

# Start a pilot project together?! But how?



**Cooperation between corporates and start-ups -  
efficient use of innovations in logistics**

2021

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**Thomas Mazzurana**  
Innovation Manager  
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For a globally active company like Gebrüder Weiss, the question of how innovations can be efficiently realised and effectively introduced is not the first time in its 500-year history. In a time of rapid technological developments and continuous testing of new business models, the question takes on increased urgency.

One answer is to open up the innovation process and cooperate with actors outside the company. Start-ups, in particular, can help to increase the degree of innovation of a traditional corporation sustainably. This study, in which Gebrüder Weiss participated together with renowned partners from the industry and renowned universities (of applied sciences), deals with the existing hurdles and promising recipes for a functioning cooperation.

The results provide exciting insights into new forms of collaboration and their framework conditions and help to critically reflect on one's actions through the development of dos and don'ts. The added value is establishing an open innovation culture that delivers profitable results for both sides – a win-win situation for start-ups and us as a corporation.



**Stefan Borggreve**  
Chief Digital Officer (CDO)  
Hellmann Worldwide Logistics SE & Co. KG



Since its foundation in 1871, Hellmann has developed into one of the major international logistics providers and is represented by a global network of 489 offices in 173 countries with more than 19,500 employees. In 2019, the Hellmann Group generated revenues of around EUR 2.42 billion with 10,743 employees. This year, Hellmann looks back on a proud 150 years of company history but also focuses on current developments and, above all, future innovations. With high-performance products, Hellmann always offers the right solution for the complex logistics requirements of its customers and relies on forward-looking digital services for maximum transparency and more efficient supply chains.

Against this background, Hellmann Worldwide Logistics, together with a renowned consortium, has intensively examined the cooperation between corporates and start-ups and how innovations in logistics can be driven forward in a structured manner. This study provides you with interesting results on the recommendations for action and the dos and don'ts from screening to cooperation and provides a guide to successful cooperation with start-ups, compares forms of cooperation and goals with each other, and provides best practices through mini-cases.

I wish you many good insights while reading and success in working with the right and suitable start-ups in the logistics industry.



**Horst Leonberger**  
Managing Director  
Diehl Connectivity Solutions GmbH



Diehl Connectivity Solutions GmbH is a system integrator for the Industrial Internet of Things and belongs to the Diehl Group with headquarters in Nuremberg. As a partner for digital business models, Diehl Connectivity Solutions develops, implements, and industrialises, together with its customers, an individual IoT infrastructure from the sensor to the cloud. The focus is on data from extremely energy-efficient sensors and integrating this data into the customer's own IT systems.

Fraunhofer IIS and the Diehl Group have joined forces and developed their own radio technology to ensure optimal condition monitoring and data transmission. With ranges of up to 15 km and a battery life of up to 20 years, MIOTY® sets new standards in transmission reliability, robustness, and cost-efficiency.

Diehl Connectivity Solutions GmbH serves a wide range of market segments: from Industry & Construction to Campus Solutions and Logistics. In the logistics market, in particular, Diehl Connectivity Solutions works closely with start-ups. Together with them, we develop a groundbreaking digital business model that combines ecological management with tangible cost advantages. Innovations can be created with start-ups, and we at Diehl Connectivity Solutions would like to realise these innovations together with the start-ups and lead them to success. In doing so, Diehl is available with its in-house electronics manufacturing for fast scaling and with market know-how.

Whether a medium-sized company, a global corporation or a start-up: we are the strong, competent partner for the industry in implementing and scaling secure, networked solutions and successful business models.



**Hubert Borghoff**  
*Head of Logistics and Authorised Signatory*  
GROUP7 AG International Logistics



GROUP7 was founded in 2006 as an international logistics company with headquarters in Munich and is now represented at Germany's economically strategic hubs with around 600 employees and 9 of its own branches. The service company generated sales of 150 million euros in 2020 and has 195 international bases that ensure a global presence. Intelligent logistics solutions for air freight, sea freight, rail transport to and from Asia, sea-air and land transport, as well as individual concepts for outsourcing in the logistics service sector represent the range of services offered by GROUP7. The company provides worldwide procurement and distribution logistics, customised services in the area of contract logistics, and fulfillment services. The focus here is on maximum flexibility and customer-oriented process handling. Competence through years of experience in the transport and logistics industry makes GROUP7 your reliable partner. Among other things, GROUP7 has been supporting start-ups in the service industry for years and was happy to provide input for the study.

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## Executive Summary

How can corporates and start-ups work together fruitfully? What should be done, what should be avoided? And how can suitable partners be found in the first place? To answer these questions, were not only numerous sources analysed (a selection can be found in chapter 6), but also extensive interviews were conducted with 13 company representatives (see chapter 1) who have already entered into collaborations in various forms (the summaries of the interviews can be found in chapter 7).

Based on a clear definition of *start-ups* incl. maturity and *innovation* in logistics (see chapter 2), instead of a *cookbook* approach often found in this environment, the *experimental kitchen* approach was followed, where corporates and start-ups are not squeezed into the research structures. It has been shown that a structured sequence of steps with flexible questions can

avoid numerous frictional losses and frustrations that can arise over the entire life cycle of the cooperation between corporate and start-up (see section 3.1). Instead, frameworks are defined, and guard rails are set to provide orientation in the identification process (see chapter section 3.2). Four steps are defined that focus on the partners' goals to find the adequate form of cooperation and be successful in the cooperation (see chapter 4). This sequence of steps should be sufficiently concrete to allow the partners to clarify the most critical issues before entering into cooperation. Even if the formalities have been settled and the agreements have been made accordingly in mutual understanding, further *dos and don'ts* should be observed, which are often disregarded in a structured approach. These are as follows (see chapter 5):

### Corporates

#### Dos:

1. **Openness towards alternative approaches of the start-up in the innovation process, in the cooperation and with regard to the framework conditions**
2. Discussion and agreement of the administrative framework conditions such as budget, accounting, form of cooperation, etc. in advance.
3. Greater willingness to take risks and greater tolerance of mistakes

#### Don'ts:

1. **Showing arrogance towards the young companies and their shortcomings**
2. **Long processes due to unclear internal responsibilities**
3. Narrowing down the cooperation to the needs of the corporates
4. Building up unrealistic expectations in terms of time and outcome

### Start-ups

#### Dos:

1. **Placement of speed, flexibility and low initial costs as a competitive advantage over established (IT) companies and compensation for increased risk**
2. Building trust through reliability, commitment and understanding of needs
3. Winning advocate in corporate (key account)
4. Competent, organised and learning sales with market know-how and authentic appearance

#### Don'ts:

1. **Lack of knowledge about the specific needs in the industry and of the client**
2. No knowledge about the interfaces to other projects and cooperations
3. Showing arrogance towards the established corporates and their structures

# 1 Objectives and approach – what are the benefits of the study results?

How can innovations be introduced efficiently and effectively in the logistics industry? What opportunities are there to increase the innovative power of companies in logistics? These questions drive established corporates to remain competitive in the future. There are numerous strategies and solutions for this. One of them is to harness the energy and innovative power of young companies, especially start-ups. This study focuses on the question of how cooperation can be made successful for both partners.

This general objective drives the present study (see Figure 1). Thereby,

- ...the understanding of innovation and start-ups in logistics are delimited and structured in feature maps,
- ...the framework conditions that need to be taken into account are compiled,
- ...the case studies and expert interviews analysed and summarised in mini cases,
- ...in order to formulate recommendations for action in the form of particularly relevant *dos* and *don'ts*.

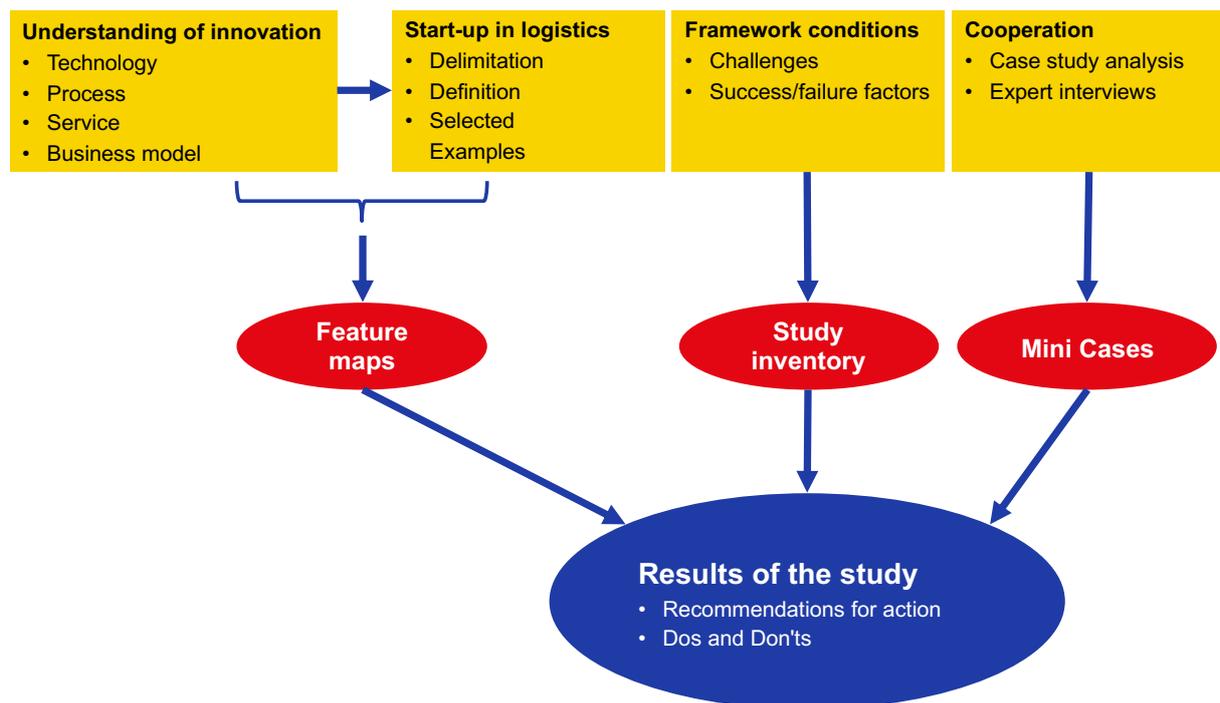


Figure 1: Objective and structure

Against this background, it is vital to examine how, from the perspective of corporates, the screening of start-ups should be carried out, what the life cycle of cooperation with start-ups can look like and which cooperation models exist (see section 3.1).

The focus here is on operational cooperation in developing innovations – financing models or pure M&A projects, on the other hand, are not the subject of this study. Based on this, a sequence of steps is developed that shows whether the partners are

pursuing the same goal, which framework conditions need to be taken into account, and which form of cooperation seems adequate in each case (see section 3.2 overview and chapter 4 details). Recommendations for action in the form of weighted lists of *dos* and *don'ts* for corporates and start-ups raise awareness of appropriate ways of dealing with cooperation (see chapter 5).

The procedure documented in Figure 2 shows that, in addition to research, the

practice was also actively involved. This is illustrated by interviews with six corporates and seven start-ups, which were summarised in the form of seven mini-cases (see chapter 7). The findings from these were validated with the practice partners. Subsequently, 22 company representatives weighted the recommendations for action, from which the most important *dos* and *don'ts* emerged, which summarise the results of the present study (see chapter 5).

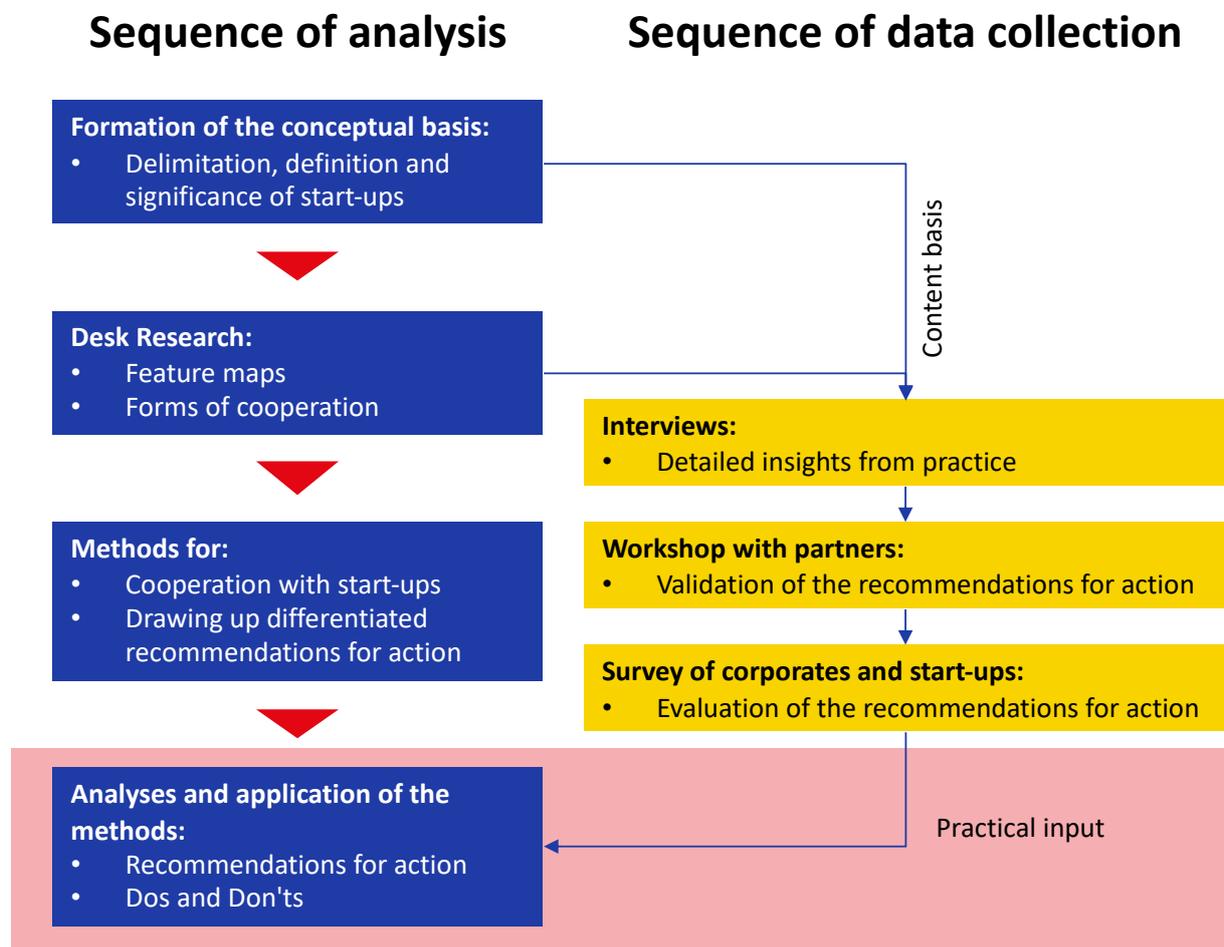


Figure 2: Procedure

## 2 Start-ups, innovations, and logistics in the supply chain – structure and limitation

The groundbreaking success stories of Silicon Valley start-ups leave no nation, region, or city cold in the face of global competition: establishing and supporting a thriving start-up scene is a mandatory task of any local government, and potential investments are attracting financiers more than ever before (albeit with uncertain success). On the labour market, the nimbus of the entirely different working environment in newly founded companies is gladly cultivated and retains promising young professionals at an early stage.

### Start-up vs. business start-up

At a start-up, the focus is on founding a company with strong growth and profit, which often is enabled through an innovative solution.

In the case of a business start-up, on the other hand, the focus is securing one's livelihood. Many business start-ups also lack an innovative idea to be classified as a start-up.

Freshly founded companies, therefore, like to adorn themselves with the label "*start-up*". Nevertheless, there are subtle differences in the choice of the term because not every start-up corresponds to the term *start-up* in the proper meaning of the word. Although there is no formal legal definition of the term start-up, a little conceptual hygiene is essential for the further thematic discussion within this study. From now on, a start-up in logistics will be understood as follows:

### A start-up

- ...is a **recently founded** company, i.e., not older than seven years (in some sources, other periods also apply, at the KfW, e.g., it is five years),
- ...with an **innovation orientation**, i.e., it pursues an innovative business idea or has an innovative, unique selling proposition,
- ...that has a business idea with (high) **growth potential**, through which the company is geared towards growth, and
- ...with an **existing form of financing (various possibilities)**, i.e., the foundation of the company has already been completed.

Not every young company can therefore be accurately called a start-up. The existing financing serves as a delimitation to the pure business idea – regardless of its quality. Also, only then cooperation with a corporate – an established company – is possible in the sense of this study. At the same time, the innovative idea delimits from pure consulting, also wholly independent of the thematic focus of a consulting offer. Consultancy is generally not eligible for protection either.

Concerning the logistics reference set here, the innovation orientation is necessary in the area of logistics, although this is broadly defined in the present understanding. Even if the aim of the study is not a market analysis and indeed not a ranking of the best start-up approaches in the logistics sector, it is worthwhile to compare the view of the quite diverse logistics start-up world with this concept classification.

It can quickly be seen that the innovative idea

- ...lies predominantly in the area of digitisation, thereby
  - ...often in the area of transport and delivery services, i.e., at the interface between the manufacturer or retailer and the end customer,
  - ...the same applies to transportation and delivery services involving the end customer as a service entity, e.g., for purchasing services,
  - ...is often developed with a focus on app-driven services,

- ...includes diverse service platforms to search for (truck) drivers, freight rates, etc., and

- ...is just as often in the field of artificial intelligence (AI) or AI applications.

**Capable of cooperation?**

The focus of the study is on cooperation in the sense of collaboration, but not in the sense of potential financial participation.

Not all innovative business ideas are suitable for potential cooperation. If the business idea is positioned at the interface between companies or between (different) companies and (many) end customers, the focus on one market actor can jeopardise the business idea. There are then few prospects for successful cooperation between the corporate start-up.

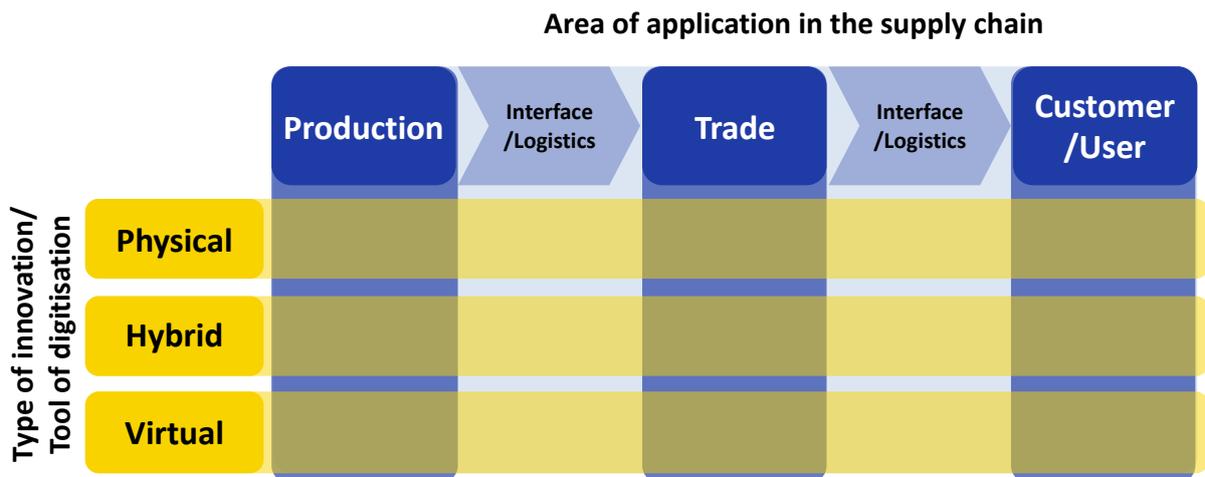


Figure 3: Feature map covering the type of innovation and the field of application

The case studies discussed below are classified using various graphics that provide a quick overview of the start-ups. The classification of the innovative idea that is the focus of the research is based on the study *Digitisation Tools in Logistics: Application Potentials, Maturity, and Value Contribution*, prepared by the same team of authors (available free of charge at <http://logistik-digitalisierung.de/>). It should be noted that this does not classify the start-up as a

whole but rather a specific start-up initiative. A start-up with different innovations could thus cover different areas. The following mini cases each focus on a particular project or plan. Figure 3 shows a feature map of the type and area of application of the innovation. The innovations can be used along the entire logistics chain or only at specific interfaces and thereby fall back on certain types of digitalisation.

Based on this, Figure 4 should provide an overview of the application potential of the innovation. This is not about a one-to-one delimitation into one of the four fields but rather about recording the focal points of the innovation. It is conceivable that, for example, services are generated employing

a unique capture technology (technology/product) that leads to entirely new processes and/or business models – i.e., all four fields are touched upon. However, most of the innovations recorded and examined can be classified much more concretely.

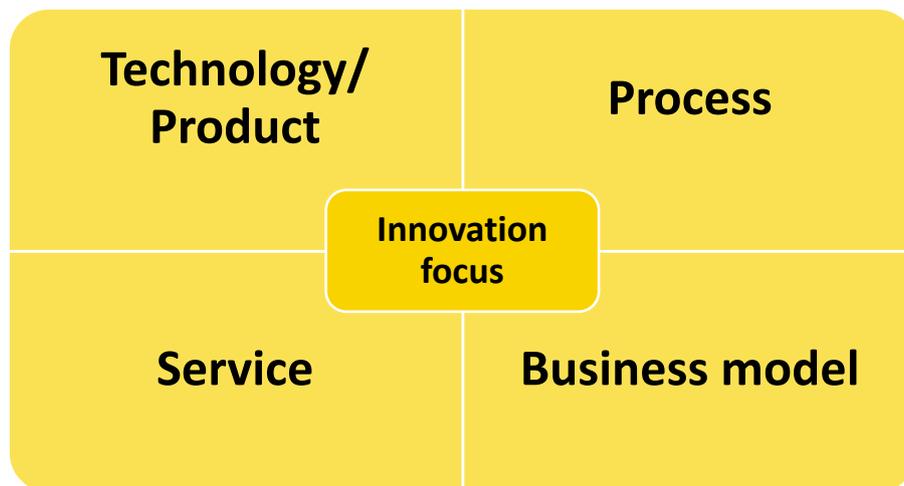


Figure 4: Innovation map with four innovation focus areas

Finally, the maturity of the start-up is an essential factor in shaping successful cooperation. Numerous models exist for this, most of which are primarily dedicated to financing issues of the start-up along its development. In the context of this study, however, these essential questions recede into the background because for a cooperative collaboration between corporate and start-up they are rather a vital prerequisite, since in these cases, financial participation is possible, but not the main focus. For this study, exactly one stage is of interest within the framework of the frequently published corporate development model *Idea/Seed–Foundation/Start-up–Development/Growth–Maturity/Exit*, namely the

Start-up phase, which is detailed in more detail in Figure 5. The initial phase (*Idea/Seed*) is not considered in this study, as companies in this phase often do not yet have a functioning business model or a concrete goal.

Based on the typical four phases (Foundation, Expansion, Maturity, and Migration, e.g., through takeover or to an established company with corresponding structures), four development strands are presented, which develop case-specifically in each case and can never be clearly defined. Nevertheless, they play a dominant role in the design of a cooperation.

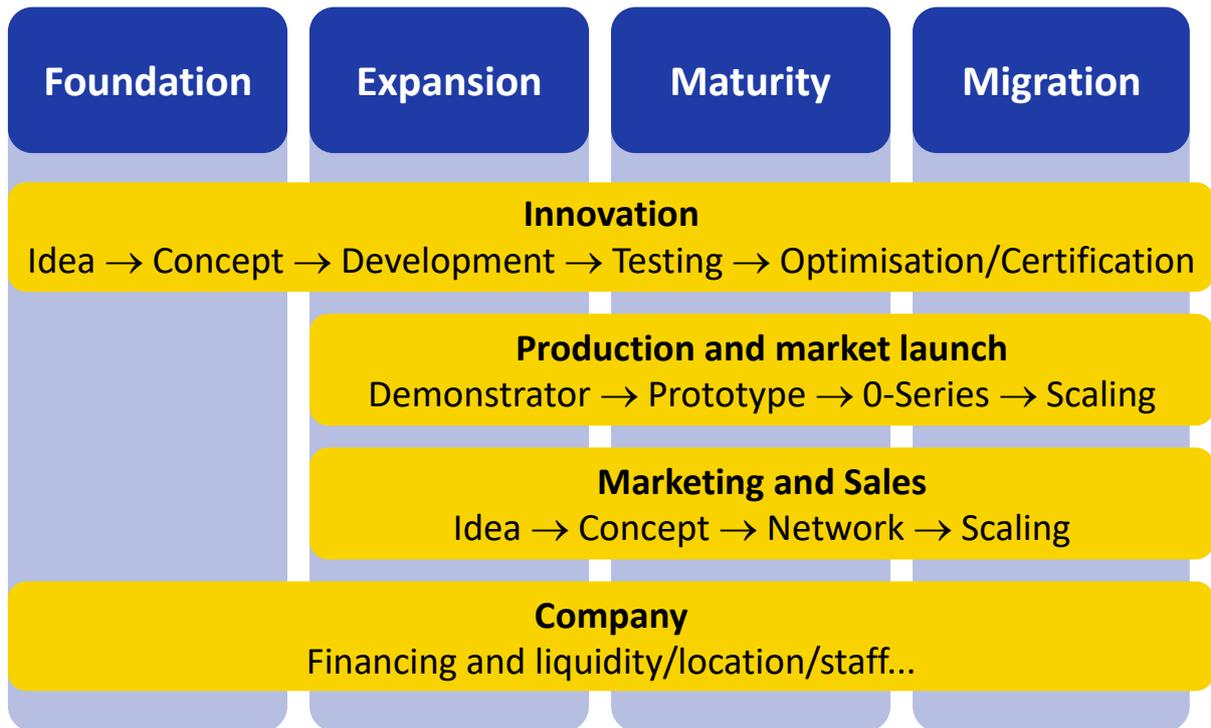


Figure 5: Maturity level of start-ups including main activities

### 3 From screening to cooperation – a guide to successful cooperation with start-ups

#### 3.1 Life cycle of the cooperation between corporates and start-ups

The life cycle of cooperations can be divided into five phases:

1. analysis of the cooperation potential,
2. initiation of cooperation,
3. design of the cooperation,
4. active cooperation and
5. expiry of the cooperation.

While the life cycle includes all phases of cooperation, screening is reflected by the first two phases. The five cooperation phases and their building blocks are explained briefly below.

##### Who am I and if so, how many?

The first phase, the analysis of the cooperation potential, is divided into the analysis of one's situation, motives/objectives, and assessing the potential for adding value. The analysis of one's situation is an essential building block for focusing on suitable cooperations and deals with core competencies and strengths, strategic gaps, potentials, environment analysis, and vision. The motives and objectives are found in the fields of innovation, market and competitive position, sales and marketing, financing and investment, as well as personnel and organisation. This is an important element in determining the extent to which the envisaged cooperation will be successful. Resources of product and service innovation include technologies, tools, people, and skills/competencies, which should be paid special attention to in the logistics and supply chain environment. The assessment of the value creation potential deals with the analysis of opportunities and risks in connection with cooperations, forms of value creation depending on the form of cooperation – from the market

relationship, cooperation to acquisition – and the measurement of value generation, e.g., through the shareholder value analysis.

**The ones interested in a cooperation should check further details.**

The second phase, the initiation of cooperation, is divided into the definition of the partner profile, partner search/first contact, and selection of the partner. This phase is the focus of the next chapter. To define the desired partner profile, the desired company size, type and location must be determined. Furthermore, the cooperation culture, business field (especially market and business model), desired resources and competencies (mostly process and technology-oriented), type of management (e.g., strategic focus), as well as the philosophy of the target organisation have to be defined. The search for partners and the initial contact associated with it are carried out via the following paths:

- ...events such as speed dating, pitching nights, roadshows, or workshops,
- ...desk research,
- ...direct approach via personal contacts, digital networks (e.g., LinkedIn), innovation ecosystems (e.g., the Digital Hub Logistics in Hamburg and Dortmund or the de:hub initiative), as well as
- ...tenders.

The selection of a potential cooperation partner is based on an analysis of the fundamental (especially the time horizon and added value), strategic and cultural fit, which can be carried out using an analysis tools such as profile analysis and utility analysis.

The screening of possible cooperations, i.e., going through the first two life cycle phases (analysis of the cooperation potential and initiation of the cooperation) is crucial, as these form the fundamental orientation for the further course of a

cooperation due to the company orientation, fields of activity, potentials and the desire for cooperation. Against this background, start-ups in a sector should be recorded, continuously monitored, and a possible cooperation considered.

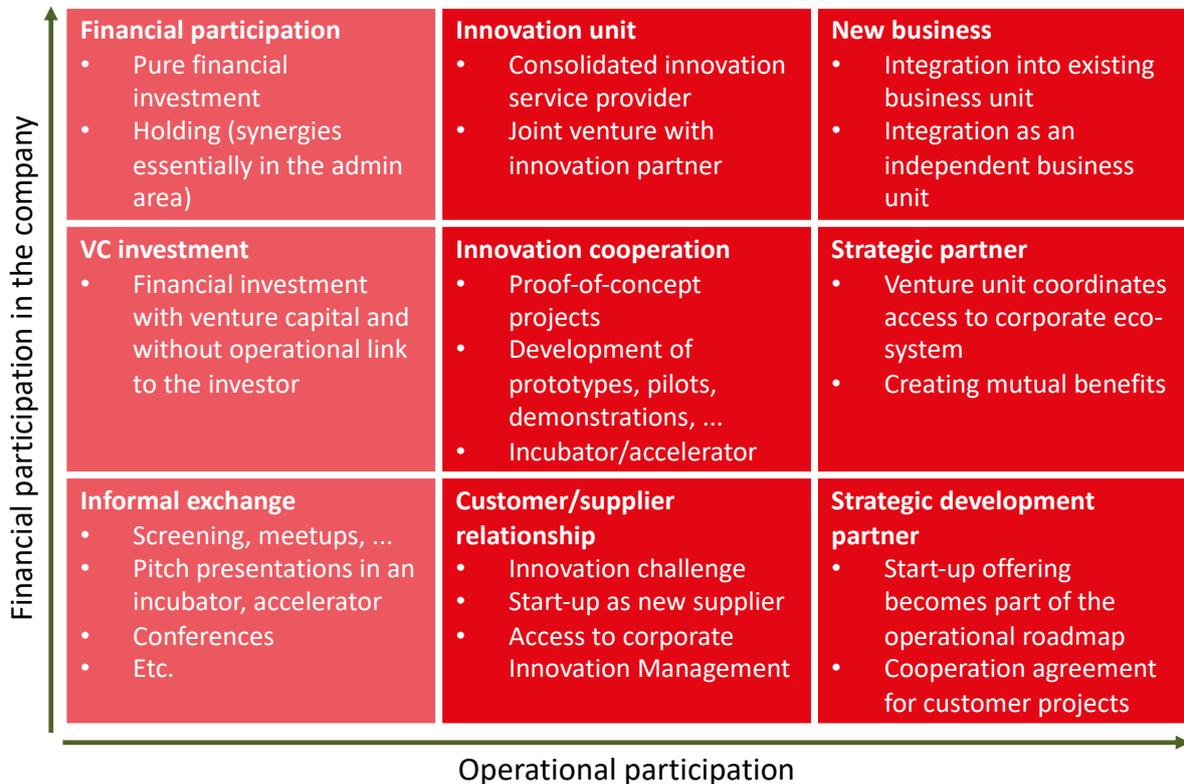


Figure 6: Forms of cooperation between corporates and start-ups <sup>1</sup>

**The right intensity is the measure of all things.**

The third phase, the design of the cooperation, is subdivided into the determination of the form of cooperation, the determination of the commitment intensity and field, and contract negotiations. The forms of cooperation to be determined can be located in the axes of financial participation and operational participation according to the extent of participation (weak to strong) (see Figure 6).

The forms of cooperation range from informal exchange to the classic business relationship and innovation cooperation to

financial participation and innovation unit. Here, the dimension mentioned above between the pure market relationship and acquisition can be recognised. Furthermore, the intensity and field of commitment must be determined. The time horizon, market, and customer orientation, resource allocation, degree of formalisation, the direction of cooperation (horizontal, vertical, or lateral) as well as value creation activities must be determined. Furthermore, the contract negotiations conclude the configuration of the cooperation. These deal with the definition of the form of the contract, the legal, contractual, and coordination

<sup>1</sup> Based on Hilde/Susemihl 2018, p. 23.

structure, (non-)exclusivity, competitive legal aspects, liability, and profit distribution, as well as regulations for dissolution. The forms of cooperation with low operational participation, in particular pure financial participation, are not considered in the further explanations.

**Cooperations are not static, they are alive.**

The fourth phase, active cooperation, is divided into coordinating and steering, as well as reviewing, learning, and adapting cooperation. Coordinating and steering the cooperation involves managing the cooperation and defining the coordination instances. In this respect, it is essential to define the scope for decision-making but also to determine what needs to be coordinated. Furthermore, committees, reporting systems, milestones, and goals must be specified. It is crucial to ensure a common understanding of success and that measurable goals are defined concerning milestones and goals. Reviewing, learning, and adapting cooperation includes ongoing performance reviews (which require transparency and monitoring), organisational learning, continuous improvement

processes, information management, adapting processes and structures, and active consensus and crisis management.

**Professional separation instead of a war of the roses.**

The fifth phase, the end of the cooperation, is subdivided into the evaluation of success as well as exit and continuation scenarios. The evaluation of success is based on economic and socio-cultural factors, such as the measurable milestones and goals mentioned above. The exit scenarios include the takeover, merger, or termination of the cooperation. In the latter case, it is advisable to advocate a *Beautiful Switch*, i.e., a sensible termination, especially in the case of longer and more intensive cooperations. Possibilities for continuation include orienting the cooperation towards a longer-term or even strategic cooperation.

Figure 7 shows an ideal-typical overview of the life cycle model of cooperation between corporates and start-ups. This complex and multi-layered model is used as a basis to develop a pragmatic guideline as described below.

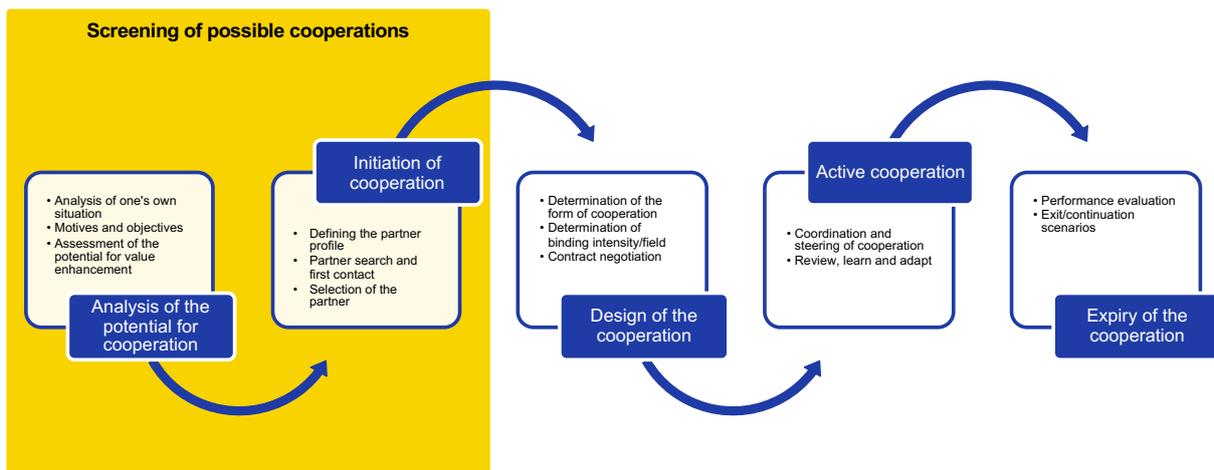


Figure 7: Overview of the cooperation life cycle model <sup>2</sup>

<sup>2</sup> Adapted from Jansen 2016, Becker et al. 2018, Bronder/Pritzl 1992, Wrobel et al. 2017, Becker et al. 2011 and Bannerjee et al. 2016.

### 3.2 Sequence of steps to realise a successful cooperation

Already at the beginning, it can be stated: A cookbook or a strict guideline for successful cooperation between start-up and corporate does not seem to make sense. The discussions and analyses have clearly shown this. On the other hand, individual steps are considered purposeful, along which a cooperation can be examined based on criteria and aspects.

At first glance, this sequence of steps (shown in Figure 8) seems like a typical

academic *finger exercise*. However, this is not the aim of this study: the heterogeneity of practice is not to be squeezed into a scheme. Instead, the objective is to provide a framework and to set out guard rails that both corporates and start-ups can use for orientation. The *cookbook* with a clearly defined procedure and concretely specified components is transformed into an *experimental kitchen* in which dynamically suitable *recipes* for cooperation are developed based on given competencies, ideas, and framework conditions. This corresponds to the practice in which little happens, according to a textbook.

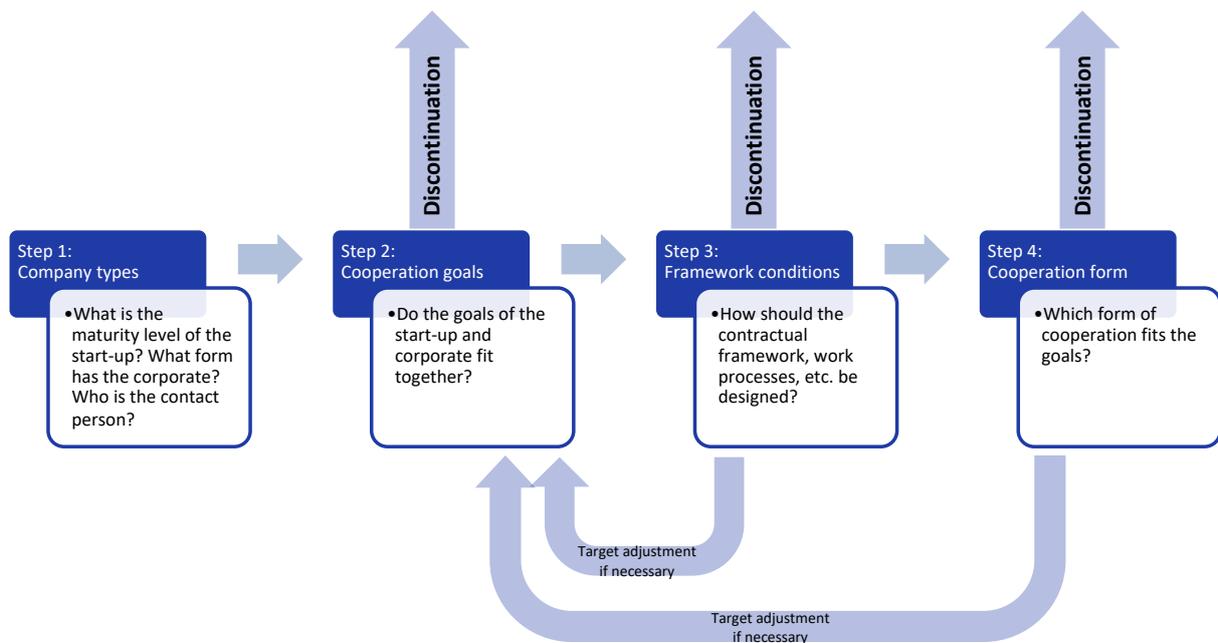


Figure 8: Sequence of steps to realise a successful cooperation

#### Step 1: Who are the cooks?

In order for the partners to adjust to each other's preparation of a common meal, they coordinate their skills, competences and expertise. Process-oriented commercial kitchen coordinators have a different background than a passionate amateur chef.

The sequence of steps derived from the interviews and analyses begins with the question about the types of companies (**step 1**). For example, it makes a difference whether a start-up is still in the prototype development phase or has already arrived

shortly before its product is ready for series production. Especially in the case of start-ups that are still at the beginning, it should be expected that they cannot yet name any concrete goals. The same applies to the corporate with which cooperation is being sought. The initiation as well as the cooperation with a medium-sized company is different than with a corporate group. There is also the question of who the contact person is in each case. Communication with an

innovation department is different than with a project manager from business who is looking for a concrete solution. This step is important to decide what can be expected in the following steps and how the further procedure can be designed.

### Step 2: What is the occasion for preparing a dish?

The question is whether a quick dish to get full or a four-course meal, whether experience is to be gained or professional cooking is decisive for whether the cooperation in the kitchen works.

A core element is the comparison of the goals pursued in the cooperation (**step 2**). The focus here is on the start-up and the corporate defining the primary goal. Both partners should be honest in this step and not pretend to have goals in order to *please*. At the latest during the cooperation, it will become apparent that different expectations and goals have formed the basis.

### Step 3: How should the kitchen be designed; what kitchen utensils and ingredients should be available?

Neither a steamer nor lobster claws are necessary for a quick meal. Also, an amateur cook tends not to be able to do anything with these utensils. Accordingly, it is purposeful that, for example, the utensils are used by those who know how to handle them. This is where joint cooperation comes into play.

If the goals are compatible and promise successful cooperation, the framework conditions can be prepared to adjust the two business environments to each other

(**step 3**). The results of step 1 and step 2 flow into this process. At this point, it is advisable to deviate from a schematic approach and react flexibly to the existing structures and ideas. A corporate group, for example, follows a classic procurement process with an inevitably longer duration for the objective of *solving a concrete problem*, which cannot be circumvented. A start-up in an early phase, on the other hand, cannot bridge the duration that this process may take, as it is dependent on the cash flow or the reference customer for fundraising.

### Step 4: Who does what in the kitchen?

In order to jointly achieve the set goal for cooperation in the kitchen, responsibilities and areas of action are concretely distributed. In a process-oriented activity such as in the kitchen, the roles must be clearly defined and the interfaces clarified.

The possible forms of cooperation that can be considered for the constellation at hand result from the respective framework conditions (**step 4**). A distinction can be made between nine forms of cooperation, ranging from an informal exchange as the lowest form of cooperation to innovation cooperation for the joint further development of a technology, for example, to financial participation in the start-up (see Figure 6). The resulting decision forms the starting point for the cooperation.

## 4 Orientation guide for the experimental kitchen instead of a cookbook as a guide

### 4.1 Step 1: Maturity level of the start-up and form of the corporation

First of all, it should be remembered that a start-up generally wants to grow and gain relevance. On the other hand, a corporation expects to benefit from cooperation in the form of innovations and improvements to its products/technologies, services, processes, and business models. From a corporate perspective, a start-up is, therefore, a vehicle in this process. Consequently, the start-up and its activities should fit the corporate and vice versa.

Against this background, the degree of maturity of a start-up is relevant in its various forms. The degree of maturity of start-ups can be differentiated into *technological*, *financial*, and *socio-cultural dimensions*. The level of technological maturity is determined by the technologies developed and, in particular, their development progress. Here, a distinction is made between the concept, pilot and roll-out stages, and widespread use. The degree of financial maturity can be derived from the turnover achieved and the form of financing, and the start-up age. Thus, a young start-up in the ideation phase, supported by an angel investor, differs from a somewhat older start-up in the expansion phase, which a venture capital company finances. The socio-cultural maturity level complements the fuzziness of the technological and financial maturity measurement. Here, the organisational development of the start-up is examined in particular. The socio-cultural maturity level focuses on the age of the start-up (e.g., just founded, a few years old or several years old), the type of company (e.g., sole proprietorship, LLC, LP or joint-stock company), forms of interaction (e.g.,

regular meetings and knowledge exchange) and the corporate culture.

While start-ups should pay particular attention to the degree of maturity, the form of the company is relevant for the corporate. This is identified by the size (e.g., small company, medium-sized company, or group), unit, purpose, and goal of the corporation seeking cooperation with a start-up. It quickly becomes apparent that a small company with only a few employees has a different cooperation focus than a medium-sized family business or even a group. In addition, the question arises to what extent the products or services of the start-up should be integrated into the corporate. This is where the application of a technology in all areas of a small company differs from applying an isolated solution in one department of a group. Furthermore, the purpose of a company (e.g., creation of added value for the customer, focus on sustainability or shareholder value) and the corporation's goal for the cooperation must be considered. The latter can be identified through the vision, mission, strategy, and values, among other things. The goals in the start-up-corporate combination and their compatibility will be discussed in more detail in the next section.

### 4.2 Step 2: Fit of the goals

After clarifying the degree of maturity of a start-up or the form of a corporate, it is crucial to be aware of the primary objective to be achieved with the intended cooperation. Experience shows that this question alone is not always asked, let alone answered, on both sides. No responsible person will indeed admit that they are proceeding *aimlessly* when making contact. Nevertheless, it is essential to formulate the concrete goal so that the potential

## Cooperation between corporates and start-ups - efficient use of innovations in logistics

A consortium project of the Digital Hub Logistics, Hamburg

partners can adjust to each other. Because one thing cannot be denied: not all goals are compatible.

The interviews, research, and subsequent analyses revealed the following goals on the part of the start-ups or corporates that they would like to achieve in cooperation (see Table 1).

	Goals of the start-ups	Goals of the Corporates
<b>Strategic</b> (long-term)	<ol style="list-style-type: none"> <li>1. Accelerate the growth of the company</li> <li>2. Scale solution faster</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Develop new business models</b></li> <li>2. Serving existing or new markets</li> </ol>
<b>Processual</b> (concrete and short-term)	<ol style="list-style-type: none"> <li>3. <b>Accelerate the development of products or services</b></li> <li>4. <b>Test products or services under real conditions</b></li> </ol>	<ol style="list-style-type: none"> <li>3. <b>Gain access to new technologies</b></li> <li>4. <b>Solve concrete problems</b></li> </ol>
<b>Structural/ Organisational</b> (detached from the respective core business)	<ol style="list-style-type: none"> <li>5. <b>Winning first reference customers</b></li> <li>6. Gain access to the (sales) network of the corporates</li> <li>7. Gain access to funding from the corporate</li> <li>8. Use the capacities of the corporation in the areas of production, administration or research/development.</li> </ol>	<ol style="list-style-type: none"> <li>5. <b>Increase the degree of innovation and digitalisation</b></li> <li>6. Improve competitiveness</li> <li>7. Attracting talent</li> </ol>
<b>Cultural</b> (superordinate or detached from the concrete company)	<ol style="list-style-type: none"> <li>9. Achieve reputational effects through cooperation with corporates for further capital acquisition from investors</li> <li>10. Access specific corporate know-how to improve the business or solution.</li> </ol>	<ol style="list-style-type: none"> <li>8. Promoting change</li> <li>9. Gain inspiration</li> <li>10. Get to know new working methods</li> </ol>

Table 1: Comparative overview of the goals of start-ups and corporates <sup>3</sup>

These ten goals mentioned in the literature can be narrowed down further, as in practice, not all of them are pursued as a priority (here, it is pointed out that the aim is to focus only on the most significant goal). For example, the purposes of *accelerating development* and *reference customers* are often mentioned, along with *tests under real conditions*. Also, not all goals are relevant for every start-up, regardless of its maturity level. This will be discussed further on.

On the other hand, corporates pursue different goals oriented towards an established business model or can be derived from the given corporate structures (see Table 1). Similar to the start-ups, a smaller number of these ten goals are increasingly pursued. The main motivations for

cooperating with start-ups in practice can be found in the *solution of a concrete problem* or the environment of change, be it through the *development of new business models*, *access to new technologies*, or *increasing the degree of innovation or digitalisation*.

Against the background of the different goals, it is understandable that a cooperation between a start-up and a corporate may not come about or be assessed as unsuccessful. Accordingly, it is necessary to be clear about the respective primary goal to make a compatibility check. Even if the primary goals of the two partners should be on the same level, compatibility is not necessarily given.

<sup>3</sup> After examining various sources, the publication Loehrer et al. 2017 was used for this list and modified on the basis of the findings from the practice discussions.

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Goals	Startups	Strategic		Procedural		Structural/organisational				Cultural		
		Acceleration of Growth	Faster scaling	Acceleration of Development	Testing under real conditions	First reference customers	Access to the (sales) network	Access to finance	Capacity utilisation	Reputation effect for capital acquisition	Access to know-how	
Corporates	Strategic	Develop new business models	o	+	o	o	o	+	o	+	-	o
		Serving existing or new markets	+	+	o	o	o	o	o	+	-	o
Procedural		Access to new technologies	-	o	o	+	+	-	o	o	-	o
		Solution for a concrete problem	-	o	o	o	+	-	-	o	o	o
Structural/organisational		Increase the level of innovation and digitalisation	o	-	o	o	o	-	o	+	-	o
		Increase competitiveness	o	-	o	o	o	o	o	o	-	-
		Attracting talent	-	-	-	-	-	-	o	o	o	-
Cultural		Promoting change	-	-	-	o	o	o	o	+	-	-
		Gain inspiration	-	-	o	+	o	o	-	o	-	-
		Getting to know new working methods	-	-	o	+	o	o	-	o	-	-

+ = Goals are compatible  
o = Goals do not contradict each other  
- = Goals are not compatible

Table 2: Overview of the compatibility of primary objectives

Table 2 shows the respective goals of the start-ups (columns) and the corporates (rows) as a matrix so that the compatibility of the goals can be compared. Based on the research and discussions, it has become apparent that a total of 13 pairs of goals (marked with a "+" and highlighted in green) can, in principle, promise successful cooperation. These pairings are compiled in Table 3.

On the other hand, for 36 pairs of goals, it should be checked in advance whether a cooperation makes sense (marked with a "-" and highlighted in red). The goal of talent acquisition by corporates stands out in particular. No cooperation partner on the

other side would get involved in a cooperation with such an objective, as there is the danger of their *brain drain*. Even if the corporate would never express this goal for this reason, it also makes clear that it is precisely at this moment that a cooperation cannot be successful in the long term.

The remaining target pairs are possibly compatible (marked with an "o" and highlighted in yellow). Initially, these do not fundamentally contradict each other. In this case, the examination of the framework conditions (step 3) should be awaited to decide about a further intention to cooperate.

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1	Develop new business models Faster scaling	8	Access to new technologies First reference customers
2	Develop new business models Acceleration of development	9	Solution for a concrete problem First reference customers
3	Develop new business models Capacity utilisation	10	Increase the level of innovation and digitalisation Capacity utilisation
4	Serving existing or new markets Acceleration of growth	11	Promoting change Capacity utilisation
5	Serving existing or new markets Faster scaling	12	Gain inspiration Tests under real conditions
6	Serving existing or new markets Capacity utilisation	13	Getting to know new working methods Testing under real conditions
7	Access to new technologies Testing under real conditions		

Table 3: Target pairs for a promising cooperation

### 4.3 Step 3: Key factor framework conditions

The malleable framework conditions for the cooperation must be set appropriately. This includes that the start-up and the corporate deal mutually and respectfully with the setting of the framework conditions, i.e., listening to and perceiving the ideas and wishes.

While commitment intensity and field are primarily given by the external circumstances of the start-up and the corporate, the contract negotiations can be adapted to the ideas and wishes. Concerning the *given* external circumstances, such as market and customer orientation, resource allocation, direction, and value creation activities (see chapter 1.1), points that are not directly apparent and obvious should be disclosed in the discussions. If necessary, concessions must be made here to move forward for a successful cooperation.

Furthermore, the time horizon, the degree of formalisation, and the building blocks of the contract negotiation between the parties must be worked out in a suitable form (e.g., compensation of the start-up based on the number of units handled in the corporate) so that the cooperation can develop its full effect. Central building blocks of the contract negotiations include the distribution of liability, risk, and profit, exclusivity, and termination provisions. Furthermore, the framework conditions also include provisions on coordination and control as well as reviewing, learning, and adapting within the course of cooperation. In these two elements, coordination bodies, milestones/goals, and crisis management play a central role. For these and other framework conditions, please also refer to section 1.1.

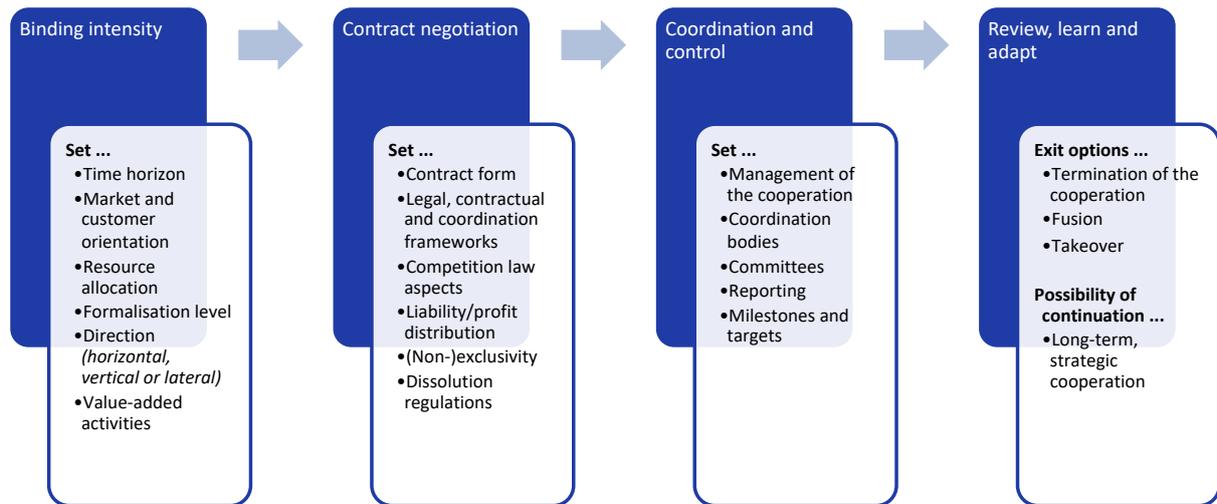


Figure 9: Overview of the framework conditions

#### 4.4 Step 4: Matching the form of cooperation and the goals

Based on the analysis of the given framework conditions, it is possible to identify the appropriate form of cooperation. In the context of cooperation between corporates and start-ups, it is possible to differentiate between financial and operational participation (see Figure 6). In the portfolio, nine forms of cooperation are listed, determined according to these participations. Depending on the target pairing, different forms of cooperation make sense.

Due to the focus pursued here on the design of the cooperation between corporates and start-ups, the forms of

cooperation with a low level of operational involvement are of low relevance in this study. This also became apparent in the analysis of which forms of cooperation fit the compatible target pairings (see Table 4).

The list shows that a large number of forms of cooperation can be chosen. Here, the influence of the framework conditions from step 3 plays a central role in determining which cooperations make the most sense. In conclusion, these also affect the design of the framework conditions. Against the background of the intensity of commitment and the form of cooperation, the framework conditions from step 3 can be taken as a basis for further coordination.

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	Informal exchange	Customer/supplier relationship	Strategic development partner	VC investment	Innovation cooperation	Strategic partner	Financial participation	Innovation unit	New business
1	Develop new business models		+		+	+			+
	Faster scaling								
2	Develop new business models		+		+	+		+	+
	Acceleration of development								
3	Develop new business models		+		+	+		+	+
	Capacity utilisation								
4	Serving existing or new markets					+			+
	Acceleration of growth								
5	Serving existing or new markets		+		+			+	+
	Faster scaling								
6	Serving existing or new markets		+		+	+		+	+
	Capacity utilisation								
7	Access to new technologies		+		+	+		+	
	Tests under real conditions								
8	Access to new technologies	+	+		+	+		+	
	First reference customers								
9	Solution for concrete problem	+							
	First reference customers								
10	Increase the level of innovation and digitalisation		+		+	+		+	
	Capacity utilisation								
11	Promoting change		+		+	+		+	
	Capacity utilisation								
12	Gain inspiration		+		+	+		+	
	Tests under real conditions								
13	Getting to know new working methods		+		+	+		+	
	Tests under real conditions								

Table 4: Forms of cooperation for the compatible target pairs

## 5 Dos and don'ts of the cooperation of corporates with start-ups – results summary

With the analyses of the relevant literature and the interviews with companies, 31 Dos and Don'ts for corporates and start-ups were compiled. To identify the most important recommendations for action derived from this, the practice (corporates and start-ups) was again included by means of a survey. A total of 22 responses ranked the 31 dos and don'ts, with just as many

representatives from corporates as from start-ups.

Seven dos and don'ts have emerged for corporates and start-ups, which are of particular importance from all perspectives (corporate, start-up, and from the authors' point of view) (see Table 5).

Corporates	Start-ups
<p><b>Dos:</b></p> <ol style="list-style-type: none"> <li><b>Openness towards alternative approaches of the start-up in the innovation process, in the cooperation and with regard to the framework conditions</b></li> <li>Discussion and agreement of the administrative framework conditions such as budget, accounting, form of cooperation, etc. in advance.</li> <li>Greater willingness to take risks and greater tolerance of mistakes</li> </ol>	<p><b>Dos:</b></p> <ol style="list-style-type: none"> <li><b>Placement of speed, flexibility and low initial costs as a competitive advantage over established (IT) companies and compensation for increased risk</b></li> <li>Building trust through reliability, commitment and understanding of needs</li> <li>Winning advocate in corporate (key account)</li> <li>Competent, organised and learning sales with market know-how and authentic appearance</li> </ol>
<p><b>Don'ts:</b></p> <ol style="list-style-type: none"> <li><b>Showing arrogance towards the young companies and their shortcomings</b></li> <li><b>Long processes due to unclear internal responsibilities</b></li> <li>Narrowing down the cooperation to the needs of the corporates</li> <li>Building up unrealistic expectations in terms of time and outcome</li> </ol>	<p><b>Don'ts:</b></p> <ol style="list-style-type: none"> <li><b>Lack of knowledge about the specific needs in the industry and of the client</b></li> <li>No knowledge about the interfaces to other projects and cooperations</li> <li>Showing arrogance towards the established corporates and their structures</li> </ol>

Table 5: Dos and don'ts for corporates and start-ups

### 5.1 Dos and don'ts for Corporates

These are the most important recommendations for action addressed to corporates. Instead of being arrogant, corporates should show openness towards the *diversity* of start-ups and not unnecessarily prolong the processes.

Overall, both parties see the task for corporates in becoming more involved in the administrative and operational needs of the young companies. The cooperation already starts in the run-up because it is a matter

of defining expectations and needs even before the contract is signed. The reason lies in the diversity of the structures. This must be anticipated by the contact persons in the corporate and cushioned against the company's own structures, which are often not adaptable at short notice. A cooperation with a start-up should not be limited to a particular use case so that the experience gained can flow into the further development of the offer. Accordingly, a certain degree of willingness to take risks and tolerance for mistakes must be brought along. Working with a start-up is more like a

marathon with experiences of success and setbacks or at least a hurdle race than a sprint. Start-ups develop and can outgrow themselves if they have or are given the necessary resources, degrees of freedom in terms of time, tolerance for mistakes, and trust.

## 5.2 Dos and don'ts for start-ups

Start-ups are seen as *young and fresh*, fast and flexible. They do not carry the ballast of established companies and thus often not the overhead costs. This is precisely what they should emphasise as a competitive advantage when talking to corporates. This can offset the risk position perceived by corporates.

But they should not forget: start-ups try to succeed in an established market environment, often through innovations that have not been used before. But in doing so, they should be sure that they have correctly understood the needs for which their solution was designed. It does not help to be arrogant about traditional processes and approaches, which may well make sense. The embedding in the overall environment should also be considered, as corporates should avoid isolated solutions in their usually complex systems that cannot be rolled out widely.

This can be countered by the partners talking to each other, staying in dialogue, and building trust. One basis for this is a professional and knowledgeable sales force that speaks the customers' language and the market. Language and understanding barriers can thus be avoided. It is helpful to find advocates in corporate who can act as mediators into the company. In combination with an obliging and reliable appearance and action, the basis for successful cooperation is laid.

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## 7 Appendix: Mini cases from practice

### DIEHL Connectivity Solutions GmbH and Packwise GmbH

#### Summary:

Intelligent containers: location and condition monitoring of liquid containers

#### Short portrait corporate

With the mission "We close the gap from sensors to use case", DIEHL Connectivity Solutions is a specialist for industrial integration within the DIEHL Group. The aim is to support customers in the digital transformation with intelligent solutions and robust and stable technology. The areas of Urban & Campus Solutions, Infrastructure & Construction and Industry & Logistics are covered at three locations.

Basic strategy for cooperation with start-ups:

Cooperation with start-ups is of strategic importance for DIEHL Connectivity Solutions in the context of technology monitoring and development. DIEHL Connectivity Solutions acts as a partner for companies of all sizes and is therefore positioned at the interface between start-ups and the market.

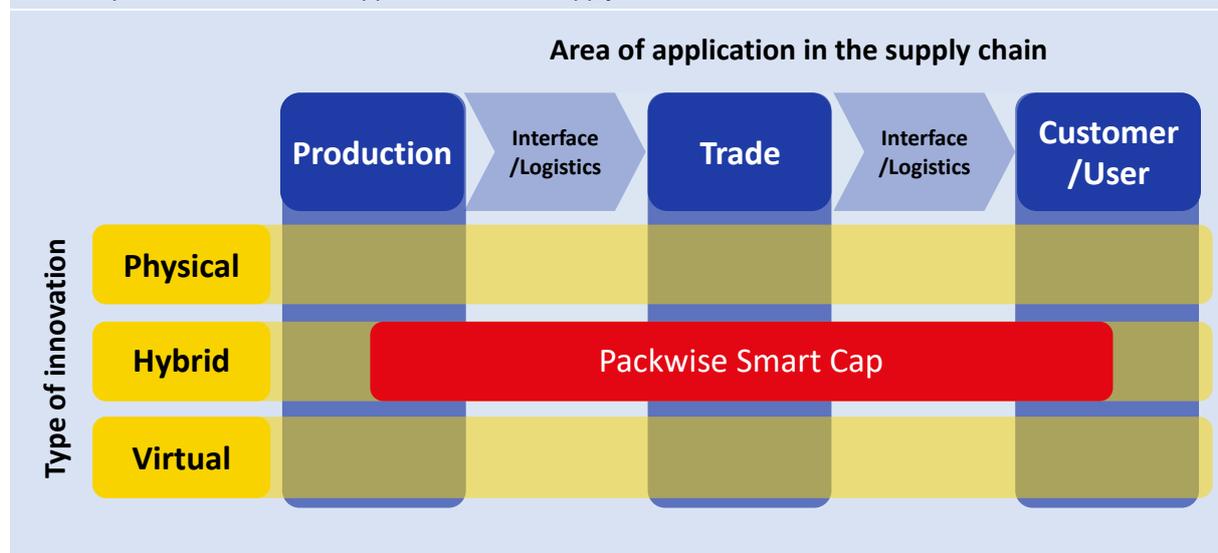
Identified concepts from start-ups are objectively assessed for risk content and realistic market potential. For a positive rating, a real business case in the range of a few years is expected. In the case of a positive evaluation result, various cooperation options are explored with the start-up, which can range from a development partnership to self-marketing as DIEHL Connectivity Solutions. A standardised approach will not be followed in order to maintain the greatest possible openness for cooperation.

#### Short profile start-up

Packwise GmbH from Dresden was founded in 2017 and offers an Industrial Internet of Things (IIoT) solution for smart container tracking and management of liquid goods in intermediate bulk containers (IBCs). The customers are companies in the chemical and food industry.

According to the company, the hybrid digitalisation solution Packwise Smart Cap is a hardware-enabled software-as-a-service solution. The reusable caps communicate via various radio standards and the digital twin of the intermediate bulk container maps the high-precision sensor data on location, fill level, temperature and movements in real time.

The platform warns of parameter deviations and provides recommendations for action. It visualises and automates processes for various applications in the supply chain.



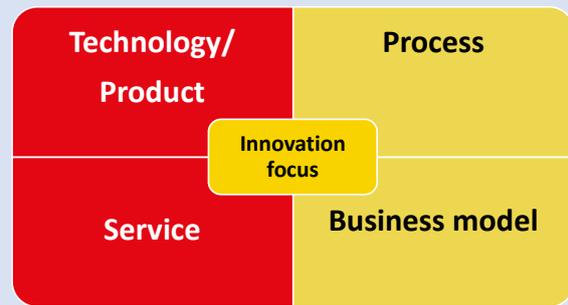
**Detailed description of the cooperation:**

The cooperation came about through a direct approach to the start-up with the aim of scaling the innovation quickly. The start-up's assets in the discovery phase were functional prototypes, a robust understanding of the market and details, and real test cases.

The market-ready implementation of a digital tool with a physical component (here: hybrid digitisation tool Packwise Smart Cap) requires extensive development tasks, especially for hardware components (certifications/CE marking, approval procedures if necessary, production planning for different quantities if necessary, determination of manufacturing costs, etc.) which represent a major hurdle for a start-up. The design of a profitable cooperation is thus in the interest of both parties.

In order to implement this cooperation, it was essential for both parties to fix the contracts, which was one of the main tasks of the first phase of the cooperation. The nature of the cooperation requires customised contracts that do not correspond to the standard repertoire of a corporate group. Part of this is the design of a business basis that generates a sustainable solution for both parties and in particular takes into account the financial strength of the start-up, because here there is a considerable difference to the classic cooperation between corporates.

In the resulting cooperation, the start-up partner Packwise is responsible for the platform and associated processes, and the corporate partner Diehl is responsible for all hardware-related parts and hardware-related IT/software.



**Challenges/risks**

- Risk regarding sufficient success of the start-up in the intended cooperation period and realistic growth figures of the business case
- Mastering the challenges of the high divergence between a corporate culture and its established norms and standards and a start-up with existential pressure to succeed

**Success factors/lessons learned**

- Clear understanding of each other's abilities and limitations
- Joint, conservative planning of development milestones and industrial development risks

## Gebrüder Weiss GmbH and Cargometer GmbH

### Summary:

Image and environmental sensing: improving workflow through cargo survey technology.

### Short portrait corporate

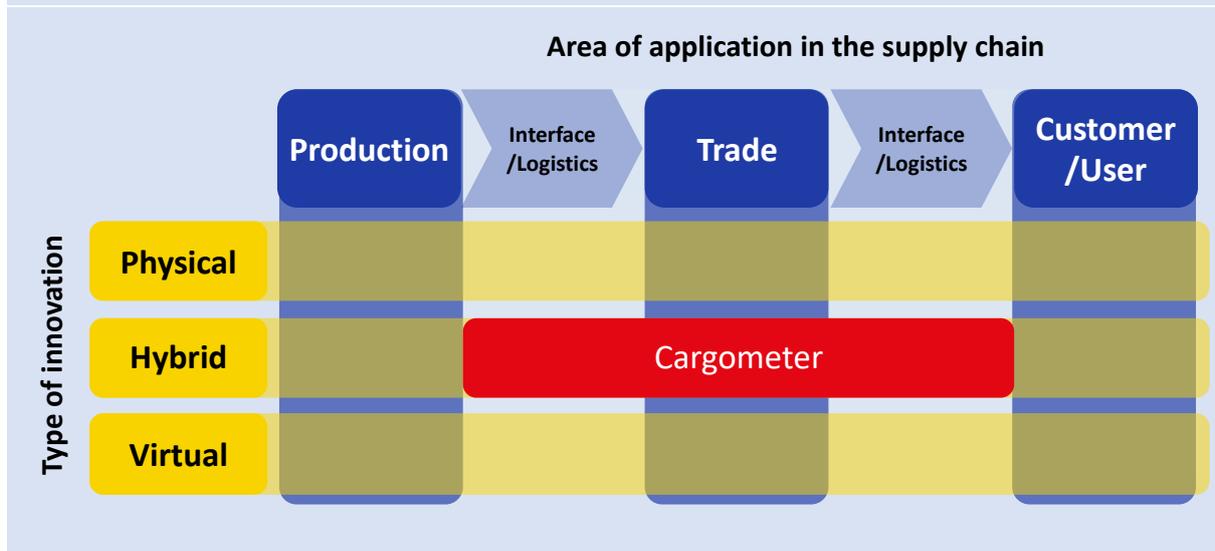
Founded in 1823, the logistics service provider Gebrüder Weiss has around 7,300 employees at 150 locations worldwide. With its innovation department located in Vorarlberg, the company aims to further develop both its product range and its processes in a targeted manner. Austria's largest logistics service provider offers transport and logistics services ranging from general cargo and groupage, partial and full loads, to nationwide parcel services, and serves customers such as Hilti, Knorr-Bremse and HP.

Basic strategy for cooperation with start-ups:

Gebrüder Weiss does not follow a specific, standardised process in initiating cooperation with start-ups. Depending on the challenge, different approaches are chosen. For Gebrüder Weiss, the focus is on the development and adoption of innovations and process improvements. Concrete applications (in the sense of start-up products) are sought on the basis of operational and strategic challenges.

### Short profile start-up

Cargometer GmbH, based on the High-Tech Campus Vienna, was founded in 2014 and offers a hybrid digitalisation solution, freight measurement on a moving forklift truck. For this purpose, the dimensions, weight and barcode of the packages are recorded directly as they pass through the loading gate, digitised and transferred to the customer's system. The hybrid digitisation solution offers logistics service providers a quick and timely freight measurement (especially volume and weight), by means of which the effective consignment size can be determined more precisely. This enables logistics service providers to charge the appropriate (fair) price for the actual consignment and to be aware of possible subsequent transport challenges (based on knowledge of the effective consignment size). Cargometer's customers include the logistics service providers Gebrüder Weiss, DACHSER Group, DB Schenker and Hellmann Worldwide Logistics.

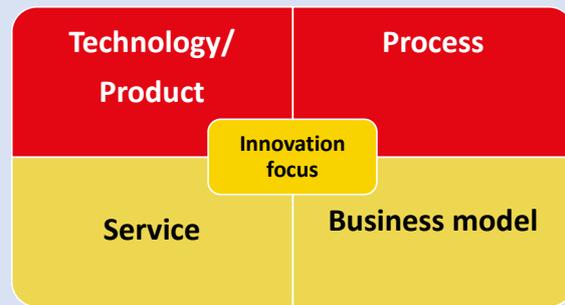


**Detailed description of the cooperation:**

From Gebrüder Weiss' point of view, the objective of a cooperation with a start-up is to bring product and process innovations and a fresh, entrepreneurial mindset into the company and to make processes more efficient. The freight measurement technology of the start-up Cargometer automatically determines the key points of the respective consignment and, through the implementation of this technology at Gebrüder Weiss, a significant improvement in the workflow is achieved.

The initial contact came about when the founder of the start-up approached Gebrüder Weiss and was given the opportunity to present the technology. Subsequently, the freight measurement technology was tested. Gebrüder Weiss provided resources and infrastructure for this purpose. After the "proof of concept" was successful, Gebrüder Weiss entered into a cooperation with Cargometer. The market-ready technology is being implemented step by step in the Gebrüder Weiss branches.

The cooperation includes the delivery, installation and provision of the freight measurement technology. Gebrüder Weiss purchases the services of Cargometer at a market rate.



**Challenges/risks**

- Ability to roll out the technology beyond an isolated solution in a larger corporate network and to scale the solutions associated with the technology, especially on the ICT side.

**Success factors/lessons learned**

- Sufficient time must be allowed for technology development and adaptation to the application environment. It must not be expected that the technology/solution to be used will work immediately in all desired dimensions.
- Both the corporate and the start-up should be prepared for personnel changes in the counterparty. Likewise, the parties should be prepared for new investors and clients.

## Gebrüder Weiss GmbH and Neohelden GmbH

### Summary:

Chatbot: Information retrieval/provision in the customer portal

### Short portrait corporate

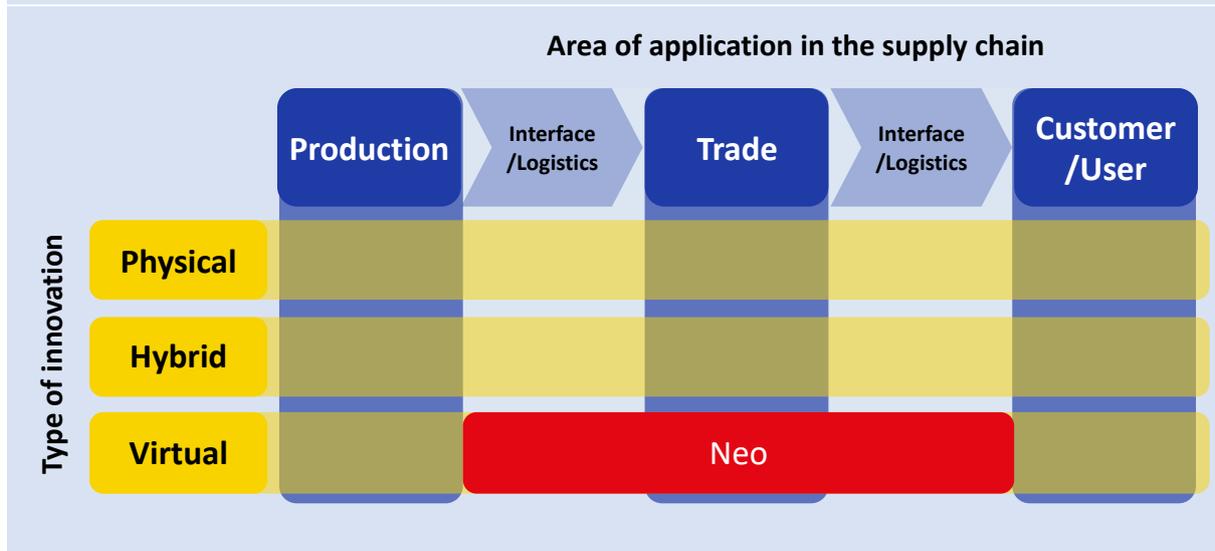
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Basic strategy for cooperation with start-ups:

Gebrüder Weiss does not follow a specific, standardised process in initiating cooperation with start-ups. Depending on the challenge, different approaches are chosen. For Gebrüder Weiss, the focus is on the development and adoption of innovations and process improvements. Concrete applications (in the sense of start-up products) are sought on the basis of operational and strategic challenges.

### Short profile start-up

Neohelden GmbH, based in the Technology Factory Karlsruhe, was founded in 2018 and offers a virtual digitalisation solution, an AI assistance technology. The AI Assistant Neo makes artificial intelligence usable for employees and customers of companies. Through the AI assistance technology, software systems can be controlled in a voice- and text-based manner. This makes it even faster and easier for employees and customers to query and control systems, such as the status of shipments and changes of address. Neohelden's customers include Gebrüder Weiss, Daimler, Siemens and Kolumbus (Wirtschaftsförderung Region Stuttgart).

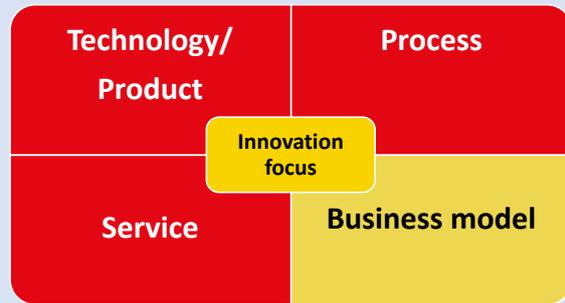


**Detailed description of the cooperation:**

From Gebrüder Weiss' point of view, the objective of a cooperation with a start-up is to bring product and process innovations and a fresh, entrepreneurial mindset into the company and to make processes more efficient. Although the basic motive for the cooperation is given, there are hurdles to overcome before the implementation of automatic information procurement/provision via the chatbot in the Gebrüder Weiss customer portal can be realised.

The contact with Neohelden came about at the pitch night of an accelerator. Due to the persuasiveness of the Neohelden team, a *proof of concept* was carried out. Due to hurdles such as interfaces/application definition (fuzzy customer problem) and technology implementation (lack of resources), the implementation was not pushed further. First, the customer portal has to be completed in order to then use the market-ready AI assistance technology in a targeted manner.

The collaboration includes familiarisation and *proof of concept* of the AI assistant technology. The cooperation is initially designed as a loose cooperation, to be formalised afterwards and to change into a market-standard purchased cooperation.



**Challenges/risks**

- Sufficient attention and resources to implement the new technology.

**Success factors/lessons learned**

- Clear definition of the interfaces and applications (in terms of the customer focus/problem). However, these should also allow for some leeway in results.
- The enthusiasm for the new technology is to be carried forward in the course of the project.

## Global automotive company and Evertracker GmbH

### Summary:

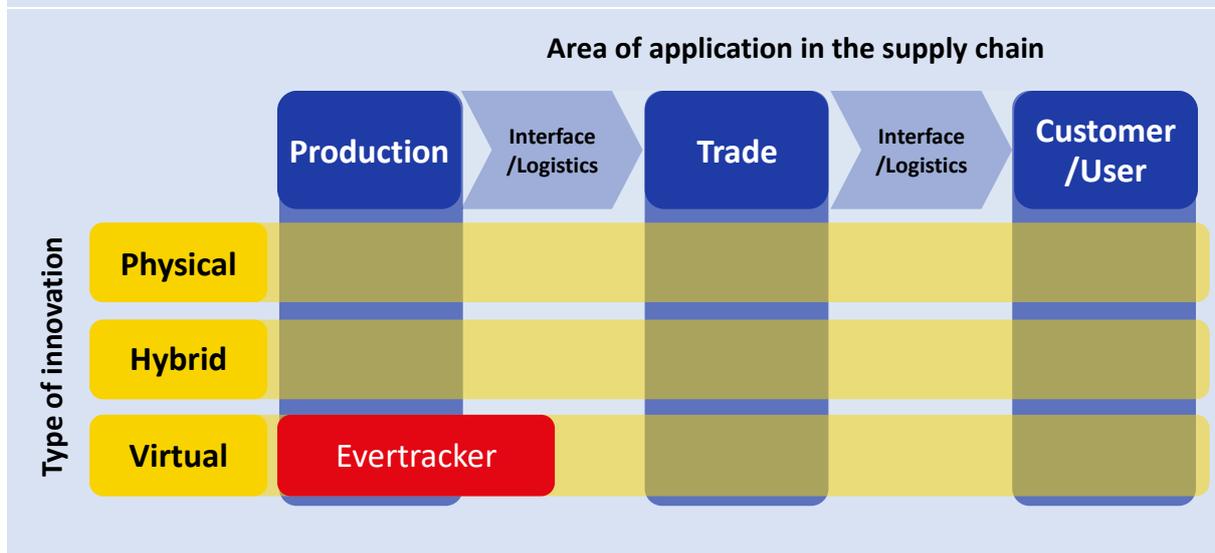
Logistics Control Tower: Using track & trace data and forecasts to plan production

### Short portrait corporate

The automotive company has a global footprint in the commercial vehicle business. Corporate continuously analyses how processes, products and services can be adapted with a view to future developments. For this purpose, corporate conducts a structured and methodologically sound screening across the group. Cooperation with start-ups is sought in various forms. In addition to identifying new technologies and promoting innovation within the company, classic contracts are also awarded.

### Short profile start-up

Founded in 2014, Evertracker is a platform technology provider that aims to make global supply chains fully transparent, controllable and predictable. The company started with tracking shipments using a tracker. Today it offers a control tower solution that brings transparency to supply chains. In addition to the automotive industry, customers come from the retail and construction sectors.



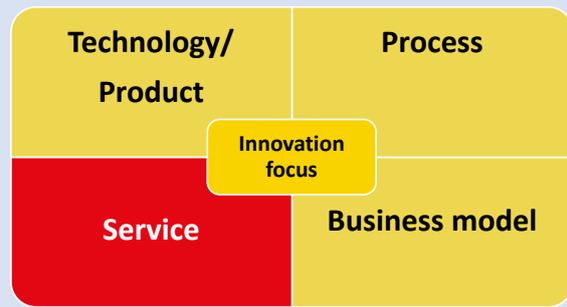
**Detailed description of the cooperation:**

Based on an internal need in connection with the future-oriented alignment of logistics, the automotive company was looking for a partner who could make its own global logistics chain more transparent. After selection interviews with various providers, Evertracker was chosen as the implementation partner. The speed and flexibility as well as the understanding of corporate structures were the reasons for the decision, in addition to factual facts.

As part of the continuous optimisation of its logistics, corporate is pursuing the goal of making the supply chain more transparent. Due to the global logistics chains, it is important for the production planners of the globally distributed locations to know whether there are delays on the supply side or whether these are to be expected. In the past, it was only possible to compare planned and actual values when the goods arrived or through a great deal of manual work.

For this problem, a partner was sought who could offer a solution quickly and flexibly. Evertracker was chosen because the start-up could not only plausibly demonstrate that it was technically competent. Also, during the preliminary talks, the impression was gained that, due to the social components, the cooperation could work in the course of a pilot. For this reason, the risk was taken to work with a start-up instead of an established IT company.

After numerous discussions and coordination rounds within the corporate and with the start-up, an official order was placed. The administrative handling corresponded to a standardised contractor-client relationship. The project is structured like a service contract, although a product was purchased.



**Challenges/Risks**

- Risk in terms of size (sustainable market presence) and performance (solving the problem) of the start-up.
- Lack of communication structures

**Success factors/lessons learned**

- Understanding of the start-up about processes in the group
- Flexible and fast response of the start-up to requests from the corporate

## GROUP7 AG International Logistics and doks. innovation GmbH

### Summary:

Drone: Inventory and analysis processes in the warehouse

### Short portrait corporate

GROUP7 was founded in 2006 as an international logistics company with headquarters in Munich and is now represented with around 600 employees and its own branches at Germany's economically strategic hubs. The service company generated sales of 128 million euros in 2019 and has 195 international bases that ensure a global presence.

Intelligent logistics solutions for the areas of air freight, sea freight, rail transport to and from Asia, sea-air and land transport, as well as individual concepts for outsourcing in the logistics service sector represent the range of services offered by GROUP7. The company offers worldwide procurement and distribution logistics, customised services in the area of contract logistics as well as fulfilment services. The focus here is on maximum flexibility and customer-oriented process handling.

Basic strategy for cooperation with start-ups: Cooperation with start-ups plays an important role in the GROUP7 company. In addition to the idealistic drive that young people with new ideas are generally worth supporting, start-ups bring new ideas to the company, question existing processes and generate creative solutions.

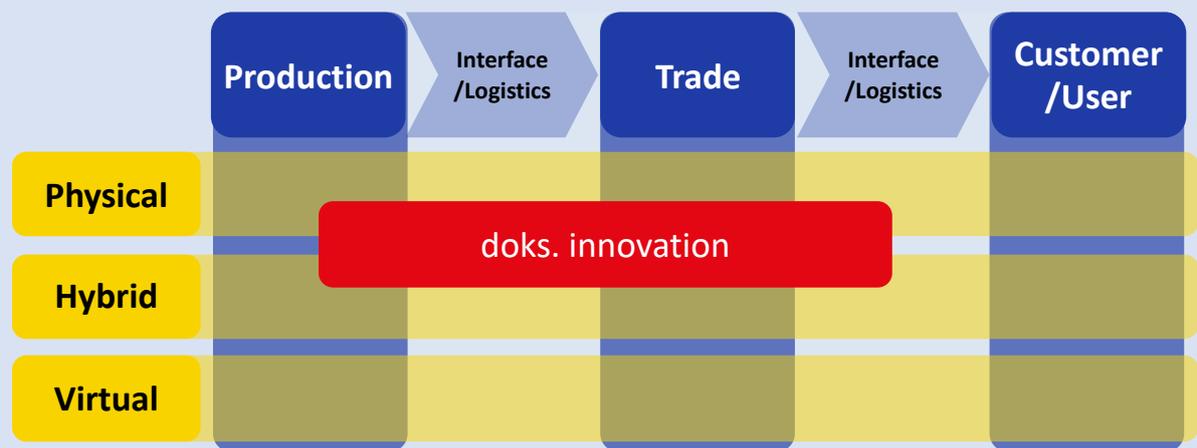
### Short profile start-up

Founded in 2017 in Dortmund in the environment of the Fraunhofer Institute for Material Flow and Logistics IML, doks. innovation accelerates the digitalisation of stocktaking and inventory processes, master data management and transport over short distances with its solutions for intralogistics. For this reason, the field of innovation in the diagram below covers both the physical and hybrid sectors.

The solutions are based on years of research and development and combine machine and deep learning, artificial intelligence and automation approaches. Since January 2018, doks. innovation has been developing solutions for logistics and industrial companies at its headquarters in Kassel in northern Hesse that contribute to the automation and digitalisation of warehouse and inventory recording processes and map a digital twin.

The processing of data into relevant information relies on a combination of intelligent sensors and automated data processing and analysis and is thus intended to generate advantages in the planning and design of processes.

### Area of application in the supply chain



**Detailed description of the cooperation:**

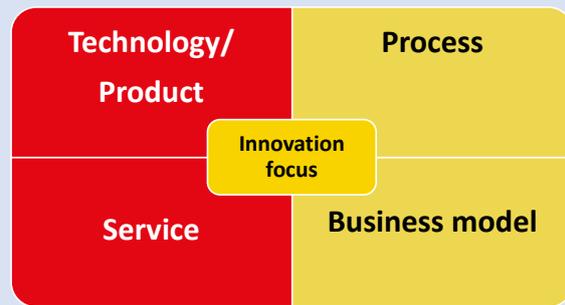
As a service provider, one of GROUP7's core tasks is basically to collect and process data for its customers. To do this, information must be continuously recorded in the form of images or data. This generates effort (blocking, recording, storing/managing, processing, deleting, etc.). The doks. innovation product drone flies in the warehouse and collects and analyses this data. This was a first starting point: the interest was there, because a basic technical fit was given.

In the first phase of cooperation at the beginning, it was important to create and form a common understanding. This required the involvement of both sides in going through a joint identification phase.

The next step was to look for possible applications and identify a new bearing as a starting point. Here, a multitude of new requirements arose for the product, which initially required further development or adaptation. At the same time, the corporate side first had to create the technical prerequisites (interfaces/IT, incl. the necessary employees).

The fixed objective and successful implementation were drone-based data collection: permanent inventory without stopping the operational processes in the narrow-aisle warehouse and passing on information to customers. The cooperation was purely based on partnership, without any investment on the part of the corporation. The cooperation was process-oriented for both parties: For the start-up, the focus was on rapid technology development and testing under real conditions; for the corporate, the focus was on access to new technologies and, in the long term, increasing competitiveness.

The result is successful and ongoing cooperation; with continuous new opportunities for optimisation (e.g., automatic gear change during inventory); but also support for the further development of the start-up in sales (markets, bringing in partner networks) and logistics (including customs clearance issues, also internationally via partners).



**Challenges/risks**

- Creating a common understanding of the technology and its potentials
- Creating a basis of trust without immediate/early contractual arrangements

**Success factors/lessons learned**

- Generation of a company-internal guideline for cooperation, which is also disclosed to the partner
- Establishing a clear culture of conversation

## Hellmann Worldwide Logistics SE & Co. KG and Ocean Insights GmbH

### Summary:

ETA: Prediction of arrival time of sea freight shipments

### Short portrait corporate

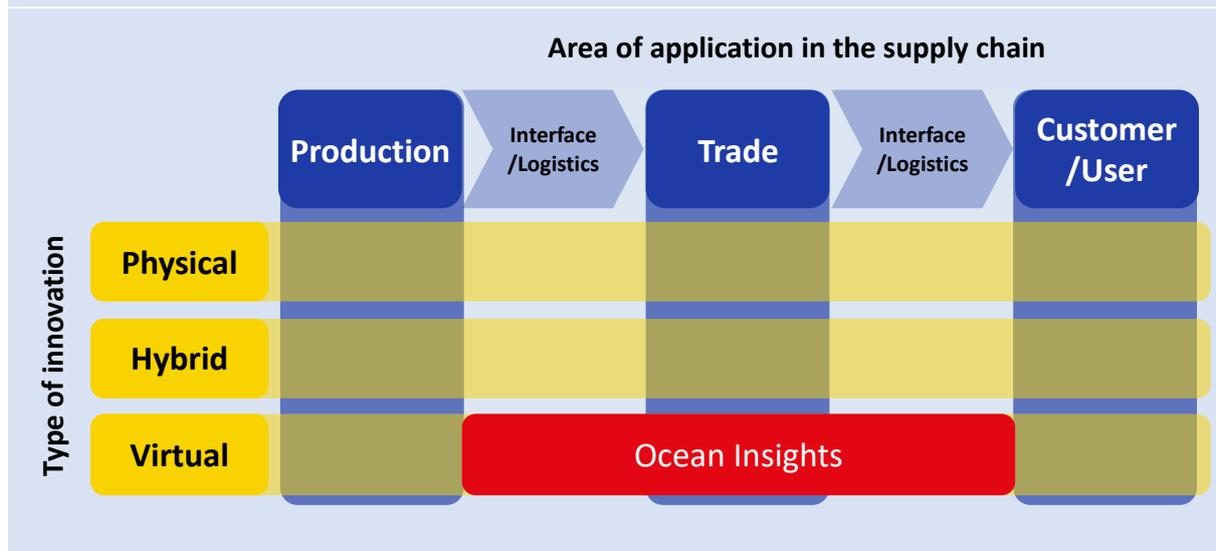
Founded in 1871, the North German logistics service provider Hellmann Worldwide Logistics with its almost 11,000 employees and approx. 260 locations pursues the goal of promoting creativity and entrepreneurial action through innovation. The family-run logistics service provider offers transport by road, rail, air and sea freight, as well as a comprehensive range of CEP services, contract logistics, industry and IT solutions.

Basic strategy for cooperation with start-ups:

Hellmann Worldwide Logistics does not follow a specific, standardised process in initiating cooperation with start-ups. Depending on the challenge, different approaches are chosen. For Hellmann Worldwide Logistics, the adoption of creative and entrepreneurial start-up solutions is a priority.

### Short profile start-up

Ocean Insights GmbH, based in Rostock, Germany, was founded in 2015 and offers a virtual digitalisation solution for tracking sea freight shipments and related services. The technology developed by the start-up enables the tracking and prediction of arrival times for sea freight shipments, taking into account complex environmental conditions. Ocean Insights' customers include Hellmann Worldwide Logistics, Samuel Shapiro & Company and Kuehne + Nagel.



## Cooperation between corporates and start-ups - efficient use of innovations in logistics

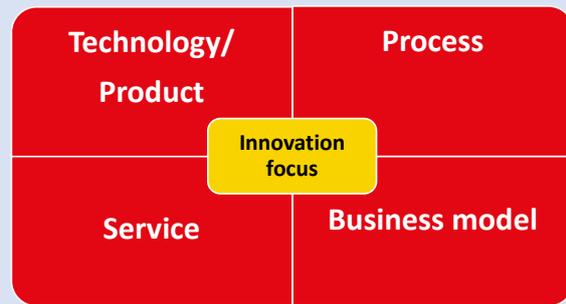
A consortium project of the Digital Hub Logistics, Hamburg

### Detailed description of the cooperation

When Hellmann Worldwide Logistics collaborates with a start-up, the focus is on a certain exclusivity of the young company and the added value of the product. This is also the case with the cooperation with Ocean Insights, whose product is intended to eliminate the difficulty of predicting sea freight arrival times including customs clearance. The technology offers added value to the customers of Hellmann Worldwide Logistics and the internal management of shipments.

The founder of Ocean Insights and former employee of Hellmann Worldwide Logistics left Hellmann Worldwide Logistics with the knowledge of the challenge of sea freight arrivals and the goal to fix it by means of a tool. Once the tool was developed, it was natural to present the ETA tool to the former employer. This was followed by a *proof of concept* using real data and a more comprehensive operational suitability test. After a successful suitability test, the two companies entered into a cooperation, the market-ready ETA technology was implemented and is in use at selected customers.

The cooperation includes the provision of ETA technology. Hellmann Worldwide Logistics purchases the services of Ocean Insights at a market rate.



### Challenges/risks

- It must be ensured that the existing maturity level of the technology is sufficient for the application in the corporate. Otherwise, a certain flexibility is required to initially use the new technology and to jointly develop it to the desired level of maturity.

### Success factors/lessons learned

- Regional proximity between the corporate and the start-up is particularly important in the initial phase of cooperation and intensive development phases.
- The start-up requires a critical level of technology and market know-how. While the technology know-how is represented by a suitable composition of developers and management (especially tech nerds), knowledge of the processes of the market players and their interaction is relevant for the market know-how.

## Wandt Spedition Transportberatung GmbH and JITpay GmbH

### Summary:

E-payment: Automated payment processing between shipper and carrier

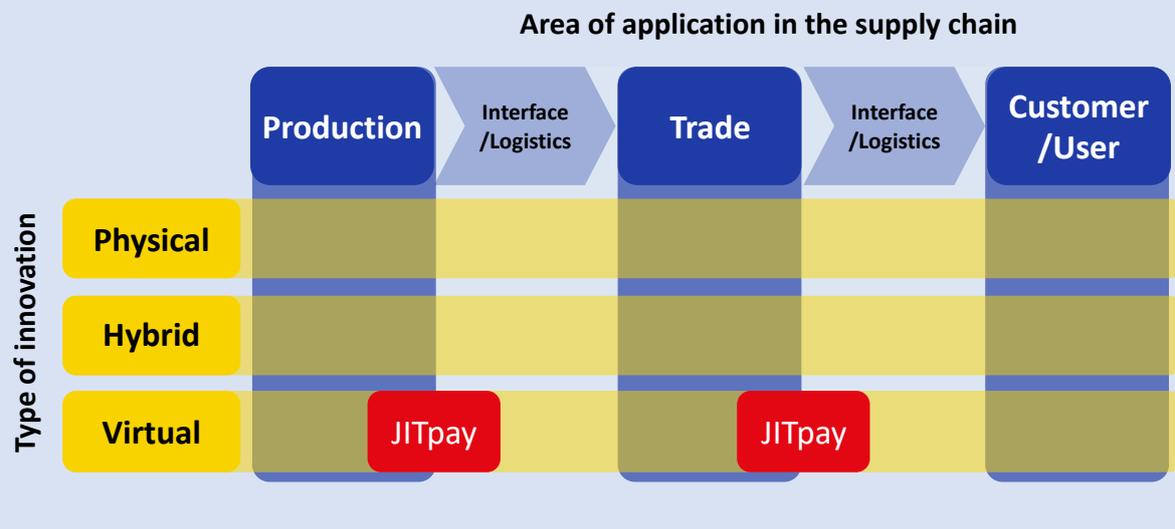
### Short portrait corporate

Wandt Spedition Transportberatung GmbH is an owner-managed, medium-sized family business that was founded in 1939. The company offers services in the field of transport and contract logistics and sees itself as a "full-range supplier for the region". The company has its own resources such as trucks, drivers and logistics space.

In its cooperation with start-ups, the company pursues the goal of future-oriented development with new solutions. Primarily, solutions are sought that can be acquired. Alternatively, the company develops its own solutions.

### Short profile start-up

JITpay is a FinTech company that specialises in the digitalisation of billing processes in logistics. The focus is on providing the service provider with immediate payment while still agreeing flexible payment terms. The start-up was founded in 2016 and can be assigned to the expansion phase. The service offers are already established and are used by numerous companies.

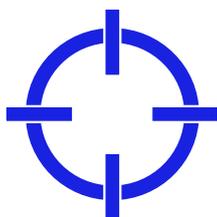


## Cooperation between corporates and start-ups - efficient use of innovations in logistics

A consortium project of the Digital Hub Logistics, Hamburg

Detailed description of the cooperation	
<p>The two companies are linked by a long-standing personal trust between the two managing directors. The cooperation is such that Wandt acts as a pilot customer for JITpay. New offers from JITpay are tested at Wandt. In the process, the two companies exchange information on the extent to which the respective solution works or how it can be improved. Both companies benefit from the cooperation. There is no contractual basis for this.</p> <p>The most important findings are that for a successful cooperation, the customers and their needs should be known.</p>	
Challenges/risks	Success factors/lessons learned
<ul style="list-style-type: none"> <li>- Different views of the process on the part of the start-up (digital) and corporate (analogue), complicated by the <i>financial services</i> perspective.</li> </ul>	<ul style="list-style-type: none"> <li>- Well-structured and competent sales with knowledge of the challenges of medium-sized corporates</li> <li>- Different way of working than established IT companies</li> </ul>





# Enter a **long-term** project together?!



**Cooperation between corporates and start-ups -  
efficient use of innovations in **logistics****

2021