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## **Play-based intrapreneurship: Challenging innovation processes and underlying cultural understanding**

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**Sune Gudiksen\***

Design School Kolding, Aagade 10, 6000 Kolding Denmark  
E-mail: skg@dskd.dk

**Pia Schytz**

Design School Kolding, Aagade 10, 6000 Kolding Denmark  
E-mail: ps@dskd.dk

**Mathias Poulsen**

Design School Kolding, Aagade 10, 6000 Kolding Denmark  
E-mail: mp@dskd.dk

**Keila Quinonez**

Design School Kolding, Aagade 10, 6000 Kolding Denmark  
E-mail: kzq@dskd.dk

\* Corresponding author

**Abstract:** It is often stated that fresh and new perspectives from outsiders can challenge existing practises and routines - setting up the conditions for this is highlighted as one of the most important drivers for innovation as well as driving a deliberate disruption of practises. In nowadays market, well-established companies are currently struggling to secure profits, mainly due to the pressure from new communication technology-based business models and competitors coming in from unforeseen areas. This study investigates how students can play a role as outside-in facilitators to foster novel perspectives on existing practices and current innovation processes using play and game-based innovation methods. Through a number of student-industry collaboration cases, this study contributes with a new course approach on how to arrange student-industry collaborations in which students apply play and game-based methods as a way for companies to keep challenging assumptions and elicit surprise framings in innovation processes.

**Keywords:** Creativity; Innovation; Play; Games; Gamification; Intrapreneurship; Ambidexterity

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## **1 The difficulty in consistently challenging innovation practises**

It is often stated that fresh and new perspectives from outsiders can challenge existing practises and routines also in relation to various applied organizational models and the concept of organizational ambidexterity. Setting up the conditions for this is highlighted as one of the most important drivers for innovation as well as driving force for continuous and deliberate self-disruption of practises. In nowadays market, well-established companies are currently struggling to secure profits, mainly due to the pressure from new communication technology-based business models, new strategic thinking from start-ups, and competitors coming in from unforeseen areas. In this pressure characterized by constant and rapid market changes, organizational structure and culture plays a vital role. We ask if students can play a role as facilitators of fresh perspectives on existing innovation practices especially in those situations where current operations are not the answer? And we further investigate in what way there is space and time for such rethinking of processes and activities in everyday organizational life?

Traditional ways of collaborating between students and industry have been characterized by either company design briefs at innovation school camps or hackathons, or at the other end student internships. The problem with the former is that such briefs and cases quickly become detached from constraints of importance which mean that many such cases end up in the drawer afterwards. The problem with the latter is that students often end out being infused into the operational machinery in more or less formalized internships. We departed from these and set out to explore if higher education play design students in their last year can act as outside-in intrapreneurs in projects and processes, and how this can be directed and polished to take place in strong interactive activities centered around play and game-based methods. Through six weeks of intense collaboration happening on-site at the companies the students went through quick onboarding and rapid understanding of organizational culture, setting up various kinds of play and game-based macro-micro interventions and stimulate reflections through a number of learning debriefings in iterative manners.

We begin by outlining the notion of the innovator's dilemma and understandings of organizational ambidexterity, and how this are directly linked to structure and culture in organizations. We then describe the research method and the overall master programme course design and the associated learning goals that we were aiming at. This is followed by diving into three student-industry cases from the first two-year experience with the course and hereafter a cross-comparison discussion and first preliminary research conclusions.

## **2 Innovator's dilemma and organizational ambidexterity**

A number of studies have investigated the difficulties in moving from one business arena to the next. Chris Argyris (2010) argued that organizations get trapped in unhealthy routines often and in many ways. McGrath (2013) describes how experimented with and building up new business model portfolio is key, but also hard because of the duality of exploitation and exploration, especially being able to move from business area in decline to the next. Bessant et al. (2010) argues that in discontinuous innovation even the most sophisticated routines might hinder novel exploration. Recent studies on radical innovation

indicate for instance that start-ups after their first run of success and when growth accelerate quickly moves from radical innovation activities to much more incremental (Green & Cluley 2014). Verganti and Öberg (2013) argue that in the hunt for radical meaning inviting for external, 'outlandish' network - inspirators not involved in the business circles of the company are of vital importance.

A general issue we have experienced in many collaborative activities between students and companies is that they tend to be based on briefs at schools or camps and hackathons ending in parallel processes with no strong results even though the company involved representatives were highly positive, and in many cases indicated high potential in the solutions. Therefore, a foundational position throughout this paper is that it is not enough to simply bring people together or providing briefs and then let students conceptualize in a number of weeks - they also need to have an interactive format and a structured way to deal with the subjects at hand and knowledge about the current organizational structure and culture taking place. Hence being able to push practices in new ways although this might come in bits or through planting seeds for the organizations to further grow - this approach we call *outside-in intrapreneurship* also referring back to how students might be a needed 'outlandish network' for the organizations. We tend to call this third space communication derived from Muller (2007), or in other words play and game-based collaboration tools and techniques that can build bridges (Gudiksen & Inlove 2018). Over the years we have seen through various master programme courses (Gudiksen et al. 2017) that when the students are capable of not only conceptualizing new product, service and experience design, but also challenge and strengthen innovation practices for upcoming organizational projects they are of value to the organization on a higher influential level. This is also related to key points made by influential design thinking pioneers Roger Martin and Tim Brown who in Harvard business review (2015, p. 58-59) argue that:

"In fact, we'd argue that with very complex artifacts, the design of their 'intervention' - their introduction and integration into status quo - is even more critical to success than the design of the artifacts themselves."

Martin and Brown refer to iterative rapid-cycle prototyping especially with decision-makers. If we combine this with Nordic participatory design and innovation research (Buur & Larsen 2010; Gudiksen 2015) and based on observation from previous courses we can add that such decision-makers are better characterized by circles of stakeholders in a specific organization that might be invested in the projects at hand. Mike Ganderton, Head of experience at the multiple awarded experience center LEGO House, in a speech before the opening of LEGO house expressed that the most difficult part in designing LEGO House and play zones inside that iterations and *stakeholder involvement, alignment and management* was by far the most challenging issue not the prototypes of the house layout or play zones as such. This adds to the point in carefully and iteratively arranging stakeholder involvement processes.

Within such a collaborative stakeholder third space we suggest to use a play or game setting because of the convincing potential these have shown in previous research especially when it comes to effects like enabling shared communication, mutual understanding, provoke underlying assumptions and elicit surprises (Brandt 2006; Gudiksen 2015; Roth et al. 2015). However, in this study not only related to a specific project or task but also to provoke the surrounding organizational structure and culture.

### 3 Research method

This work is based on design-related action research; that is intervention experiments in innovation activities in which we engage participants in trying out new collaborative methods. The type of intervention experiment is in family with Schöns' notion of exploratory experiments in which an action is undertaken only to see what follows, and move-testing experiments in which there is a possible end in mind (Schön 1983). As a mean of collecting, unfolding and progressing knowledge we used debriefing sessions closely related to experiential learning and highly interactive settings (Kolb 1984). We report from experiments from three different student-industry collaborations. We base the analysis on empirical material and this specific research design:

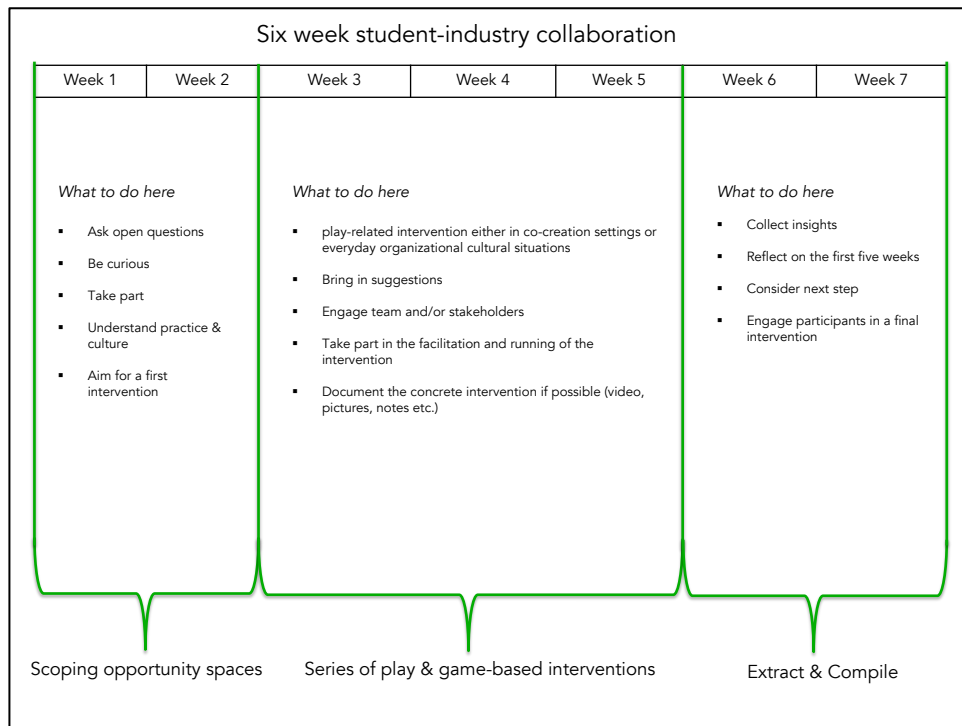
- Debriefing sessions for the students with exercises one day in all six weeks.
- Debriefing and alignment of activities with company representatives, students and teachers every second week.
- Final evaluation sessions with company, students and teacher together, and cross-comparison debriefings with the students.

When the three student-industry cases are connected and brought into the same paper we get a chance to make cross-comparison between case incidents. Here we look for differences, similarities and above all interesting nuances rather than generalization, the later which is rarely a goal in case studies. Concretely, the cases were selected with the intention to develop 'a metaphor or establish a school for the domain that the case concerns' (Flyvbjerg 2006). The organizational setting in the three cases are intentionally diverse in nature - a communication-marketing division part of a large company, a municipality with highly cross-disciplinary employees, and a small flourishing start-up company.

### 4 Course set-up & cases

The course format was designed with the intention to have a high degree of openness both to allow for students to experiment and for the students to use their energy on understanding the organizational dynamics in a specific workplace (See Fig. 1 for basic visual guidelines for the progression). Furthermore, the following four guidelines were injected into the curriculum and the specifics of the course.

- A pair of students for each collaborative organization - by having two students being paired with the same company, each student has a dialogue student partner who might observe other issues about the organizational structure and culture to include, but also can support being active, brave and bold in the interventions.
- Learning goals with a high degree of ambiguity (See Fig. 2) - fixed or strict interpretation of learning goals would lead to a specific structure which would likely not be suitable for the organizational setting and in general organizational dynamics that are difficult to incapsulate in school-based curriculum learning goals.



**Figure 1** The overall guideline in the course on how the students could proceed

- Course content with in a mix between many shorter presentations, workshops and feedback back and forth in between students and between students and teachers. The course started with introductory days of the course in general and first overview of possible approaches and methods for interventions as well as co-framing conversations with the collaboration partners. Most course content related to play and game-based design and innovation methods, co-design and co-creation approaches, human-centred design methods and additionally methods and theory related to organizational culture and understandings of organizational ambidexterity.
- Bi-weekly individual inspiration, supervision and support from skilled design and innovation practitioners and practice-based researchers. As well, a help-line directly to these teachers beyond scheduled supervisions. This demanded a high flexibility for the involved teachers.

<b>Course objective</b>	<p>In order for play-based interventions to be relevant for organizations, students need to understand organizational culture and constraints related to workplace settings – and subsequently why play under such constraints can act as a vehicle for changing routine practices and infuse novel perspectives and approaches to support on-going creativity and innovation in organizations.</p> <p>Play-based intrapreneurship focusses on the effects of introducing play into the processes of companies and organizations. The course explores how elements of play might enhance the practices in order to increase i.e. engagement, collaboration, creativity and innovation. The students collaborate with a company or an organization, investigate their practices, design and introduce a play intervention for this context and document the effect. As the play intervention is targeting a broad range of stakeholders, students will analyze and reflect on the people involved including interpersonal relations and how this influence the play experience and the outcome of the activity.</p>
<b>Learning outcome</b>	At the examination, the student is expected to:
Knowledge	<ul style="list-style-type: none"> <li>• have knowledge about play in relation to productivity and performance</li> <li>• have knowledge about play as a method for creativity, innovation and intrapreneurship activities</li> <li>• have knowledge about designing and facilitating play in organizational settings for selected stakeholders and/or users</li> </ul>
Skills	<ul style="list-style-type: none"> <li>• be able to examine a context of organizational practice</li> <li>• have the ability to document the effects of introducing play into a given practice</li> </ul>
Competencies	<ul style="list-style-type: none"> <li>• demonstrate the ability to design a play intervention that addresses and existing practice and improves it</li> <li>• be able to select a play design method suitable for the situation being addressed</li> </ul>

**Figure 2** Curriculum learning objective and learning goals

## 5 Case one: Playline project at Billund Municipality

The Playline is an urban development project for the city centre of Billund that hopes to serve as an artery to connect and revitalize the different areas of the city with a recreational walking path. This small city in Denmark is distinguished by a handful of attractions mostly related to being the home of the LEGO brick toys. The company's headquarters as well as the theme parks and recreational facilities attract daily a significantly high number of working commuters and tourists in comparison to the low density of the residential population. The students placed in this case had their six-week on-site collaboration at Billund Municipality, an office and citizen service building located outside of the city centre and the project's physical venue. At Billund Municipality the two play design students were introduced to a team of five members working with the development of the Playline project. The internal members of the team all worked in different departments of the municipality. The main contact/supervisor on-site was from the Health & Well-being department and the project lead at the moment was from the Urban Planning department. The other three members were each from the Communication, Nature and Landscape and Infrastructure departments.

### *Early phase - first co-framing conversation*

During the on-boarding process the master students were introduced to the team, the project, the workspace and daily dynamics. They were invited to participate in all project related meetings. These meeting activities, additional desktop research and cluster maps of the information collected so far, led to the first intervention by the students. For this initial intervention with the team in which the students would try to lead some process they schedule a 30-minute session and removed the chairs from a meeting room to carry out two main activities. The first was a stakeholder mapping and the second and most significant

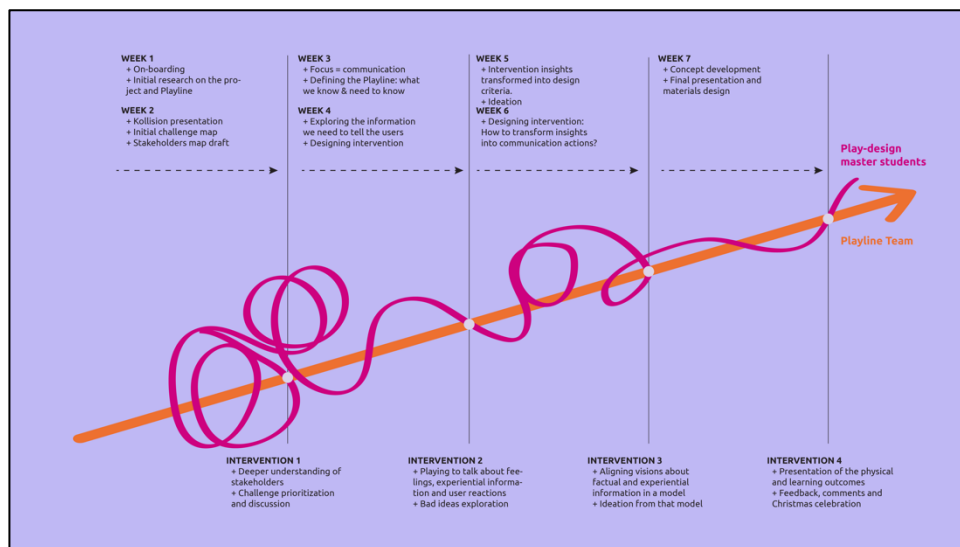
was an activity they named ‘Doors of Opportunities’ (see Fig. 3) to prioritize with the team some design opportunities from a vast pool of challenges that were scoped during this early introduction phase. They presented the team with a large printed map of the Playline route, framing the activity as a board game in which they had to conquer the space through a voting system placing stickers on the challenges they saw as crucial to overcome in that phase of the project. The team responded with enthusiasm and much deeper discussions about the possible challenges than expected by the students which prolonged the activity far longer than planned out motivated by their interest to continue. This constituted the initial phase of the collaboration which was mostly characterized for the students by the challenge of trying to feel comfortable with the uncertainty of the process and familiarizing with the context.



**Figure 3** ‘Doors of opportunities’ co-framing conversation

#### *A play-design process - coping with organizational constraints*

On the grounds of the organizational constraints experienced by both parts of the collaboration in the early phase, the students assume the role of external consultants working on-site. Both parts acknowledge more possibilities in handing over some autonomy for the students to assign their own tasks rather than introducing additional managing work from the internal team in order to make use of their potential methods and strategies. The students established the intervention format allowed them to work alongside the team by setting touch points for creating together without producing a major interruption or dependency on them on a daily basis. A continuity in the process is achieved by tapping in and out each time a major development step needs to take place.



**Figure 4** Overall structure model of the collaboration

As a result of the ‘Doors for opportunity’ intervention and the gathered information from participating in the different meetings with stakeholders, the students together with the team established that the Playline was presenting a communication challenge. Many of the pressing issues were related to the common theme of communication or miscommunication, creating a distance or setting up barriers for the municipality and stakeholders to develop the project towards a common vision and a shared sense of ownership. The students took this challenge as their overall goal for the collaboration; how might we communicate the Playline in a tangible way? And under this umbrella they developed a set of steps and interventions for the said goal.

### *Second intervention - Sensorial mapping*

The second intervention that was held with the team was intended to collect experiential qualities that could describe the project rather than the factual information that was already available. For this the play designers prepared four exercises using playful methods. One of the methods they created was a 'sensorial mapping' laying out a table with a wide range of materials, objects and even foods for the team to experiment for describing through the different senses or through metaphoric references to the qualities they were experimenting. They first gave the team a few minutes to explore the table with their eyes closed in order to focus on tactility and then continued with all the other senses. An interesting discussion that sparked from experimenting with clay during this exercise was about 'malleability' and how the Playline is as a space capable of being re-shaped by the users, allowing flexibility or adaptability to the visitors and the local residents of Billund. A more obvious one was the strong inclination of the team for objects in the colour green or natural objects, making a reference to how nature must play a big role in defining the importance of this walking path. One more playful method during this intervention worth mentioning was the 'project autopsy', where the students brought in a small box illustrated as a burial casket and told the team the project had died from an overdose of bad ideas. They then told the team that we were to carry an autopsy process of what were the

bad ideas the Playline had died from. They proceeded to open the casket box where the team found some random objects with blank white labels. The team carried out an ‘inverse-brainstorming’ naming each of these objects as the possible worst ideas to communicate the Playline. They came up with great ‘bad’ ideas to avoid like ‘people understood it was another play space just for children’ and ‘it wanted to be so much and making so many people happy that it ended up being nothing’. This exercise was according to the team one of their favourites and most effective, as it really eased the pressure of coming up with good solutions right away and shifted the focus to an examination from the future in order to see potential mistakes they wished to avoid.



**Figure 5** The team exploring materials for creating a sensorial map of the Playline

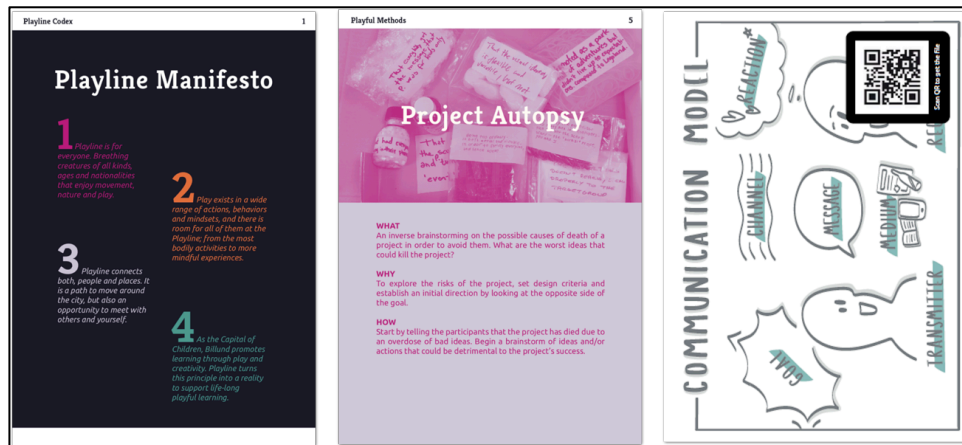
The students held a third intervention with the purpose of aligning visions within the team of the factual and experiential information that defined the project. They also carried out a playful method for idea-brainstorming based on the alignment. The whole intervention and playful methods approach for the internal team was surprisingly effective despite the ample presence of humour and chaos which tend to give the feeling that things might not be taken as seriously as they might be. The consistent use of metaphors in narratives to engage with the participants and the transformation of the physical workspace to facilitate new viewpoints during the interventions continuously enhanced innovative collective thinking within the team.

#### *The outcome - Playline toolbox & Playphonic*

As a result of this participatory design process the students delivered two physical outcomes to the team. A generative toolkit (Sanders & Stappers 2014) which collected knowledge and methods and a concept prototype demonstrated through a short film. Each are described in more detail.

Playline Toolbox (1): The intention behind a generative toolkit is ‘to give non-designers a means with which to participate as co-designers’ (Sanders & Stappers 2014) in the process. The Playline Toolbox became a card-based collection of the knowledge and methods that were gathered and created during the collaboration, only possible through the team’s

continuous participation in the student's design process. The cards were designed divided into three main categories:



**Figure 6** Codex, Playful Method and Template card example

- CODEX – Factual and experiential information that defined the present and future of the project. Includes a manifesto, vision, value, purpose and an ‘as-is’ and ‘to-be’ descriptions of the Playline.
- Playful Methods –To inspire and facilitate the continuous use of methods that challenge their conventional approach.
- Templates – Graphic facilitation templates included as images and a code for scanning where they could access for digital or printed use.

As the students understood that their six-week time frame was very limited in comparison to the years of development to come in this project, they opted for making a toolkit that could outlast their physical presence at Billund Municipality and would aid the team to continue using the process and methods they had been so fond of for the past weeks. In this manner they introduced a change in culture to the conventional way of developing and participating in such projects even when the designers are not around. With a toolkit of aligned visions, ideas and methods the team is supported to continue exercising as co-creators and facilitators of the project with their stakeholders and external developers.

Playphonic, the voice of the Playline (2): The students also delivered a concept proposal based on the underlying issue of the initial design challenge they had scoped with the team, communicating the Playline. The concept consisted of a physical installation of talking tubes to be strategically located along the walking path. Through these tubes with speakers the project is personified and it is given a voice to narrate its own story to passers-by. The story told by the automated voice shares the values and characteristics that the team and Billund Municipality envisions for the future of the facilities. Empathizing and connecting with the local community.



**Figure 7** Concept movie, Playphonic (<https://vimeo.com/343596961>)

### *The bottom-line*

The playful interventions account for ‘iterative interactions with the decision makers’ (Brown & Martin 2015) that allow the students to introduce change to the work-culture of this project and confidently present an unexpected proposal, as it is the result of a participatory design process in which the team has been involved just enough to gradually accept the validity of the concept. The team has been part of defining the problem, providing the ingredients for solutions and even ideating for a possible direction (Brown & Martin 2015) and for this reason being presented to a large blue talking tube did not seem as an unreasonable idea to them as it was to the other confused employees of the municipality.

Furthermore, an unexpected team building experience had resulted through the process of making the team play together so often for the duration of the collaboration. From their own reflections they shared that not only they had a much better common goal and understanding of the project but also a fortified relation to their colleagues as part of this specific project team with a clearer path to move the project forward.

## **6 Case two: Carrots and fried egg in a corporate marketing setting**

Two students collaborated with Digital Agile Development is part of the LEGO Agency (a global in-house marketing and communication agency of The LEGO Group). They joined their team to challenge internal processes and spark play design methods into the everyday of developers, designers and decision makers around a variety of project groups. The organisation work within an open development setting and in general were open to be challenged on practices related to design and innovation. Therefore, there was an acceptance to do things out of the ordinary and an expectation to dare break habits. The open setting gave the contact person the possibility to define the direction for the interventions together with the students. Play design methods was a key element to be explored and the framing was fairly free so the students had space to experiment and they were encouraged to take action from the very start.

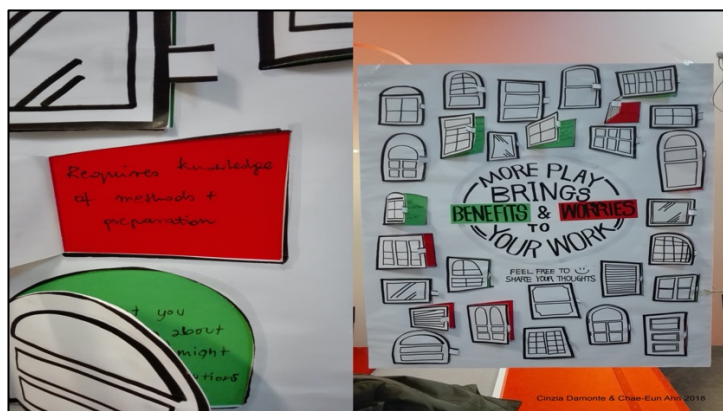
“Play is an open thing and that's where the interesting things happens, rules arise during the process and through the interaction between those who play. I trusted the process and expected that we would learn a lot about play and we got challenged in our meeting setup.”

Pia Breum Corlin, Design Strategist

### *Empathizing*

The process took off by investigating the organisation through observation and open-ended interviews to identify the best area of concern to experiment with play interventions. Since the task was widely defined the students wanted the employees to share what play was for them through a method called the “Play Calendar” and they mapped out existing processes and point of views on play and development through the employees. They specified three opportunity spaces to work within:

1. Build trust using roleplay and humour
2. Make people explore new possibilities and scenarios through the use of metaphors
3. Use narratives and visual elements to improve cross disciplinary communication



**Figure 8** Play Calendar template with content from interviews

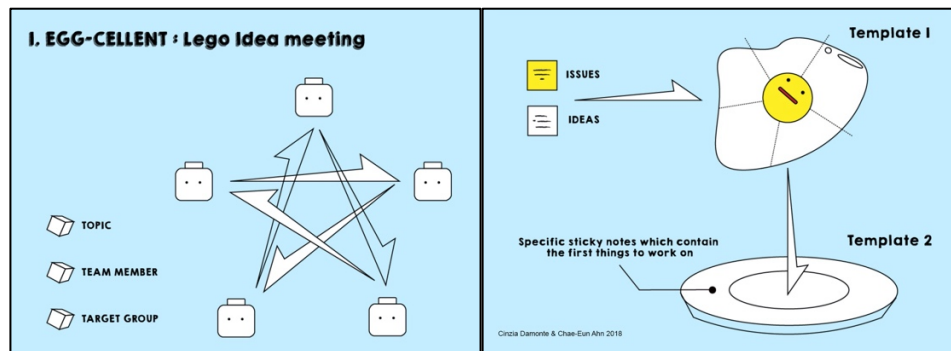
They found an opportunity space for doing cross disciplinary interventions within meetings since they are frequent and out of the workspace area where they work digitally in a classical work environment. The play interventions interfered in their everyday work without taking extra time and they could engage as many employees as possible. In dialogue with their contact person they identified what kind of meetings they could join to do play more accessible around different topics. It ended with four micro interventions with different teams and two with a specific focus on metaphoric elements will be presented here.

### *First intervention - Fried eggs on the table*

The first meeting with internal as external participants focused on problem solving and feedback about a website design. The method Egg-Cellent was developed to open up all issues which participants were facing and making sure everyone had ideas to discuss and felt safe doing so. Their game mechanic (dice) was focusing on putting chance for random turn system which kept it interesting and engaging and the egg template ensured information was visualised in order to develop ideas further. Closing the meeting was done by cutting the egg into pieces (ideas/issues) and move relevant parts to a general plate poster. The plate poster was optimized after so each participant got a plate and the egg pieces (tasks) were divided onto each participants plate.

*“Not only can metaphors assist in problem reflection but also help to break away from the limitations imposed by initial problem constraints, explore unfamiliar design alternatives and establish novel associations with the design problem”*  
Casakin.H.P. 2004

The method made it much easier for the participants to explore the difficult topics, everyone had time to reflect and especially by using the fried egg elements as a metaphor, the entrance level for bringing things up was lowered and it kept a safe atmosphere around few but clear rules.



**Figure 9** Egg-Cellent game setting

They also experienced that people with a more introvert personality got the right space and chance to share their point of view.

*“it was more fun. I think in some ways having our energy partially directed at the dice diffused the seriousness and maybe some of the tension that would naturally happen”*  
Internal employee, Digital Agile development unit

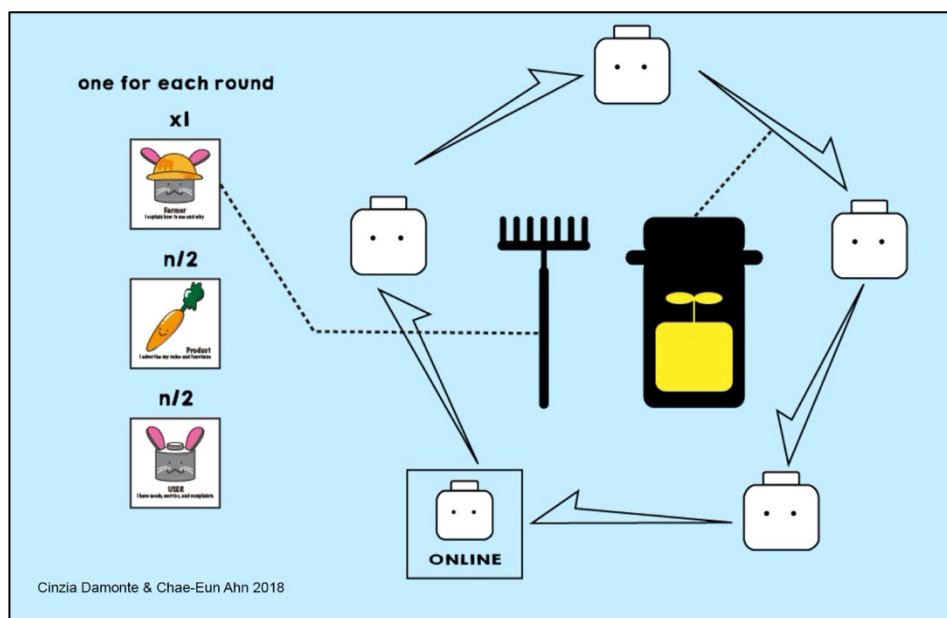
### *Second intervention - The Carrot Auction*

The next meeting with a new team was hosted physically in Billund with some online participants. The task was to challenge a feedback session concerning design previews. The students observed beforehand the tendency that people kill ideas before they are unfolded and the term constructive feedback would be preferable to investigate in a metaphorical setting. Roleplay in a narrative was used digitally to explore, empathise and deepen diverse perspectives. They tried to make a distance between the participants well known role and focus on valuable design feedback.

In the narrative the farmer presents an on-going project. The carrot is the role of the product of the project itself, which appeals its function and defend any criticism from the bunny who is representing the user. The roles are specified and fixed by cards and each of the participants had to choose among the cards without knowing which role they would pick. The rules were meant to create a safe space so each participant could speak freely and avoid being offended personally by others feedback. The roles itself encourage specifically to say what is good (Carrot) and what can be improved (bunny).

The method led to open discussions with multiple points of view. When the approach is open ended with play as a key element, it seems much easier to point towards challenges

and opportunities to highlight the next crucial step. A very challenging part in this setup was to create a safe space when hosting a meeting in a physically and online setting.



**Figure 10** The Carrot Auction game

Earlier this spring 2020 the Carrot Auction game was mentioned in a meeting once again. The playful method had left its imprint and had become a reference element in a dialogue around how to establish trust in a creative culture. It points towards the need for creating safe spaces to strengthen a cross disciplinary team culture.

”How to make meetings more playful? Meetings are often serious business but yesterday my creativity and playfulness were sparked with an awesome workshop organized by our very own Student Worker Committee and two talented students from the ‘Design for play’ Masters program! I gained valuable hands-on tools for play examples and could easily see the benefits while still balancing time limits, resources, preparation time, participants etc.”

Pia Breum Corlin, Design Strategist

After completing the micro interventions, the students were asked to plan a housewarming bridging +40 people through play, a user journey mapping as well as a play session with student workers. Their playful approach and methods secured even more opportunities to intervene within the organisation and finally they helped develop an important meeting for the management, focusing on playful approaches. Their final product was an informal poster build upon the insights they experienced along the six weeks and the diverse play experiences and it was well received among the employers.

The six weeks led to diverse experience with different teams were play engaged, connected and challenged the organisations everyday work. As newcomers visiting a team for a meeting it was a struggle to navigate the participants into the right topic since the students lacked knowledge about the topic. On the other hand the students did not have well known predefined roles and could easily push new ways of doing. The organisation opened their

doors for new students again the year after and their expectations on investigating play as a key element in pushing great design are still high. They have found the right tool and are eager to continuing investigate what it can bring into their culture.

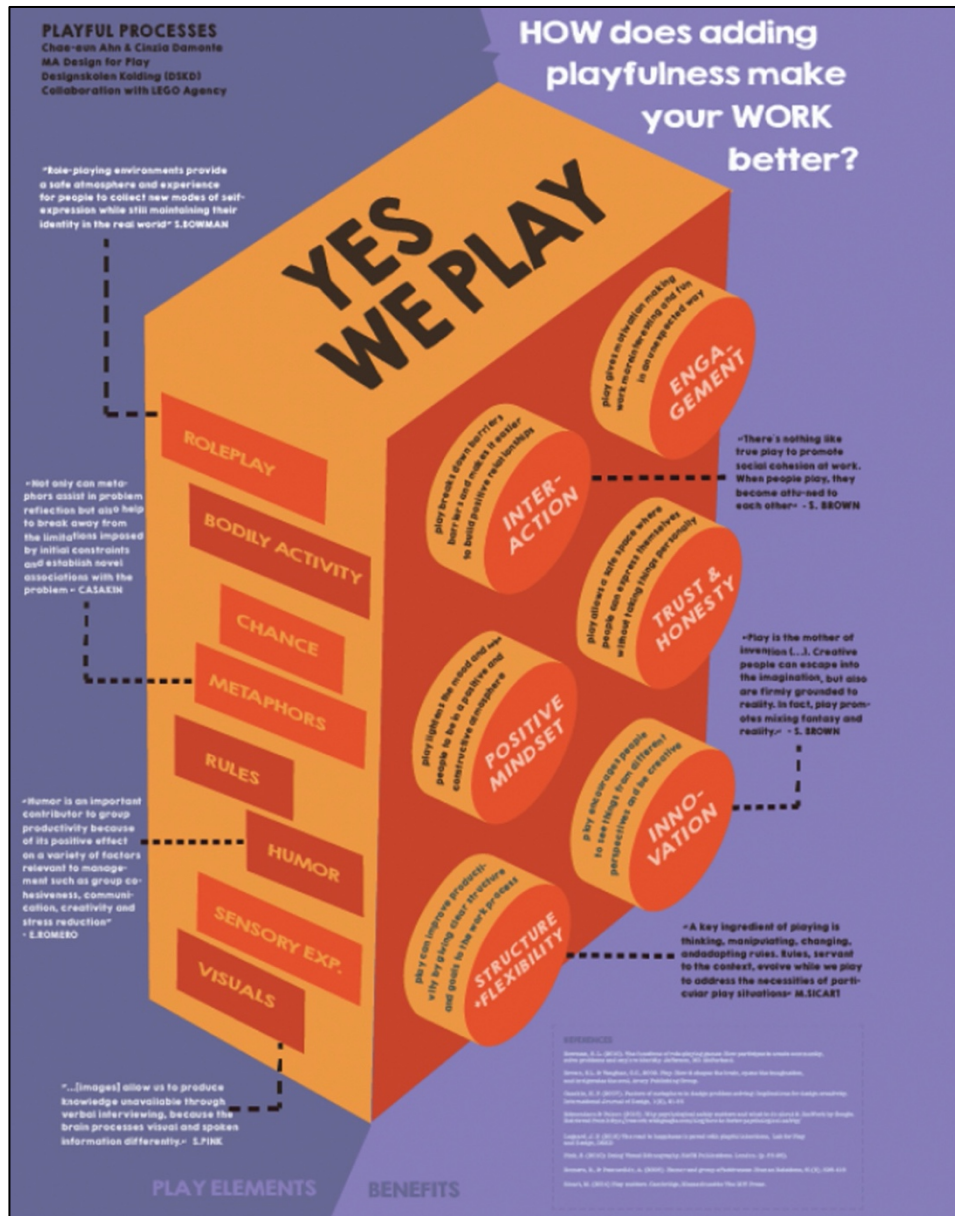


Figure 11 Play Poster containing insights shared with the unit at LEGO agency

## 7 Case three: Play design sprints & Play scales in small design consultancy

Another student worked with Regndans (“rain dance”), a small design agency that specializes in facilitating creative processes through design sprints. They have a diverse range of public organizations and private companies as their customers, all of whom they aim to help solve “real problems for real people”.

### *First co-framing and project interventions*

For students joining a company as part of this course, the issue of *access* is always of key importance. The students need proper access to the relevant people and processes in order to have real influence and make an actual impact. Due to the small size of the company Regndans and the student’s good ability to build a trusting relationship, she was allowed to shape many projects, externally and internally. As they said, she was given “the keys to Regndans”. Right from the beginning, she was involved in an important design sprint with a customer. After this initial sprint, she started preparing a workshop with a different customer on the topic of recycling and sustainable materials. At this point, she had realized that her design background gave her a solid understanding of how physical materials and tactility influence our sense-making. She decided to combine these insights with her experience in play design, aiming for a workshop that activated both body, mind and the senses through engaging with physical materials. For a section of the workshop, she developed a “sense box” where participants would stick their hand in to touch and describe different materials without seeing them. All of this contributed to an atmosphere where participants felt safe to play and experiment, leading to a series of creative ideas for sustainable use of materials presented at the end.

### *Company identity intervention*

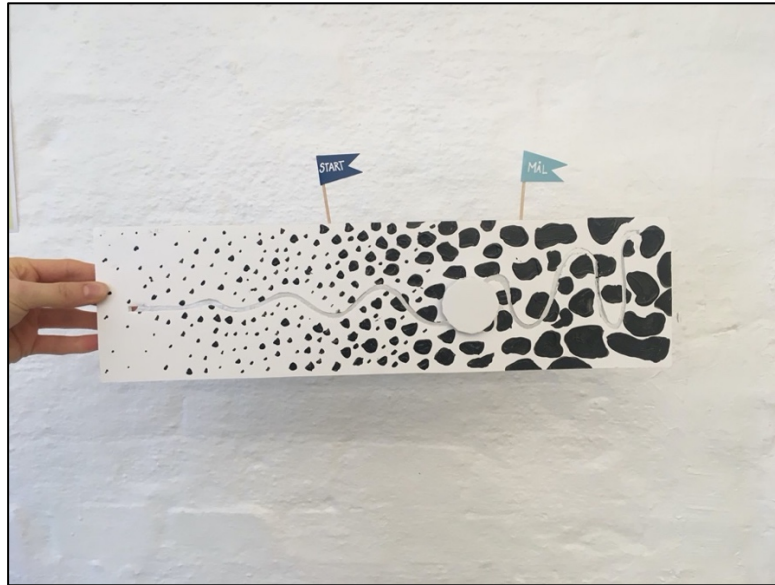
Once she had acquired a sufficient understanding of the organizational culture in Regndans, she proposed an internal play intervention to strengthen the identity of the company. She decided to use *taste* as a metaphor for identity, asking the question “what is the taste of Regndans?”. Here she was building on her knowledge that metaphors can enhance the creative process by allowing us to see the familiar in a new light (Casakin 2011). Drawing on the taste metaphor, the intervention was framed as a dinner party with invitations, a menu card and a selection of ingredients. The two partners were presented with a range of taste experiences, which they had to describe in detail. For each taste, they filled out a card, analyzing the taste and answering the question “this tastes a little bit like Regndans because...”. The playful process identified five core values of the company, that were all tied to a specific taste.

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### *Company identity intervention*

As the student worked on these projects, internally and externally, engaging with a range of rather different stakeholders, she observed a recurring issue. Whenever she wanted to introduce elements of play into the activities, the *value* of play was questioned. This is a common issue when working with play in professional contexts, as play is often perceived as inappropriate, a waste of time, silly and otherwise not worthy of serious attention (Walsh 2019; Brown and Vaughan 2010). At the same time the student knew, from practical experience and theoretical insight, that play could very likely help them achieve better results, especially when striving for creative innovation (Bateson and Martin 2013). She

saw the need for a “ludic space”, a physical and mental space for play, but she also saw some reluctance towards this idea. To make this tension visible and tangible, she created a “play scale” that charts the intensity of play, from no play to a high degree of play intensity. She used it to talk about the risks of *not* playing, and map out a possible progression from less playful to more playful activities over a period of time.



**Figure 12** The play scale

The play scale proved helpful in her conversations about the relevance of play, and she used it actively to demonstrate how increasing the intensity of play could also increase the potential for innovation. As such, it became an important part of her strategy for bridging the gap between what is already known and what is too unfamiliar to resonate. The student described this as a situation as ‘customers who want playful innovation, but who don’t know exactly what they want what that looks like’.

The partners in the company afterwards stated that this playful approach brought ‘impressive results’ and contributed to ‘all activities with unique knowledge and angles, which always brought new perspectives into the process’ that they would never have come up with themselves.

## **8 Cross-comparison and discussion**

In a cross-comparison look and following the collaborations emergent themes were derived and further reflected upon. Although many other themes are still to be looked at three of them seemed to be relevant in all the cases and when applied in specific ways led to effective dialogues and hands-on action. Here we discuss the two themes.

### *Collaborative exploration of alternative directions through metaphorical play*

From the ground-breaking book *Metaphors we live by* by George Lakoff and Mark Johnson (1980) it has decades back been described how the use of metaphors is part of everyday language and can be a powerful mean for let's say for instance politicians. Danish prime minister Mette Frederiksen in a televised speech to the public explaining the strategy of the Corona lockdown and opening in Denmark said that it is like a line dancer 'if we stand still we can fall, but if we move to fast it can go wrong, and therefore we must take one careful step at the time' (Translated by authors). While politicians use metaphorical sentences to communicate a message, designers in general tend to use them as a creative strategy to explore alternative scenarios and directions whether individual or in teams (Casakin 2011). In the cross-disciplinary settings in the paper cases the interactions enabled by the interventions also indicate a high potential for metaphors being used to create collaborative perspective shifts and movement towards new understandings.

The 'doors of opportunities' and 'autopsy' metaphors supported by visual and tangible means lead the municipality participants to search collaboratively for new opportunity spaces and sharing bad ideas from the past. In the LEGO agency case the 'fried egg' and the 'carrot auction' led to a visual structure of the information in hand and open discussions less confronting and more positive clashes of possible viewpoints - a point which has also been investigated in participatory innovation (Buur & Larsen 2010). When supported by visuals and tangibles the interactions and outcomes of the interventions also demonstrate that metaphors - after the perspective shift - can help simplify, connect and organize ideas, which resembles to some degree early findings tangibles (Roos 2006). In the start-up company case a sense box, taste and staging of a dinner party were used to explore not new ideas as such but identities and relations - aiming at forming stronger relations and culture for the start-up partners. After the introduction of framing metaphors further play and game techniques are then used like role-playing and randomizers by the students to foster a turn-taking not resting on the status quo power relation in groups participating as well as to kick participants out of habitual thinking.

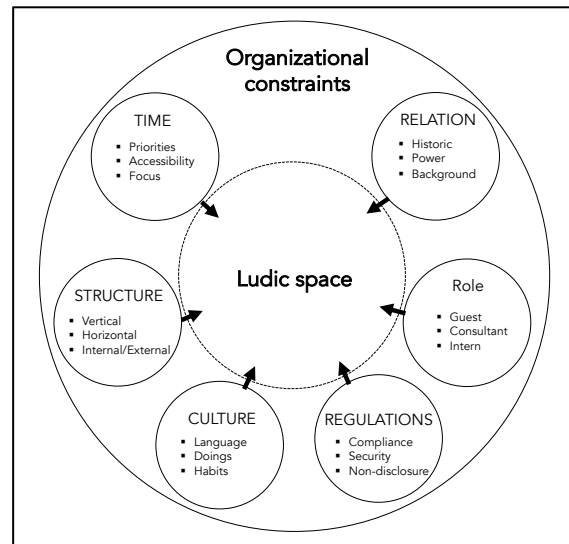
As designers and innovators occupied with changing status quo and innovating one specific metaphor might not be the right one - a possible next step might be to build up approaches that easily will let participants jump between two to three different framing metaphors to explore the perspectives and possible new ideas however the cases also indicate that benefits can be found in cross-disciplinary settings by *not* jumping head on into exploration of new ideas but instead looking for past experiences and discipline viewpoints as starting point.

The downside in the power of using metaphors with connected visuals, tangibles and play techniques might also be that such metaphors are difficult for the participants to leave behind over time if they are no longer strong framings until maybe new metaphors are introduced.

### *Creating play boundaries in organizations - suspending situational constraints*

The beforementioned elements - metaphors, visuals, tangibles, roleplay and randomizers - helped to establish what in circles of play and game theory are called sometimes play space, other times ludic space and even magic circles. While such a space can also be established in organizational settings they are difficult to foster due to work tensions and sometimes frustrations in the relation between people. This also including the 'judge the idea/thought itself, not the person' attempt and avoidance of the phenomenon of the devil's advocate (Kelley 2005). One model emerging from the debriefings highlighted a number of what we decided to call organizational constraints - these are not meant as negative barings but as

constraints to be aware of and design the intervention around and helping to set the conditions.



**Figure 13** Ludic space and the influencing constraints

Some of the constraints the students in the cases had to deal with was related to the 'right time and place' to intervene - the model indicating the process for the students and the involved employees in the municipality case (Fig. 13) clearly highlight these difficulties - this was echoed by the students in the marketing case. Sensing and observing in the first interventions also led to a better understanding of historical connections between participants, the power relations and the diversity in the professional backgrounds. In the start-up case this further also led to a developed play scale model by the student to help choose when to use what play technique and with what kind of intensity. In the cases the students also jumped between pre-arranged workshop spaces and everyday meetings as well as informal work activities and environments also to challenge the perspective that novel thinking only happens in formalized workshops and labs.

With the quite heavy organizational constraints to bear in mind associating the play and game activities here by only the shallow term 'fun' might not be nuanced enough. Often the interventions and interactions in these are characterized by deep immersion, highly concentrated time with many senses in use and a complex number of parallel and intertwined number of interactions that students and any other facilitator cannot catch all of. Even though incorporating a high number of the discussed and play and game techniques occasionally these organizational constraints pops-up and challenge the new sparkling thoughts in the groups. For the moment we tend to call this a *liberating ludic space* - a space that aim to suspend everyday routines and status quo operational matters to allow for new directions to emerge.

## **9 Conclusions**

Depending on the current status quo of the company the students might be caught in a net of flawed organizational ambidexterity - meaning a lack of keeping both operations and innovation running with resources. The people or the participants in the interventions might not be able to leave operations behind more than a few seconds. When in crisis as a company either because of changing customer behaviour or larger societal changes, companies and organizations tend to be caught up in strategies that looks only into operations and optimizing - cutting away all sparks of new ideas. When having growth companies might have strong ambidextrous strategies in place but those having no new value propositions to ramp up when others are in decline will fail to live on for long.

With such perspective in place it is clear that students cannot change the whole organization through seven weeks of collaboration and change processes are long and somewhat slow and can last many years - but the means used here are powerful ways of planting seeds in the organization that tend to last for a while if not always coming into full use. Main contact persons from the involved companies have in follow-up discussions months after stated that the methods are still in use or the working mechanism of these are saved in the mindset of the participants coming into place in later meetings or workshops. Part of these collaborations between the students and the organizations are also to build up stronger relations to the people in the organization and between. One could argue that this is a much better way to test a relation between a student or potential employee than job interviews and the increasing psychological cases associated with these where organizations do not get to see them in design and innovation processes and social interactions. Corresponding with earlier results from other courses the students have a chance to build longer relations with the organization before the end of the studies. Many of students in the course are still connected deeply or employed with the organizations while others find out what they want with their career as a direct effect of seeing themselves and the specific organization in action.

Our aim to build on the preliminary results on the play and game techniques being applied especially the use of metaphors and role-play to further sophisticate these approaches. For collaboration organizations in the student-industry set-up we will also look for organizations having had less or almost no encounters with play and game-based innovation methods before.

## **10 Acknowledgement**

We wish to thank all the students and organizations that took part in the collaborations. As well, we thank Fonden for Entrepreneurskab and EU Knowledge alliance project Gamify for financial support. GAMIFY has been funded with support from the European Commission. This communication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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