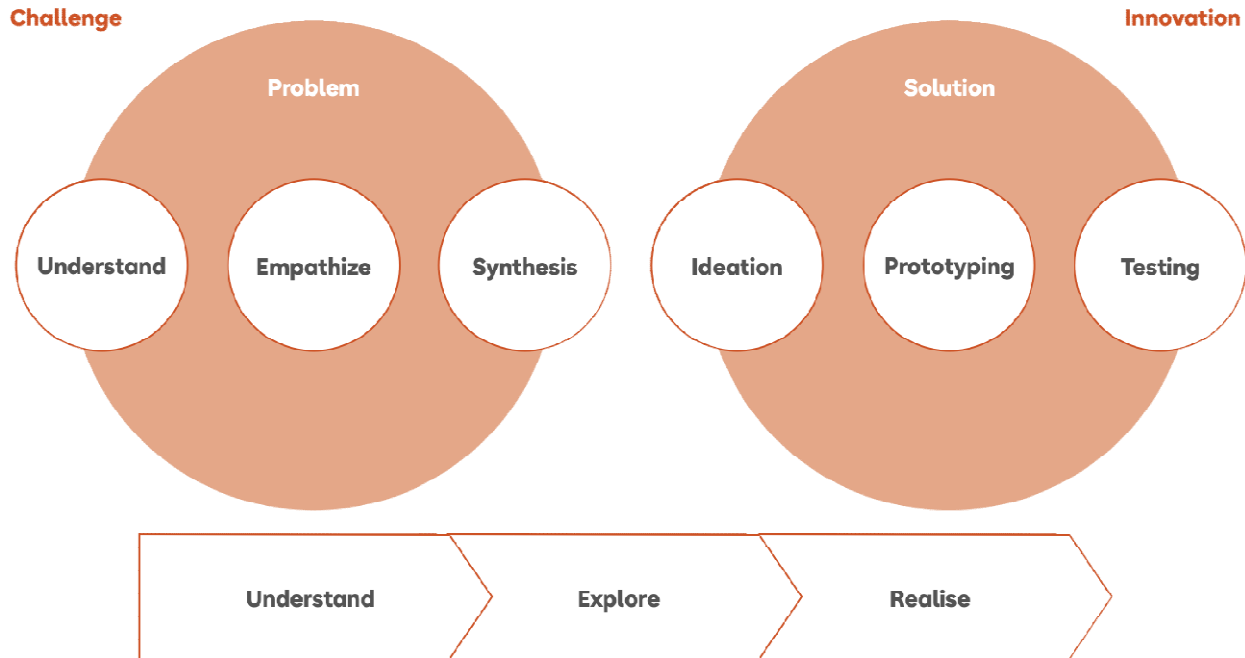
D. Finding new ideas with design thinking –

Design thinking is a creative process for finding ideas. The method and approach leads, in a user-centred way, to the development of new ideas and innovations as well as to the solving of complex problems. The process is based on the work of creative people, such as designers and architects, and their creative methods. In the focus of design thinking, team, space and process are equally opposed. The method is initially intended for the structure of a creative process. The Hasso Plattner Institute summarises the method as (6): Design thinking is a systematic approach to very complex or unsorted problems from all areas of life.

Depending on the approach, there are four to six phases of the structured innovation process. This process is the foundation of design thinking. The phases do not necessarily have to be run through one after the other and primarily serve as a basis for a creativity process model.

The first phase deals with the needs of the target group. This involves observing, identifying and understanding them. The insights gained from this are then the starting point for the actual innovation process. Based on this, prototypes are created and tested in order to quickly implement and evaluate the underlying ideas. The focus is less on the detailed elaboration of an idea and more on experimenting and gathering new views and perspectives.

By means of repetitions and alternating sequences of the different phases, possible solutions emerge in addition to an increasingly better understanding of the task.

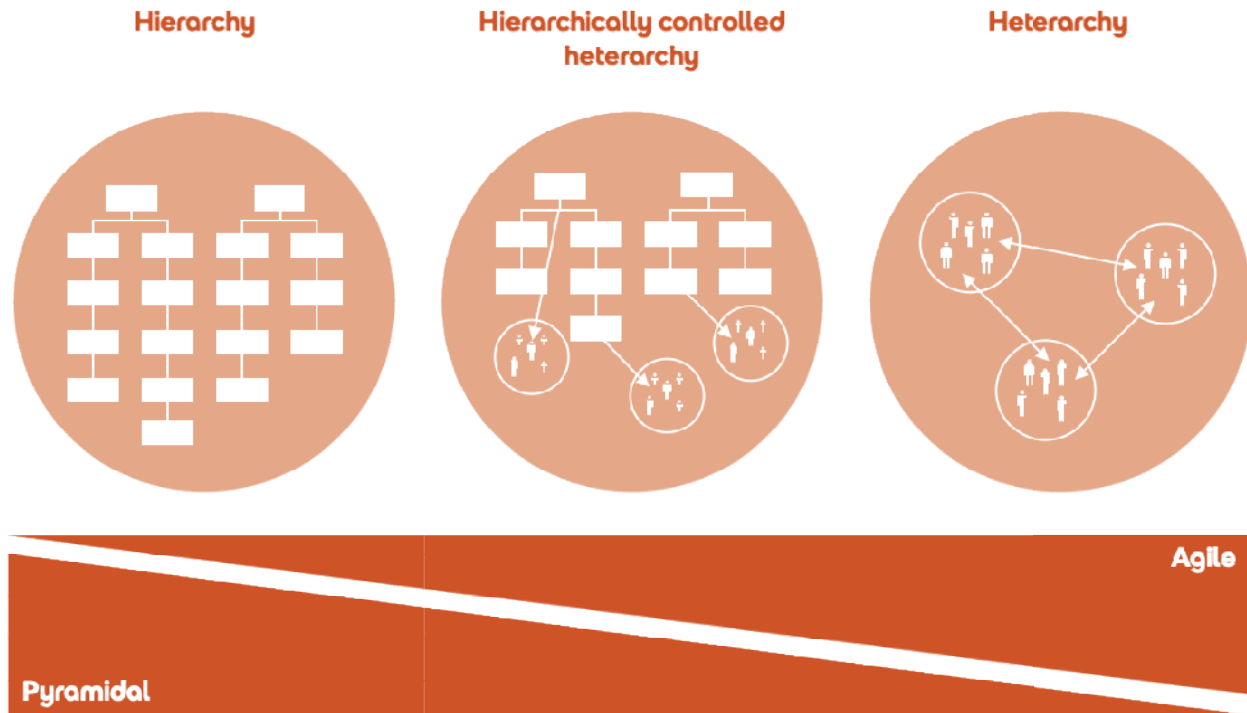


Phases of Design Thinking – Illustration (SRH_Design_20221117.tiff) © 2022 Benjamin Zierock

E. Agile values and framework conditions –

Agile project management requires the definition of appropriate framework conditions for a hackathon. These framework conditions, also described as building blocks, are :

1. the agile values: they reflect the essential principles in agile project management: more flexibility and less unnecessary structures. You can already check at this level whether agile project management fits the setting, the environment, the project and the team.
2. the agile principles: They describe fundamental approaches to project management. These principles include iterations (repeated loops) and the self-organisation of teams. (7) The real challenge lies in transferring the principles to one's own project world, from simple to complex to chaotic projects.
3. agile techniques: These are concrete, easy-to-understand measures that can be incorporated into the respective project management and give it the necessary structure. Not every technique is suitable for a specific hackathon-project, but must be carefully selected in advance.
4. agile methods: The principles and the techniques are combined into a coherent process and represent pre-structuring at the level of the process models. An adaptation of the methods is recommended for each hackathon-project and project environment.



Self-organisation of teams: Hierarchy vs Heterarchy – Illustration (SRH_Agile_20221117.tiff) © 2022 Benjamin Zierock

IV. CONCLUSION

So it remains to be said that various stakeholders are noticing a clear movement towards more participation and creativity in creative design processes. This is especially true in the area of agile, very creative or “chaotic” hackathons. Design thinking as a defined method theoretically offers a fitting answer to the very uncertain and new situations. However, the extent to which the practical application is or will be successful in various cases remains open at the present time and should be the object of future investigations. Irrespective of this, it must be stated that with regard to the complex, hybrid challenges of communication, classic methods of design seem overtaxed, from which a clear need for innovation and change in interaction and participation can be derived. An entrepreneurial and digital mindset can play a big role in this, and it will be of fundamental importance in creative processes anyway.

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