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To control or not to control: How to organize employee-driven innovation

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Nowadays organizations are increasingly understanding the relevance of employees for innovation. Innovative initiatives that involve larger groups of employees, despite their role and hierarchical position, are more and more diffused within companies. However, the literature on this topic is still at its infancy, especially considering those initiatives that are structured and organized by management. Using multiple case studies, performing 34 semistructured interviews in five different companies, we investigate how managers navigate alternative design choices when they organize employee-driven innovation (EDI). Our findings suggest companies adopt different structures to organize EDI (i.e., open, closed, and hybrid), depending on the desired goals they want to achieve (i.e., creating a community or producing innovation). In this paper, we provide a clustering of different EDI practices (i.e., community-nurturing practices, solution-based practices, and integrative practices), outlining how managers can configure different design choices (e.g., topic definition, team creation, ideas transfer, ideas filtering and evaluation, and task division and allocation) to drive employees' involvement and to produce innovation.

KEYWORDS
community-building, employee-driven innovation, employees' involvement, organizing innovation, producing innovation

1 | INTRODUCTION

In recent years, organizations have shown a tendency to seek innovation outside labs and R&D functions, looking both outside the boundaries of the company (i.e., soliciting ideas from consumers, and suppliers) (Hanine & Steils, 2019; Overdiek & Warnaby, 2020) and inside the firm (i.e., recognizing the potential of non-R&D personnel) (Høyrup, 2010). Traditionally, decisions about innovations have been the right and duty of a small fraction of individuals within the organization: Top managers and specific functions like R&D or strategy. The majority of employees within the firm have been mostly excluded from these decisions (Kesting & Ulhøi, 2010).

However, in recent years, practitioners and academics are increasingly paying attention to the innovative potential of "ordinary employees," meaning employees without an innovation-specific position. This is the idea of employee-driven innovation (EDI), which endorse the involvement of all the company employees in innovative activities: "From shop-floor workers and professionals to middle managers across the boundaries of existing departments and professions" (Kesting & Ulhøi, 2010, p. 66). Today, many organizations are encouraging employees, at all the levels of the organization, to play a more active role in the innovation process (Abstein & Spieth, 2014; Chasanidou et al., 2018).

This trend has been favoured by two main drivers: First, with increased complexity in the environment, it is becoming almost

impossible for a single individual to possess all the knowledge and skills needed to innovate; these capabilities are instead dispersed among all officers in the organization (Høyrup, 2010). Second, today, employees increasingly expect to realize their potential at work (Felstead et al., 2018), and "participation has become an important element in firms' competition to attract and retain the best human talents" (Kesting & Ulhøi, 2010, p. 65).

Initiatives like the "innovation time-off policy," initially introduced by Google and 3M, or internal innovation contests, hackathons, and internal crowdsourcing are flourishing in contemporary business world (Tirabeni & Soderquist, 2019). Organizations are trying several alternatives to invite employees' participation in the innovation process. Yet, there is a lack of research to guide the organization of these events. It is still not clear how different design choices can be combined and implemented when EDI is structured from the top.

EDI can in fact emerge spontaneously, informally, and in an unplanned manner, but it can also be structured in formal and organized activities (Høyrup, 2012). While unstructured bottom-up approaches have been the initial focus of academic research, today the challenge for the practice of EDI is to understand how to consciously design and manage specific programs in order to enhance innovation (Tirabeni & Soderquist, 2019). Indeed, there is a wide range of options for how to orchestrate employees' involvement in innovation (e.g., introducing financial incentives, facilitating communication and knowledge flows, and enabling participation mechanisms), and it is still not clear how to select and combine different alternatives (Bäckström & Bengtsson, 2019).

Moreover, scholars have stressed that EDI can mean different things in different organizations: It can aim at employees' involvement and at the implementation of innovations (Kesting & Ulhøi, 2010). However, these goals can be achieved in different ways: Involvement seems favoured by freedom and autonomy (Kurz et al., 2018) while implementing innovation requires certain levels of control (Voxted, 2018).

The aim of this paper is to understand how managers navigate different design choices when they organize EDI and to what extent the goal pursued by the organizers influence the formalization of these initiatives. To reach our purpose, we use a qualitative research approach, based on 34 interviews, conducted within five companies. In this paper, we provide a clustering of different EDI practices (i.e., community-nurturing practices, solution-based practices, and integrative practices), outlining how managers can configure different design choices (e.g., topic definition, team creation, and ideas transfer) to drive employee involvement and innovation.

The article is organized as follows: In the first section, we explain the characteristics of EDI and we introduce the research question for this study. In Section 2, we present the methodology and cases, and in Section 3, we introduce our findings that will be later discussed in Section 4.

2 | THEORETICAL BACKGROUND

2.1 | EDI characteristics

According to Kesting and Ulhøi (2010, p. 66), "employee-driven innovation (EDI) refers to the *generation* and *implementation* of significant *new ideas, products, and processes* originating from a single employee or the joint efforts of two or more *employees who are not assigned to this task*." This definition helps in pointing out three relevant characteristics about EDI.

First, EDI requires both the *generation* and the *implementation* of significant innovations. Indeed, employees driving innovation means "both coming up with an idea and being involved in its implementation. It means more than just having an inspiration. Putting forward an idea thus includes (1) further development, (2) promotion of the idea so that it becomes subject to corporate decision" (Smith et al. 2012, p. 225).

Second, EDI can include any content (i.e., product, process, and paradigm innovations), even if new knowledge, reconstruction of routines, and organizational innovation often predominate (Høyrup, 2010). EDI improvements can be *both incremental and radical* (Kesting & Ulhøi, 2010), and both *inner-directed* (focused on organizational processes and people management policies) or *outer-directed* (focused on the business model and choices for being successful in the market) (Høyrup, 2010).

Finally, EDI focuses on *ordinary employees*, at all levels of the organization, who are not normally assigned to innovation activities but can contribute *outside the boundaries of their primary job responsibilities* (Høyrup, 2010). Employees can contribute to innovation with their creativity, exclusive information, and network (Smith et al., 2012).

Employees' contribution is a relevant topic that has been explored before in other research streams, such as continuous improvement or TQM literature (Bessant & Caffyn, 1997; Jørgensen et al., 2006). However, EDI presents new characteristics compared with traditional research on corporate suggestion schemes. Suggestion systems indeed are usually conceived as "part of a continuous improvement strategy, in which employees only submit ideas which then will be assessed and implemented (or not) by others presumed to be experts" (Tirabeni & Soderquist, 2019, p. 5). EDI instead rests on the assumption that employees should be involved *both in idea generation and implementation*.

Moreover, the paradigm of continuous improvement or TQM mostly regards employees as a means of incremental innovations, rather than vehicles for discontinuous change. EDI instead considers employees as possible *sources of radical innovations* (both "inner-directed" and "outer-directed").

Finally, EDI engages employees also *outside the boundaries of their primary job responsibilities*, outside existing practices and procedures in which they are involved. Employees from all over the company can be invited to participate in those organizational decision-making procedures by which innovations are triggered and determined, even in processes that might not be directly connected to their day-to-day work.

2.2 | The challenges in structured EDI processes

EDI includes a variety of different processes; it can "emerge sponta-neously and informally; it may be unplanned, just as it can be orga-nized and supported by various organizational and managerial means." (Høyrup, 2010, p. 149). According to Høyrup (2012), EDI can take the following form: (i) A *bottom-up process* where innovation arises from the everyday cultural practice of employees, also from practices that did not start with the goal of innovation; (ii) a *mixture of bottom-up and top-down processes* where management tries to formalize promis-ing innovation processes coming from employees; (iii) a *top-down pro-cess* where management invites employees in participating to the innovation process.

While the first approach (bottom-up) is closer to a traditional view of employees' involvement in innovation (i.e., an informal process, not planned, and carried out by employees who identify an innovative opportunity); the last two approaches (mixture and top-down) reshape the notion of employees' participation. They imply that managers should organize specific practices to involve ordinary employees in the innovation process.

According to Bäckström and Bengtsson (2019), to develop the EDI discourse further, scholars need to better investigate interactive and top-down processes. Indeed, *organizing* EDI may be a challenging experience for managers, as there is a wide range of options for how to orchestrate employees' involvement in innovation: Designing job autonomy, decentralizing decision making, introducing financial incen-tives, facilitating communication and knowledge flows, and enabling participation mechanisms (Bäckström & Bengtsson, 2019). Today, "the challenge for the practice of EDI in organizations is to move away from an essentially unstructured and spontaneous approach to more specific programs, *consciously designed and managed* in order to enhance EDI's positive impacts on innovation" (Tirabeni & Soderquist, 2019, p. 6).

Currently, most of the studies have explored the conditions or antecedents for EDI. Research has been focused both on individual conditions (e.g., Lempiälä et al., 2018; Weigt-Rohrbeck & Linneberg, 2019) and organizational arrangements (e.g., Lotz, 2018; Sorensen et al., 2018) to foster EDI. For example, Echebiri (2020) identifies individual-level antecedents of EDI, showing that self-leadership has a positive relationship with employee-driven innovation and the need for autonomy has an indirect association with EDI. Kurz et al. (2018) show that an appropriate job design that stresses autonomy and innovativeness as job requirements influences employees' innovative behaviour. Amundsen et al. (2014) found that enterprises that experience increased innovative capacity due to EDI-practices have a number of cultural characteristics in common (i.e., commitment, cooperative orientation, pride, trust etc.).

Few studies have explored how managers can *formalize* the involvement of employees in the innovation process. Teglborg-Lefèvre (2010) identifies a set of factors differentiating structured approaches to EDI: For example, the type of innovation, the popula-tion targeted, or the ways in which suggestions are processed and rewarded. However, the study provides no explanation on how to combine and choose between different factors.

Beside the organization of these events, another challenging ele-ment is the dualistic goal pursued by EDI. Scholars have noted that EDI aims both at employees' involvement and at the implementation of innovative ideas (Kesting & Ulhøi, 2010; Teglborg-Lefèvre, 2010). However, some studies have underlined opposite ways to achieve these goals (Hartley et al., 1997). For example, autonomy and freedom seem to favour employees' innovativeness and involvement (Echebiri, 2020; Kurz et al., 2018; Lempiälä et al., 2018). On the other side, control seems necessary to ensure the implementation of employees' ideas (Voxted, 2018). We claim that this dualistic goal can therefore influence the extent to which EDI is formalized.

This paper aims precisely to understand how managers can choose between different possible alternatives when they organize EDI and if and how the goal pursued by the organizers is linked to the choice of a specific configuration. The research question we would like to address is thus the following:

RQ: How different design choices can be combined to organize EDI?

3 | METHODOLOGY

We conducted a multiple case study, selecting companies who operate in different sectors and are implementing heterogeneous EDI initiatives in order to get a general overview on how these practices can be organized and managed. The five companies that we selected (described in Table 1) are encouraging employees to innovate outside the scope of their day-to-day activity using different initiatives: From hackathons, to gamification, innovation challenges, and innovation time-off policy.

Data collection was performed using a semistructured interview protocol. We developed an interview guide that represented a general script for the interviews. The interview guide provided the overall structure for the discussion, then specific variation in our questions were performed during the conversation, taking in consideration the experience of the informants and the nature of the innovative initia-tives we were investigating. Our interviewees were selected across different hierarchical levels and functions; for each initiative, we col-lected information both from participants and organizers, in order to provide broader perspectives to our research. We performed a total of 34 interviews in five different companies. The interviews lasted for 40–70 min and were recorded and transcribed. Additional information (i.e., reports, presentations, videos, pictures, and other internal documents) were directly provided from our interviewees and were used in the coding process. Table 1 summarizes the interviewees and collected material for each case.

For data analysis, we followed Gioia et al.'s (2013) approach for qualitative research. We created a database in which we reported information for each interview, including informants' role, date, length, and place of the interview. With an iterative process, triangulating emergent data, codes and the relevant literature, we grouped the information derived from interviews and additional documents. We performed multiple rounds of data analysis. To begin, the researcher

TABLE 1 Description of cases

Company	Industry	EDI initiative	Type of innovation	Interviewees	Additional material
Marconi	Consultancy	Hackathons	Process and product innovation	• 2 executive partners (Giampiero, Giacomo) • Lucia, senior manager • Enrico, manager • 2 employees (Marta, Emanuele)	Internal videos, pictures
Meucci	IT	Country Innovation Team (CIT)	Process and product innovation	• Marco, executive partner • Roberto, senior manager • 3 employees (Nadia, Carlo, Simone)	Pictures
Volta	Energy	Innovation Map & Innovation Lab	Process and product innovation	• Carlotta, manager • 9 employees (Davide, Umberto, Massimo, Renata, Pietro, Francesco, Gabriele, Marilde, Franco)	Internal documents, pictures
Fermi	Consultancy	Innovation Challenges & Hackathon	Process and product innovation	• 4 senior manager (Gabriele, Claudio, Alessio, Alessandro) • 6 employees (Francesca, Filippo, Carlo, Luca, Andrea, Stefano)	Recorded video from the event, slides, internal documents
Natta	Conglomerate	15% Time Culture	Process and product innovation	• Alessandro, senior manager • Cristina, manager • Marco, employee	Slides

who has conducted the interviews developed a descriptive summary of each initiative based on the information acquired from the interview transcripts and additional material.

The research team then started the analyses of the interview transcripts to identify cross-patterns of themes associated to the organization of EDI practices.

First of all, we identified two main goals that our interviewees were mentioning while describing why they decided to organize EDI: (i) Creating a community and (ii) producing innovation. We understood that these two goals are the drivers behind the decision to introduce a structured EDI initiative in the company. The first goal of "community building" resonate with the stream in innovation literature related to capacity building and outcome achieving which demonstrates that innovation capabilities of companies can be nurtured by nurturing internal social ties, which in turns favour knowledge sharing and idea generation (e.g., Calantone et al., 2002; Jantunen, 2005).

We then noted a set of design choices that our informants were mentioning while talking about the organization of these practices (i.e., topic definition, team creation, ideas transfer, ideas filtering and evaluation, and task division and allocation), which were our first-order codes. We identified three groups of design choices connected to the level of formalization introduced by the organizer: A closed structure, an open structure, and a hybrid structure. We also noticed a group of common design choices that were similar in all the cases: The decisions about task division and incentives. Figure 1 shows the coding tree (Gioia et al., 2013) related to the overall EDI Organization.

We finally noted a connection between the *desired goal* and the *openness/closeness of the design choices* identified. We engaged a qualitative analysis that resulted in the categorization of different clusters of initiatives (i.e., community-nurturing practices, solution-based

practices, and integrative practices). We are going to present in details each cluster in Section 4.

4 | FINDINGS

In this section, we are going to present how managers can combine different design choices to organize EDI. Through cases, we understood that managers choose between three levels of formalization. They can select an (i) *open* structure, a (ii) *closed* structure, or a (iii) *hybrid* structure to organize EDI, depending on the combination of the following design choices: Topic definition, team creation, ideas transfer, and ideas filtering and evaluation.

As explained in Table 2, when employees are actively involved in topic definition, team creation, and ideas filtering and evaluation and the ideas are visible to the whole company, the structure of the event is *open*. When topic definition, team creation, and ideas filtering and evaluation are in the hands of managers and ideas are visible just to certain groups in the company, the structure of the event is *closed*. When employees are involved in topic definition and team creation, but idea transfer, filtering, and evaluation are controlled from managers, the structure of the event is *hybrid*.

We also understood that the *desired goal* pursued by the organizers influences the choice of a specific structure. Managers pursue two goals in EDI: (i) Community-building and (ii) producing innovation. The choice to pursue one of these goals or both these goals lead the organizer towards the selection of an open, closed, or hybrid structure.

In the following sections, we are going to present different clusters of initiatives identified. First, we are going to present the Marconi
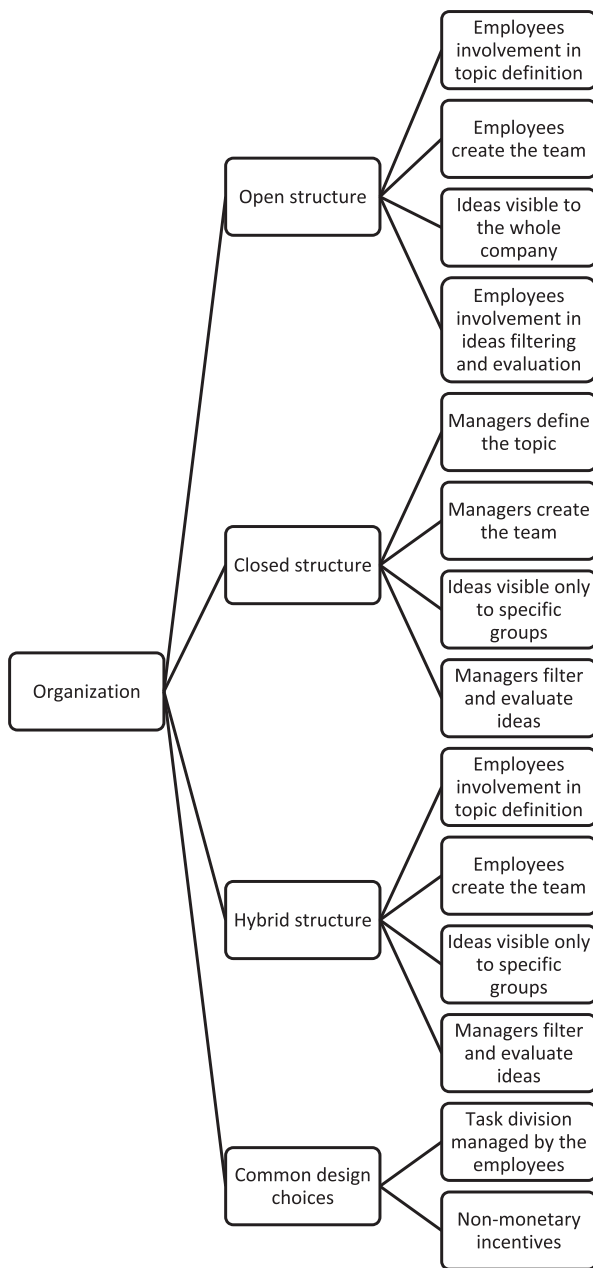
FIGURE 1 EDI organization

case, where managers decided to organize an EDI initiative for *community-building* and therefore they chose an open structure. We define these kind of practices as community-nurturing practices. Then we will present the opposite case, Meucci, where managers wanted to *produce innovation* and therefore selected a closed structure. We define these kind of practices as solution-based practices. In Volta, the organizers pursued *both community building and innovation in separate initiatives* and they consciously chose an open or closed design to be compliant with their goals. After, we will talk about Fermi and Natta, where the organizers pursued *both community building and innovation simultaneously* and therefore tried a hybrid structure in a learning by doing process. We define these practices as integrative

practices. Finally, we are going to explain what are the design choices that are common to all the cases: Decentralized task division and nonmonetary incentives. In Section 5, we are going to discuss why these design choices are similar in all the cases.

4.1 | Marconi: An example of community-nurturing practice

The hackathons organized in Marconi are a good example of the practices that we named community-nurturing practices.

Marconi involves employees in hackathons: 48-h competitions where different teams of employees compete to answer an innovation challenge. The company provide a broad theme for the hackathon, based on the topics proposed by employees in another format called Labcamps. Then all the employees can post their ideas in the company social network. Organizers select six to eight ideas to be further developed and implemented during the hackathon. Organizers communicate the list of projects selected and open the possibility to comment other people proposals; in this way, the original team who proposed the idea can pick additional team members. Employees can self-organize their work before the hackathon, compete during the 48-h event to realize their proposal, and finally present their work to a jury who elects the hackathon winner.

In Marconi, the main goal of the initiative is to foster continuous learning and knowledge sharing:

> We have to introduce an effective way of continuous learning (...) the idea was really let us give people and knowledge the opportunity to emerge. (Lucia – senior manager)

Managers organize hackathons to create a sense of community and belonging among employees and to diffuse an innovative culture:

> Marconi is really investing on it, it is an attitude ... it is a culture, it is a matter of sharing, it is an attitude towards innovation that you actually build. (Lucia – senior manager)

> In structuring this initiative, the CEO keeps telling me "You are not working for the customers. Focus on the people, you are working for the people and their knowledge, so, you do not have to make the customers happy, you have to make sure that the people know more. And then the customers will be happy about that." (Lucia – senior manager)

The desired goal affects the structure of the event: The organizers prefer an *open and collaborative design* and they try to *involve all the employees* in each step of the initiative. For example, employees are indirectly involved in *the choice of the topic*, because organizers looks at the most popular training sessions conducted by

TABLE 2 Comparison of different initiatives

Name of the company and of the EDI initiative	Goal pursued	Open/closed design choices				Design choices in common to all the cases	
		Topic definition	Ideas transfer	Ideas filtering and evaluation	Team creation	Task division and allocation	Incentive
Marconi: Hackathon	Community-building	Employees involvement	Visible to the whole company	Employees involvement	Done by employees	Done by employees	Non-monetary
	Foster continuous learning and knowledge sharing	General topic defined by the organizers, considering also topics proposed by employees during other events (Labcamps)	Post in internal social network	Ideas filtered by the organizer. Final evaluation during the event done by a jury (also popular jury composed by employees)	Done by employees and open to the community	Done independently by employees	Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Meucci: Country Innovation Team	Producing innovation	Top-down selection of topics	Visible to specific groups	Done by managers	Top-down	Done by employees	Non-monetary
	Producing innovation on specific topics identified by general management	Priorities and areas of investigation identified from management	Visible only to CIT members	Evaluation from management	Done by organizers	Done independently by employees	Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Volta: Innovation Map	Community-building	Employees involvement	Visible to the whole company	Done by managers	--	--	Non-monetary
	Foster a culture of innovation and change among employees	Open topic	Post in the website created for the event	Filtering and evaluation done by management			Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Volta: Innovation Lab	Producing innovation	Employees involvement	Visible to specific groups	Done by managers	Top-down	Done by employees	Non-monetary
	Implement innovative projects	Decided by managers considering the innovation map	Presentation to managers	Evaluation from management	Done by organizers	Done independently by employees	Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Fermi: Innovation Challenges	Community-building + producing innovation	Top-down selection of topics	Visible to the whole company	Employees involvement	Done by employees	Done by employees	Non-monetary

(Continues)

TABLE 2 (Continued)

Name of the company and of the EDI initiative	Goal pursued	Open/closed design choices				Design choices in common to all the cases	
		Topic definition	Ideas transfer	Ideas filtering and evaluation	Team creation	Task division and allocation	Incentive
	Foster a culture of innovation and implement ideas	General topic defined by organizers	Post in internal crowdsourcing platform	Ideas filtered by the organizer but voted also by employees. Different rounds of evaluations during the event	The innovator selects team members among employees who commented the idea	Done independently by employees	Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Fermi: Hackathon	Community-building + producing innovation	Employees involvement	Visible to specific groups	Done by managers	Done by employees	Done by employees	Monetary and non-monetary
	Foster a culture of innovation and implement ideas	Defined by employees in previous challenges	Presentation during the 30 hours event	Final presentation during the event to a jury composed by organizers and experts	Done by participants with some criteria suggested by the organizers	Done independently by employees	Cash prize, curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement
Natta: 15% Time Culture	Community-building + producing innovation	Done by employees	Visible to specific groups	Done by managers	Done by employees	Done by employees	Non-monetary
	Foster employees' proactive contribution and implement ideas	Defined independently by employees	Individual presentation to managers	Managers filter and evaluate the idea	Done independently by employees	Done independently by employees	Curiosity, learning opportunities, challenging activities, routine escape, visibility, network improvement

the employees to find themes for the hackathons. Employees are also responsible for *team creation*: After the announcement of the hackathon, they create a team and post their proposal in the internal social network. They can also select additional team members between the people who comment their proposal. Employees are also involved in *the evaluation* of the projects, as they vote to select the hackathon winner.

Community-nurturing practices are an interesting way to involve employees from different organizational areas with the aim of creating an innovative culture and a knowledge sharing attitude within the company. However, these practices do not have the primary goal to produce innovative solutions. Both managers and employees describe this event as a game or an exercise:

> We are leveraging very much on the group initiatives about innovation (...) for our people to enter in the innovation mood, in the innovation way of working. In our company we have specific programs to have people *act as innovative people*. (Giacomo – executive partner)

> There was this collaboration during the hackathon and I gave them my availability for everything, I mean, if they have technical questions or if they want to go on with this project, but then, let me say, I did not have news about that, so I do not know if the project is going on or it was just a game. (Emanuele – employee)

Even if the primary goal of such EDI initiatives in Marconi was not to produce innovative solutions, interviewees mentioned some actual innovative outcome that was initiated by such initiatives, for example, the "Smart Travel Assistant" for train users. The idea for this innovative solution was first developed by a multifunctional team that was participating in the hackathon, and it was implemented for one customer by the Machine Learning unit.

4.2 | Meucci: An example of solution-based practice

Some managers consider the implementation of innovation as the predominant goal when they introduce EDI in their companies. We name these practices *solution-based practices*, because in this case employees are involved as problem solvers in order to address a problem or an opportunity identified by the managers. The *Country Innovation Team (CIT)* organized by Meucci is a perfect example of this kind of practice.

In Meucci, top managers selected 300 employees as members of the CIT. During the year, the CIT management board usually starts different waves of innovation, each wave includes 12 different innovation projects identified by top managers. The CIT management board creates groups of employees choosing among the 300 CIT members, and assigning them to specific projects aiming at implementing innovative ideas.

The CIT organizers explained that their goal is to generate innovative solutions:

> We are trying to put people and ideas together, to have projects, with the goal of generating innovation. (Marco – executive partner)

The design of this practice is *closed*, the *topics* are defined by management:

> The Country Innovation Team is supported by the Country General Manager with the board, so when general managers identify in their discussions some themes, priorities, areas that require attention, instead of taking a decision from the top, they say "ok this is an area on which we should do something, let us give the work to the Country Innovation Team." (Roberto – senior manager)

Managers are also responsible for *team creation*, they create groups selecting employees from the pool of 300 pre-selected CIT members, and they assign a project leader and an executive sponsor to each project:

> All the assignments of executive sponsors, project leaders and team members have been defined by the CIT governance. (Simone – employee)

The *final evaluation* of the projects is also done by the managers, other employees are not involved for feedback:

> The team works for a sufficient period of time to analyse the problem, define a proposal and then submit it to the general management in order to have the approval and the resources to go forward. (Roberto – senior manager)

Solution-based practices are used when companies want to produce innovation. Managers involve employees to address relevant challenges and implement innovative solutions. For example, many of the features related to the Meucci software product offer leveraging on artificial intelligence were initially proposed by employees in such EDI initiatives. However, employees are rarely part of the teams that actually implement such new product features. For this reason, they do not feel high levels of involvement in these practices:

> Let me tell you, in the initiative that Roberto described to you, the CIT, there are several groups, I am in a group and someone can think "you have the freedom to do whatever you want", yes in part it is true, but in the reality this initiative has been set from above, in the groups you are free to propose and do something, it is an initiative with freedom but set from above. So,

is there flexibility? Certainly, there is more flexibility than in a super structured project, a classic "Meucci project", as it may be a software implementation, but anyway there is a bit of rigidity. (Nadia - employee)

4.3 | Volta: A combination of community-nurturing practices and solution-based practices

In some initiatives, managers pursue both community building and innovation; however, they use different approaches to achieve this dualistic goal (i.e., a sequential or a simultaneous approach). Sometimes managers decide to pursue these objectives *sequentially*: At first, they foster *community-building*, using community-nurturing practices (*open* and *participative* initiatives); afterwards they introduce solution-based practices (*structured* and *closed* initiatives) to *produce innovation*. The *Innovation Map* and *Innovation Lab* organized by Volta are perfect examples of this sequential approach. Volta decided to diffuse an innovative culture first:

> Volta has decided to invest in its people with an initiative to spread a culture of innovation and a climate of openness to change. (Carlotta - manager)

At first, all the employees were invited from top management to join a gamification event. Various stickers were distributed among employees in different business units, people had to cooperate and share their stickers to create a map. After completing the map, employees had access to a platform where they could watch two informative videos about innovation, and they were further invited to post innovative ideas in the "innovation box" online. Managers organized this gamification event to diffuse the idea that "innovation is expected from everyone" and to let employees "play the innovation role":

> One morning everyone found on the desk an envelope, containing two or three stickers that we had to put together to create the Innovation Map (…) so this was the first step, it was like playing, we had to play the innovation role, afterwards, once the concept of innovation became more and more familiar to us, the organizers add more activities. But the first step was this: giving people sensibleness about innovation and making people understand that innovation starts from everyone. (Davide - employee)

Coherently with the involvement goal, the organization of the Innovation Map is open. Employees can propose *any topic*, and also *idea transfer* is organized as a game:

> You have to propose something and then you have to nominate some of your colleagues to do the same, so one of my colleague said "I want a company with less

paper and more digital tools and I ask Davide what he wants", and I said "I want more smart devices for our operative technicians and I ask Marco what he wants" and so on. (Davide - employee)

At the end of the Innovation Map, the company identified 304 "innovation changers," meaning employees that participated in the first initiative and gave their availability to be involved in the second event: The Innovation Lab. The goal of this second initiative was to *produce innovation*:

> We move from a phase of engagement on the theme of innovation and change, to the application of innovation in the company, with a focus on the development of people's potential. Our goal is the realization of at least one innovative and transversal project that can be directly implemented in the company at the end of the path. (Carlotta - manager)

Coherent with this goal, the structure of the event became closed and guided from management. Managers created 12 teams of employees that competed to generate innovative projects:

> They called me and they put me in a group, I do not know the criteria, however, they put me in a group and we were dealing with digital innovation. (Gabriele, employee)

Idea *evaluation* was also done by managers, without the involvement of employees. Four winning innovative projects were chosen to be implemented. For example, the company was able to launch an innovative visor for logistic operators that exploit augmented reality to support workers in goods shifting in the plant.

Organizing initiatives that pursue both involvement and innovation *sequentially* can be a good strategy to engage employees and implement innovative ideas; however, there is also another option for managers who want to pursue dualistic goals, as exemplified in the next section.

4.4 | Natta and Fermi: An example of integrative practices

Managers can organize an EDI initiative to pursue community building and innovation *simultaneously*, through *Integrative Practices*. When both these goals are sought in the same initiative, companies use a hybrid structure, applying both closed and participative solutions. The *Innovation Challenges* and *Hackathon* organized by Fermi and the *15% Time Culture* structured by Natta can provide examples of this kind of practices.

Fermi created a special division called Innovation Farm, responsible for the organization of innovative initiatives. From 2015, the Innovation Farm has organized four Innovation Challenges. In those

challenges, employees were invited to post their ideas using an internal crowdsourcing platform, the organizers provided a general theme for each challenge, and employees had the possibility to comment other people proposals. After a first screening, ideas were grouped, eliminated, or selected from the organizers, who asked the "innovator" (the employee that proposed the idea) to create a team selecting other team members among the people that previously commented the idea. Different teams were formed in this way and had the possibility to improve their idea and compete in a contest, in two rounds: A semifinal and a final.

Fermi initially introduced Innovation Challenges with the goal to "spread the culture of innovation," but also to find and implement innovative ideas. The Innovation Challenges point out the risk of a simultaneous approach: If the structure of the event is too open or too closed, there is the possibility to shift towards community-building practices or solution-based practices and miss one of the goals (community-building vs. producing innovation). In Fermi's Innovation Challenges, the design is too open: *Idea transfer* is transparent, employees are involved in *filtering* ideas and are responsible for *team creation*, and only the topic definition and the final evaluation are performed by the managers.

The open structure of the Innovation Challenges allows employees to exchange ideas and improve their proposals, thanks to the interactions and feedback received in the process. However, while this format meets involvement and knowledge sharing goals, it is not sufficient to meet the innovation goal:

> My drama was that I arrived at the end of the challenge, I had collected some cool ideas from employees, I went to check, what was behind the projects? Anything! So, we thought to organize the hackathon to really bring ideas to the market. (Gabriele - senior manager)

In Integrative Practices, closed and open design choices are balanced to meet both involvement and innovation goals, without shifting into community-nurturing practices or solution-based practices. Fermi indeed decided to organize another event, the hackathon, to reach the innovation goal. The managers selected some ideas not implemented yet from the Innovation Challenges, and they decided to further improve those ideas with a hackathon. The organization of the hackathon is *balanced*: Employees are involved in the definition of the topic and are autonomous for team creation; on the other side, the ideas are shared just among the groups that joined the hackathon and are evaluated by a formal jury (composed of managers, organizers, and external experts).

We noticed a similar structure also in the *15% Time Culture* implemented by Natta. In this company, we explored the 15% Time Culture, an initiative that has been running in the company for decades and is still ongoing:

> It was launched many years ago, in 1950 I think. The former president of the company said that every employee can come up with an idea, so if you have a good idea and you present it to your manger, you can take 15% of your time using the company's capabilities to develop your own idea. And we have many different examples of products that are now on the market that were developed with the 15% time culture. (Marco – employee)

A single employee or groups of employees make a short pitch to their managers and can receive a small budget and use the company labs to implement their idea. Once the idea is implemented, employees can patent it and apply for a company annual award, which gives them the recognition of "innovator of the year." The 15% Time Culture presents a balanced structure: The *topic is open*, defined by the employees and also the *team is formed by employees*. On the other side, *the project is shared between a restricted group* of people and the *managers are responsible for the evaluation* of the idea.

Integrative Practices can spread an innovative culture among employees and can also lead to implement or patent innovative solutions. For examples, in the Natta case, such practices finally produced patents for innovative adhesives, while in Fermi, several products that leverage on smart technologies for innovating tourists' experience in Italy through smart technologies were created. However, this simultaneous approach requires a balanced mix of closed and open design choices; it seems that the topic definition and team creation should be open to involve employees, while ideas transfer and evaluation should be controlled to meet the innovation goal.

4.5 | Similar design choices among different initiatives: Decentralized division of labour and nonmonetary incentives

Despite the aforementioned differences, all the practices presented have some characteristics in common. First, the division of labour in these practices is always decentralized and autonomous: Employees self-organize their work and allocate tasks within the team. Employees can divide tasks and assign roles among different members considering the following: (i) Competences and skills, (ii) roles they wish to contribute to even if they do not have extensive experiences, and (iii) time constraints and the overlap with their daily work activities.

In all the cases (with the exception of Natta, for the 15% Time Culture), we find that it was difficult for employees to balance their working life and the time devoted to the initiatives. Sometimes participants spend also their free-time working for the events:

> We worked during our free time, so extra-working-hours. (Volta's case – Pietro, employee)

> It takes some effort, we need to prepare presentations, we have quite full days usually and we still have to find time during the weekend to make presentations and feasibility studies, a series of activities. (Fermi's case – Filippo, employee)

If we consider motivation, we can find some further similarities among our cases. Four companies in our sample (Natta, Volta, Meucci, and Marconi) did not use monetary rewards in their initiatives:

> We did not use specific incentives, I can mention just visibility because we used a social platform, but we did not provide any kind of incentive, my opinion is that the majority of people joined the event because they wanted to tell their personal point of view, they join the event just for the willingness of participating. (Volta's case – Carlotta, manager)

In Fermi instead, one of the initiatives included a cash prize, because during the hackathon the company decided to involve also external people beside internal employees. However, from our interviews and observation of the hackathon, we discover that the monetary incentive was not considered the main driver for participation; this answer was common among the employees involved:

> The monetary incentive did not affect at all my decision to join the event, I did not even know that there was this incentive and how much it was at the beginning. (Fermi's case – employee at the hackathon)

In all our cases, employees mentioned intrinsic motivations like the possibility to learn and the willingness to challenge themselves and escape the daily working routine among the main reasons to join the initiatives:

> I joined the initiative to leave the daily routine, challenge myself and find new stimuli. (Volta's case - Gabriele, employee)

> The motivation was the experience of the hackathon itself and the opportunity to meet other people with different skills, from different companies within Marconi, and to work for a weekend with a team,

it's very interesting. (Marconi's case – Emanuele, employee)

Also, they mentioned extrinsic motivations like the possibility to improve their network and visibility within the company:

> There is certainly an issue of exposure and networking because any project that starts from the CIT has an Executive Manager as reference. (Meucci's case - Simone, employee)

5 | DISCUSSION

In this study, we explored different initiatives organized to involve employees in innovation, with the aim to understand how managers select and combine possible design choices while structuring EDI and to what extent the goal of the event influences its formalization. Empirical evidences point out the desired goal can influence the organization of EDI. In some initiatives, *community building* is the predominant goal, while other initiatives are designed considering *producing innovation* as the prevalent goal; finally, some initiatives are organized to pursue *both community-building and innovation* (*sequentially* or *simultaneously*). These approaches are summarized in Figure 2. As we have mentioned in the literature background, we know it would be possible to have unplanned innovative initiatives, not organized by management (Høyrup, 2012), that usually start from bottom-up processes, and therefore do not have *intended* goals. These cases are represented in the low-left quadrant of Figure 2.

Results show that when *community building* is the main goal, the structure is open and participative: The topic is open or based on employees' suggestions, the whole company have visibility on the ideas proposed, and employees can self-select their teams and are involved in idea evaluation. In these initiatives, organizations seek to create, support, and maintain a culture of innovation and knowledge sharing. Employees are seen as knowledge owners, and we call these initiatives community-nurturing practices.
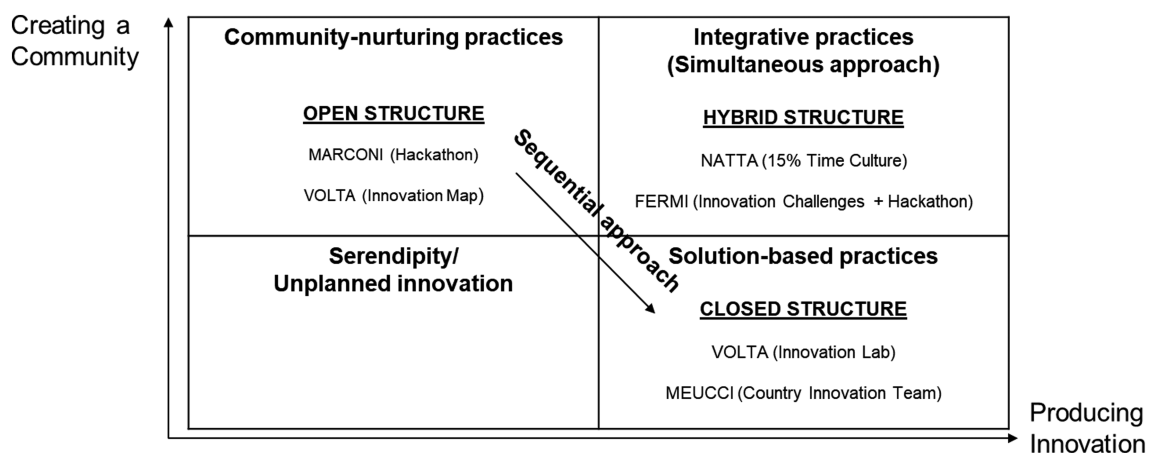

FIGURE 2 Approaches to organize EDI

These practices are suitable to involve employees and to diffuse a culture of knowledge sharing. However, employees describe these initiatives as an "exercise" or a "game"; also, managers explain that these initiatives are useful to let employees "play the innovation role." The primary goal of community-nurturing practices is not to produce implementable innovation, rather it is to create an innovative and knowledge-sharing attitude among employees, by letting them act as innovators.

When *producing innovation is the main goal* instead, managers organize the event with a closed structure: They provide specific topics and directions for innovation, and they are also the only responsible for team creation and idea evaluation. In these initiatives, organizations seek to solve various problems they have previously identified or to find realizable innovation opportunities. Employees are seen as problem solvers, and we call these initiatives solution-based practices.

In these initiatives, managers exercise more control, strongly directing employees in order to collect and implement innovative proposals. The primary goal is to produce innovation; therefore, more control is necessary to guide participants in a direction that is relevant and feasible for the company (Bäckström & Lindberg, 2018). For this reason, employees experience less freedom and involvement in these initiatives.

Finally, organizations can pursue *both community building and innovation* in different ways: Sequentially or simultaneously. When companies select a *sequential* approach, they pursue involvement and innovation in separate initiatives, structured like community-nurturing practices or solution-based practices. When organizations select a *simultaneous* approach, they try to balance close and open design choices. In the simultaneous approach, employees are seen as proactive innovators, and we call these initiatives *Integrative Practices*.

To summarize, empirics confirm involvement and innovation require different levels of freedom and control, and this aspect influences the formalization of EDI processes. Tensions between fluidity and control are a common topic in innovation literature (De Clercq & Pereira, 2019; DeFillippi et al., 2007; Schreyögg & Sydow, 2010). Innovation is often believed to flourish best under minimal conditions of organizing (Dougherty & Heller, 1994). This is partly because engagement with change and innovation is often seen as impeded by top–down approaches (Hartley et al., 1997).

In the EDI literature, there is in fact a tendency to promote autonomy and freedom as essential element to foster employees' innovativeness and involvement (Echebiri, 2020; Lempiälä et al., 2018) and to focus more on bottom-up approaches compared with top-down approaches. If employees have autonomy in their job, they experience feelings of competence and self-determination, and they propose innovations without following a structured process (Kurz et al., 2018).

However, other scholars have noted that ungoverned employee participation in innovation could be counterproductive from an organizational perspective (Kesting & Ulhøi, 2010) and that an organizational framework is necessary to ensure the implementation of employees' ideas (Voxted, 2018).

Managers should recognize the tension between involvement and innovation when they organize EDI and should decide how to deal with it. Our work proposes possible responses to this tension: One option for managers is to pursue only one goal at a time and therefore organizing EDI coherently. Managers can value employee involvement independently from the production of innovation (with community-nurturing practices), or they can pursue innovation implementation independently from employees' involvement (with solution-based practices). Otherwise, managers can try to navigate this tension by using a sequential approach and pursuing involvement and innovation in separate initiatives, or they can use a simultaneous approach, balancing fluidity and control in the same initiative with a mix of closed and open design choices (i.e., topic definition and team creation should be open to involve employees, while ideas transfer and evaluation should be controlled to meet the innovation goal).

Finally, we have also identified some similarities in the initiatives we have studied: The *division of labour* is normally decentralized as employees autonomously divide tasks within the team. They self-select their role considering both their skills, interests, and ordinary job duties. Since EDI involves non-R&D employees across the organization, giving them the possibility to self-organize and adjust work within the team is considered an effective choice, because employees can come from different organizational units and need to balance the time devoted to the EDI initiative with their ordinary work.

With reference to the *integration of effort*, in most of the initiatives explored, managers did not introduced monetary incentives, rather they leveraged on the novelty of the experience to favour employees' participation. Employees claim that monetary incentives are not the primary motivation to join these events, rather they mention intrinsic motivation (i.e., curiosity, the possibility to learn, the willingness to challenge themselves, and escape the daily working routine), and extrinsic motivations (i.e., the possibility to improve their network and visibility within the company) among the most relevant reasons for participating. This result confirms the importance of intrinsic motivators discussed in the literature (Kurz et al., 2018), and specifies further what type of intrinsic and extrinsic motivators drive employees. As for other studies, extrinsic motivators such as rewards and cash prizes are not significant for employees (Kurz et al., 2018).

6 | CONCLUSION

The aim of this study was to understand how managers navigate different design choices while organizing EDI. Results confirm the challenge in organizing EDI lies in the pursuit of different goals: Involving employees and implementing innovation. Empirics endorse the idea that on one hand, autonomy and inclusivity foster employees' involvement and community building, as the Natta case suggests. On the other hand, control seems necessary to guarantee innovative results, as instead examples from the Meucci case suggest. Managers can navigate this tension following different approaches for developing EDI (i.e., single, sequential, or simultaneous approach). Managers can pursue a single goal (only community-building or producing innovation);

or both goals (sequentially or simultaneously), and consequently they can organize the initiative following the model we have proposed in this paper.

This study sheds light on the challenges of organizing EDI and provides a model and practical implications for managers who want to involve employees in innovation. This research represents an initial step to improve our knowledge on organizing EDI. Future studies should investigate more in depth the role of people in these initiatives, focusing on the interactions between managers and employees and exploring the leadership dynamics and possible tensions arising in these events. Connected to this, borrowing insights from employee engagement perspective may contribute to expand the implications related to community-building intended outcomes. Moreover, longitudinal observations might be necessary in order to improve our knowledge about the relationship between EDI initiatives and different types of innovation (e.g., product, process, radical, and incremental), or to investigate the implications of EDI initiatives on the firm long-term strategy and innovative outcomes.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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REFERENCES

Abstein, A., & Spieth, P. (2014). Exploring HRM meta-features that foster employees' innovative work behaviour in times of increasing work-life conflict. *Creativity and Innovation Management*, *23*, 211–225. https://doi.org/10.1111/caim.12053

Amundsen, O., Aasen, T. M., Jarle Gressgård, L., & Hansen, K. (2014). Preparing organisations for employee-driven open innovation. *International Journal of Business Science and Applied Management*, *9*, 24–35.

Bäckström, I., & Bengtsson, L. (2019). A mapping study of employee innovation: Proposing a research agenda. *European Journal of Innovation Management*, *22*(3), 468–492. https://doi.org/10.1108/EJIM-05-2018-0101

Bäckström, I., & Lindberg, M. (2018). Behavioural implications of employee-driven innovation—A critical discourse analysis. *International Journal of Innovation Management*, *22*(07), 1–18. https://doi.org/10.1142/S1363919618500585

Bessant, J., & Caffyn, S. (1997). High involvement innovation. *International Journal of Employee-Driven Technology Management*, *14*(1), 7–28.

Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, *31*(6), 515–524. https://doi.org/10.1016/S0019-8501(01)00203-6

Chasanidou, D., Sivertstøl, N., & Hildrum, J. (2018). Exploring employee interactions and quality of contributions in intra-organisational innovation platforms. *Creativity and Innovation Management*, *27*, 458–475. https://doi.org/10.1111/caim.12290

De Clercq, D., & Pereira, R. (2019). Resilient employees are creative employees, when the workplace forces them to be. *Creativity and Innovation Management*, *28*, 329–342. https://doi.org/10.1111/caim.12328

DeFillippi, R., Grabher, G., & Jones, C. (2007). Introduction to paradoxes of creativity: Managerial and organizational challenges in the cultural economy. *Journal of Organizational Behavior*, *28*(5), 511–521. https://doi.org/10.1002/job.466

Dougherty, D., & Heller, T. (1994). The illegitimacy of successful product innovation in established firms. *Organization Science*, *5*(2), 200–218. https://doi.org/10.1287/orsc.5.2.200

Echebiri, C. K. (2020). An empirical study into the individual-level antecedents to employee-driven innovation. *Technology Innovation Management Review*, *10*(6), 42–52. https://doi.org/10.22215/timreview/1367

Felstead, A., Gallie, D., Green, F., & Henseke, G. (2018). *Productivity in Britain: The workers perspective—First findings from the skills and employment survey 2017*. Centre for Learning and Life Chances in Knowledge Economies and Societies, UCL Institute of Education.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15–31. https://doi.org/10.1177/1094428112452151

Hanine, S., & Steils, N. (2019). Ideation contests: Crowd management and valorization to avoid negative feelings of participants. *Creativity and Innovation Management*, *28*(4), 425–435. https://doi.org/10.1111/caim.12325

Hartley, J., Bennington, J., & Binns, P. (1997). Researching the roles of internal change agents in the management of organisational change. *British Journal of Management*, *8*(1), 61–73. https://doi.org/10.1111/1467-8551.00040

Høyrup, S. (2010). Employee-driven innovation and workplace learning: Basic concepts, approaches and themes. *Transfer: European Review of Labour and Research*, *16*(2), 143–154. https://doi.org/10.1177/1024258910364102

Høyrup, S. (2012). Employee-driven innovation: A new phenomenon, concept and mode of innovation. In *Employee-driven innovation: A new approach* (pp. 3–33). Edinburgh University Press. https://doi.org/10.1057/9781137014764_1

Jantunen, A. (2005). Knowledge-processing capabilities and innovative performance: An empirical study. *European Journal of Innovation Management*, *3*(8), 336–349. https://doi.org/10.1108/14601060510610199

Jørgensen, F., Broer, H., & Laugen, T. L. (2006). CI implementation: An empirical test of the CI maturity model. *Creativity and Innovation Management*, *15*(4), 328–337. https://doi.org/10.1111/j.1467-8691.2006.00404.x

Kesting, P., & Ulhøi, J. P. (2010). Employee-driven innovation: Extending the license to foster innovation. *Management Decision*, *48*(1), 65–84. https://doi.org/10.1108/00251741011014463

Kurz, V., Hüsig, S., & Dowling, M. (2018). What drives different employee types of innovative behaviour? Development and test of an integrative model of employee driven innovation in German firms. *International Journal of Entrepreneurship and Innovation Management*, *22*(4/5), 397–426. https://doi.org/10.1504/IJEIM.2018.092955

Lempiälä, T., Yli-Kauhaluoma, S., & Näsänen, J. (2018). Similar structures, different interpretations: Perceived possibilities for employee-driven innovation in two teams within an industrial organization. *International Journal of Entrepreneurship and Innovation Management*, *22*(4/5), 362–380. https://doi.org/10.1504/IJEIM.2018.092958

Lotz, M. M. (2018). Organising routines and spaces for employee-driven innovation in global work arrangements. *International Journal of*

Entrepreneurship and Innovation Management, *22*(4/5), 338–361. https://doi.org/10.1504/IJEIM.2018.092964

Overdiek, A., & Warnaby, G. (2020). Co-creation and co-design in pop-up stores: The intersection of marketing and design research? *Creativity and Innovation Management*, *29*(1), 63–74. https://doi.org/10.1111/caim.12373

Schreyögg, G., & Sydow, J. (2010). Organizing for fluidity? Dilemmas of new organizational forms. *Organization Science*, *21*(6), 1251–1262. https://doi.org/10.1287/orsc.1100.0561

Smith, P., Ulhøi, J. P., & Kesting, P. (2012). Mapping key antecedents of employee-driven innovations. *International Journal of Human Resources Development and Management*, *12*(3), 224–236. https://doi.org/10.1504/IJHRDM.2012.048629

Sorensen, H., Faber Ussing, L., Wandahl, S., & Christensen, R. M. (2018). Key mechanisms for employee-driven innovation in governmental client organisations. *International Journal of Entrepreneurship and Innovation Management*, *22*(4/5), 427–450. https://doi.org/10.1504/IJEIM.2018.092987

Teglborg-Lefèvre, A.-C. (2010). Modes of approach to employee-driven innovation in France: An empirical study. *Transfer: European Review of Labour and Research*, *16*(2), 211–226. https://doi.org/10.1177/1024258910364319

Tirabeni, L., & Soderquist, K. E. (2019). Connecting the dots: Framing employee-driven innovation in open innovation contexts. *International Journal of Innovation and Technology Management*, *16*(04), 1950031. https://doi.org/10.1142/S0219877019500317

Voxted, S. (2018). Conditions of implementation of employee-driven innovation. *International Journal of Entrepreneurship and Innovation Management*, *22*(4/5), 471–488. https://doi.org/10.1504/IJEIM.2018.092974

Weigt-Rohrbeck, J., & Linneberg, M. S. (2019). Democratizing innovation processes: Personal initiative in bottom-up eco-innovation. *European Journal of Innovation Management*, *22*(5), 821–844. https://doi.org/10.1108/EJIM-12-2018-0278

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