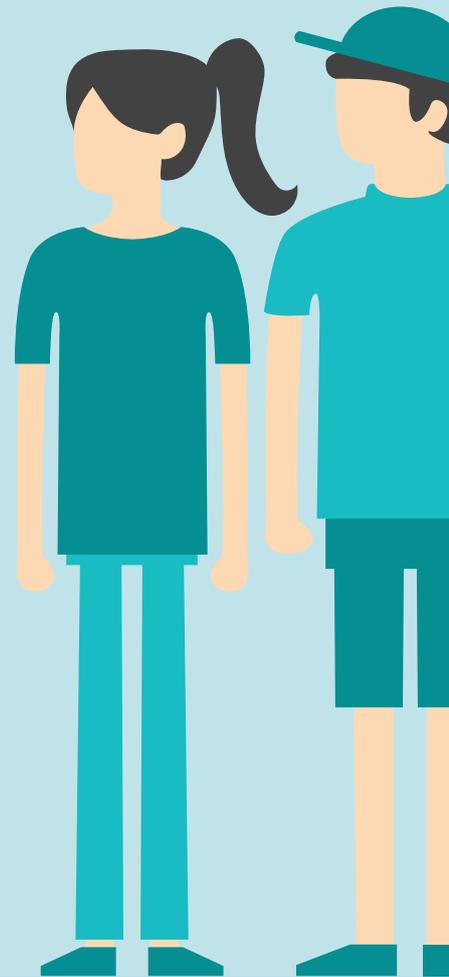


# REFI INSIGHT

The **ROCKWOOL** Foundation Interventions Unit  
Insights and Learning Series / October 2019

How can we make  
it possible for more  
young people to  
complete vocational  
training courses?



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# What is RFI INSIGHT?

**A**t the ROCKWOOL Foundation Interventions Unit we aim to generate new knowledge about possible solutions to challenges faced by society. Our work is spread over four phases. First, we investigate the nature of a current issue, drawing on knowledge, insights and lessons gained from research, social innovation and interaction with practitioners. Second, we prototype and develop possible solutions. Third, we evaluate the impact of these solutions in order to determine the degree to which they generate positive change and their cost-effectiveness in doing so. We keep scalability in mind throughout; solutions are designed to reach their full potential at scale, which is our fourth and final phase.

Our work is always a learning process. New questions arise, and we continuously acquire new insights into the nature of the challenge, the intended participants, and the methods that may produce positive change. We build on this knowledge in creating a specific solution. However, it is not until we finally see the results of a research-based impact evaluation that we know whether that solution really does have the capacity to generate positive outcomes for participants, and benefits for society as a whole. It takes time to reach that point. The idea of “RFI Insight” is to share the practical knowledge, insights and learning that we continuously accumulate through our work, including in the early phases.

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# How can we make it possible for more young people to complete vocational training courses?

The ROCKWOOL Foundation Interventions Unit is currently working with a number of vocational training schools on a new initiative intended to help more young people to complete courses of vocational training. Our aim is to carry out an impact evaluation of the initiative with a large number of vocational training schools and thus to contribute new knowledge concerning what works, so that more young people can complete the courses they begin.

In 2017, almost one third of 25-year-olds in Denmark had not completed an upper secondary level education.<sup>1</sup> The members of this population group face the risk of a weaker future relationship to the labour market than people who have completed an upper secondary level qualification.<sup>2</sup>

Many young people begin upper secondary level vocational training courses, but drop out after a short time. In fact, only around half of the students who begin vocational training courses actually complete them and obtain the associated qualification.<sup>3</sup> Some of the students drop out even before completing their 20-week Foundation Course 2 (Grundforløb 2 in Danish, or GF2). This has been the situation in Denmark for many years; and despite intensive efforts to find new methods and solutions, we know relatively little about how the vocational training schools can increase the proportion of students who complete their courses.

How can we ensure that all students feel from the outset that they belong to the school and are welcome to play an active part in the classroom learning community? How can we give students authentic experiences of their chosen profession that closely match what they will encounter in the real world of work? Can such experiences make the students more aware of the opportunities that exist within their field of study? Would that persuade more students to complete their courses? How can new initiatives be implemented on courses where there are so many learning goals to be met? The ROCKWOOL Foundation Interventions Unit is working to find answers to these questions in close collaboration with a number of vocational training schools, students and businesses. In addition, researchers from Copenhagen Business School are participating in the project, conducting analyses of administrative data from the schools.

Our focus in this report is on “students’ voices”. We present what we have learned through conversations with the students at vocational training schools. We have been keen to learn all we could about the experiences, wishes and needs of these students. On the basis of the insights we have gained from this process, we have described two opportunity spaces for new ideas, where we have identified openings for interventions which could lead to more students completing the vocational training courses that they begin.

1 Source: Danmarks Statistik, 2018: Nyt fra Danmarks Statistik, 4 April 2018, no. 130. Accessible at <https://www.dst.dk/Site/Dst/Udgivelser/nyt/GetPdf.aspx?cid=26821>.

2 Source: Jakobsen, 2015: Uddannelses- og beskæftigelsesmønstre i årene efter grundskolen. Copenhagen: SFI.

3 Of the 50,000 students who commenced an upper secondary level vocational training course in 2012, within a period of five years only 52 percent had completed a course in the field in which they had started (Danmarks Statistik, 2018).

## *What is an opportunity space?*

An opportunity space is:

1. A new understanding of a problem which opens up possibilities for thinking “outside the box” in order to find solutions

and/or

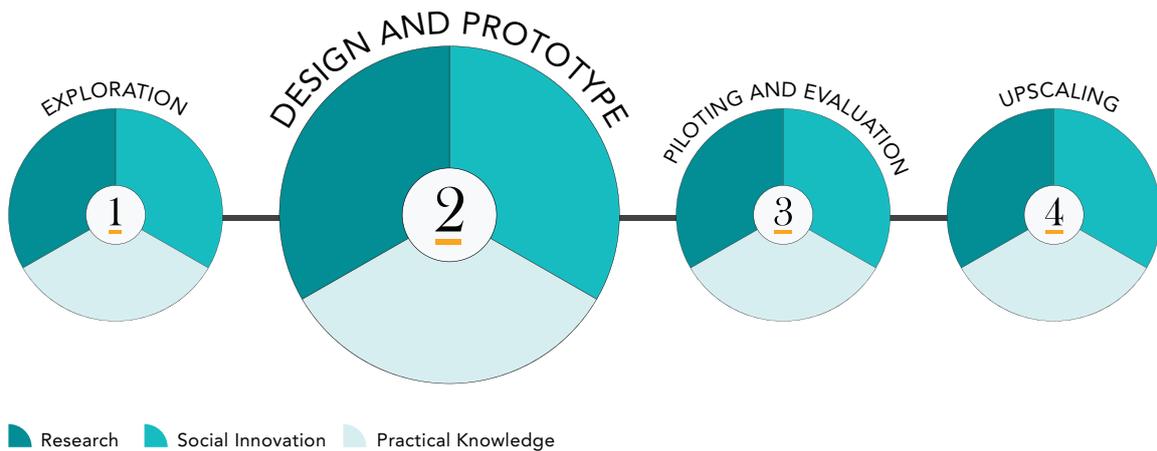
2. A recognition that there is unfulfilled potential in rethinking how existing or completely new resources can be brought into play in finding a solution to a problem.

In the approach that we are taking, we believe we have identified two opportunity spaces in which work can offer potential for improvement:

1. A scaling back of the expectation that students will be certain in their choice of subject area when they begin their foundation course at a vocational training school; and instead, a greater focus on students developing familiarity with their chosen sector from the outset, gaining authentic experience of their vocational area, and beginning to establish a professional network
2. A reduction in the emphasis on individual goals in the foundation course, and a greater focus on establishing a classroom learning community among the students.

We are currently working on developing and trialling specific initiatives and approaches that can be implemented at vocational training schools. By actually trialling these ideas in practice, we expect to obtain feedback that will teach us more about the relevance of these changes in focus and how to implement them.

## The RFI model



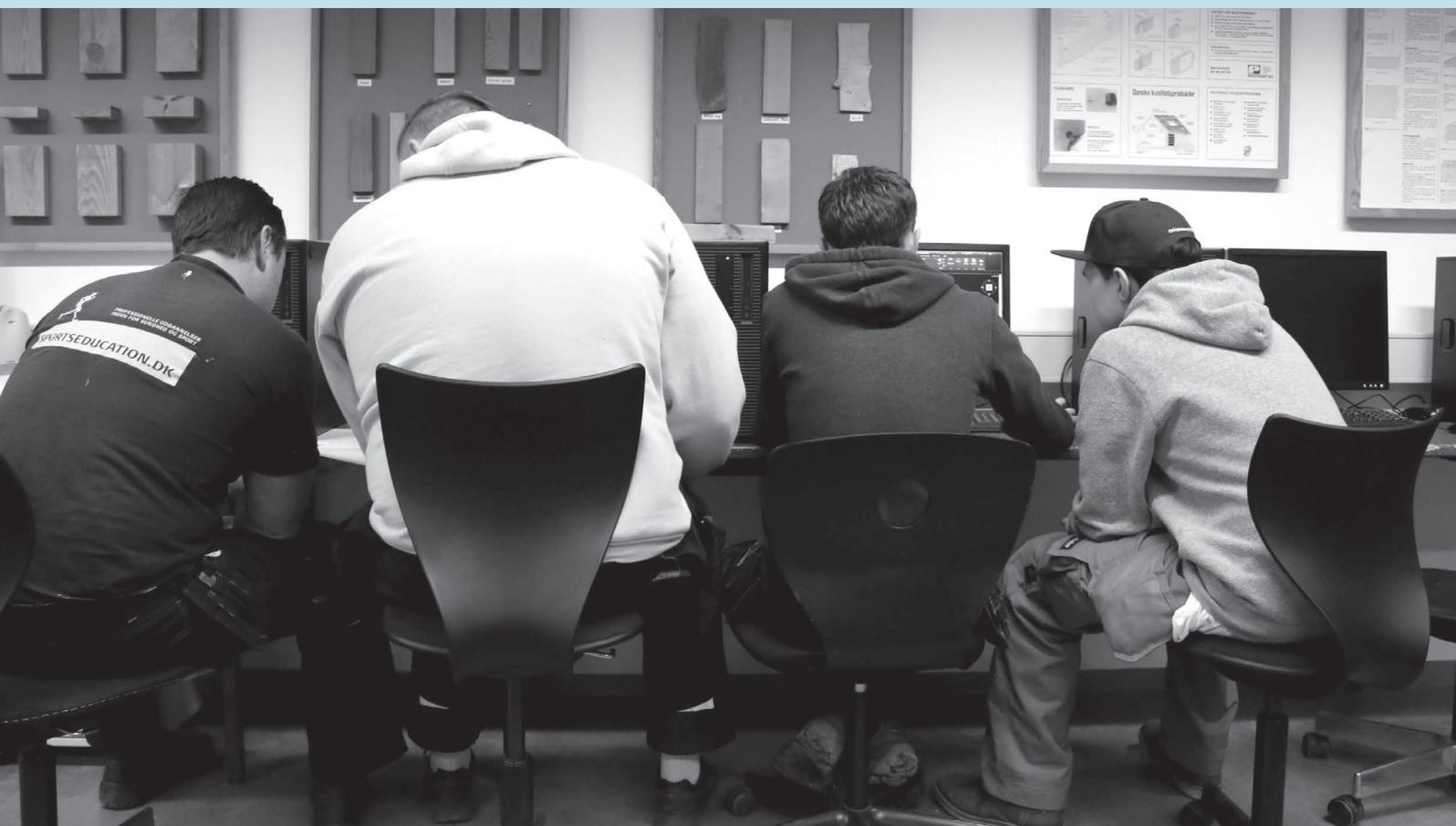
At the ROCKWOOL Foundation Interventions Unit we aim to generate new knowledge about how we can solve the challenges faced by society. We do this by combining research, social innovation and knowledge of practice, and by working with external partners who are keen to join in with our efforts to find new solutions. The RFI model covers four phases in which research, social innovation and knowledge of

practice all interact, together creating the foundation for our initiatives. Our initiative designed to increase student completion rates at vocational schools is currently in phase two of the model, Design and Prototype. It is in this phase that we try out prototypes. By constantly alternating between development and trialling we gain insight into where and how we can create positive change.

# What are we working on at present?

**W**e are currently working on developing initiatives and/or on data analyses in collaboration with the vocational schools NEXT, Aarhus TECH, EUC Zealand, SDE College, TECH-COLLEGE and CELF. In addition, we have set up an EUD innovator network involving a larger group of vocational schools – there were 19 schools participating at the most recent event. These schools have supplied valuable input for our project development on a regular basis.

At present, we are working with teachers and students in three foundation courses at NEXT. In order to ensure that our work covers courses that are broadly representative of the entire vocational school curriculum, we have selected one course within each of the major areas of Building and Construction, Industry and Production, and Business. However, our aim is to develop one single initiative that will be relevant across all the various vocational fields of study.



# Can data from vocational schools' administrative systems provide us with new and relevant information?

Researchers Fane Groes and Edith Madsen of Copenhagen Business School are engaged in collecting administrative data from a number of vocational training schools. These data are linked to register data provided by Statistics Denmark in order to throw light on the following research questions:

*1. What background factors are significant for whether students complete their course programmes?*

*2. What is the typical pattern of progression for students who enter vocational training schools? How many of them continue directly from the foundation course to the main course,*

*and how many repeat the foundation course? What happens to the students who drop out? Do they begin another course, or a job, or do they lose contact with the labour market?*

*3. What is the relationship between students' absences from school and the probability of them dropping out of their course?*

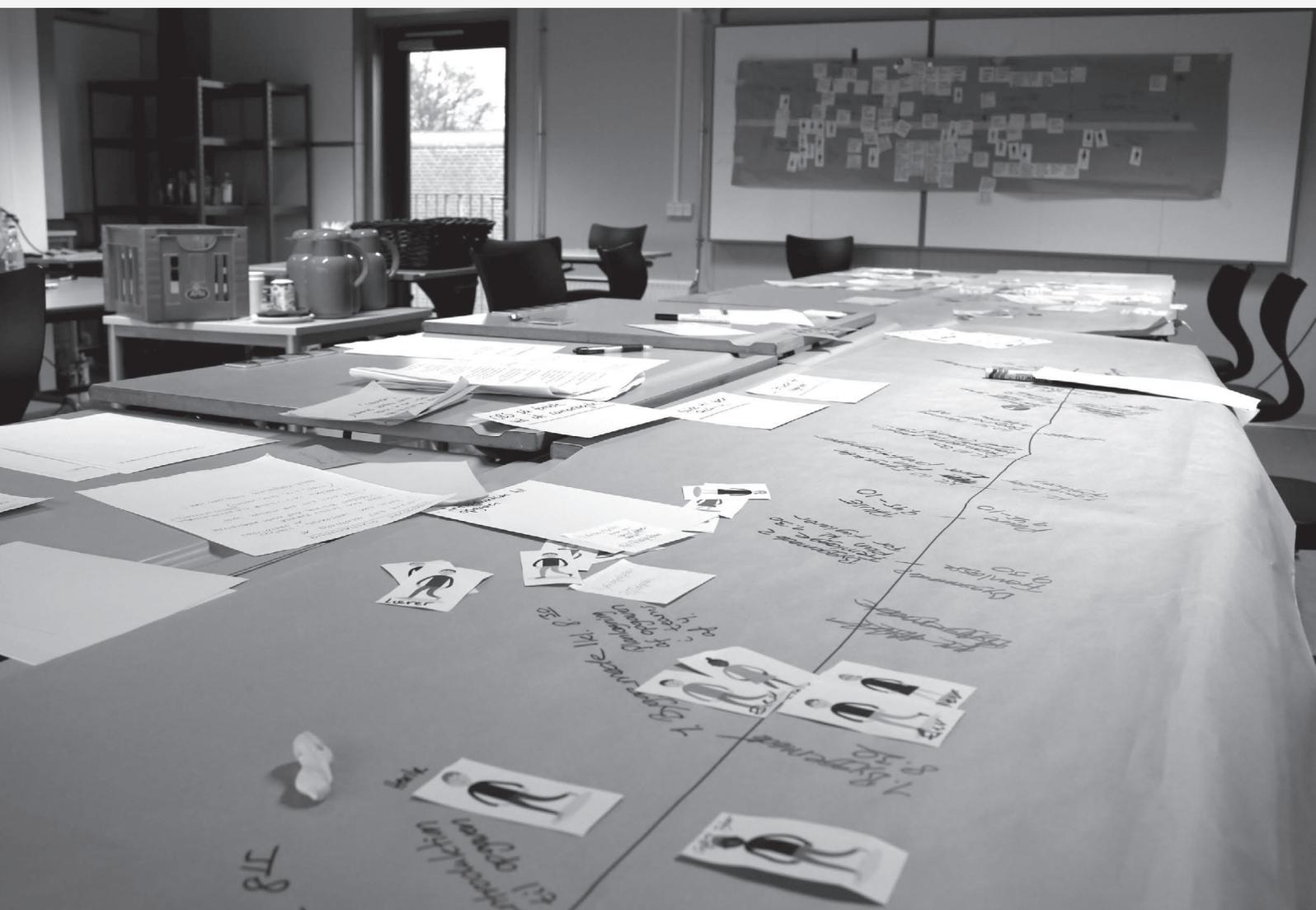
These are among the questions to which we are keen to find the answers. We continuously use the knowledge that we gain through our data analyses to inform our development work on the initiative. We expect to publish the results of our analyses in 2020.

# What are the questions that guide the development of our initiative?

“Do I really fit in at this school, or would I be better off leaving?” This is a question that many young people ask themselves, particularly those who are on the verge of dropping out of a vocational training course. Research tells us that feeling excluded from a group has special significance for young people. If young people begin to believe

they are not fully part of a community, they are liable to withdraw from that community of their own accord.<sup>4</sup>

In this publication, we present the thoughts of students that have been especially helpful to us in establishing the focus of our development work.



4 Blakemore, Sarah-Jayne, 2018: *Inventing Ourselves: The Secret Life of the Teenage Brain*. New York: Doubleday.

# *The data*

In our work of developing initiatives, we use various sources of data – for example, participant observations, interviews, trialling of prototypes, and workshops. We have based what we have learned so far through this initiative on the sources of data listed below.

## **2017**

In the autumn of 2017 we carried out exploratory field studies at two vocational training schools. The insights gained from this process are based on:

- 20 days of field studies at vocational training schools
- 12 in-depth interviews with students

## **2018**

In the autumn of 2018 we trialled three different prototype initiatives at three different schools. The insights gained from this work are based on:

- 15 days of fieldwork at vocational training schools, including implementation activities and discussions with students and teachers
- 35 in-depth interviews with students
- 6 workshops with students

## **2019**

In the spring of 2019 we conducted field studies in several areas of study at vocational training schools. The insights gained from these field studies are based on:

- 12 days of fieldwork at vocational training schools
- 40 interviews with students
- 8 workshops

# Opportunity space 1

*A scaling back of the expectation that students will be certain in their choice of subject area when they begin their foundation course at a vocational training school; and instead, a greater focus on students developing familiarity with their chosen sector from the outset, gaining authentic experience of their vocational area, and beginning to establish a professional network.*

## Certainty

Foundation Course 2 at vocational training schools lasts only 20 weeks, and before students can proceed to their main course, they must pass the final foundation course examination. Many of the students and teachers at vocational training schools with whom we have talked find that it is hard for them to find the time to learn all the skills required to pass the exam. Some of the students said that they felt they encountered an emphasis on the idea that “You really have to want this course”, that students needed to be completely sure of their choice in order to be able to learn all that the vocational training foundation course demands. We have been told that this emphasis contributes to students

feeling that they do not really belong on the course, that they cannot possibly succeed at the school and make a contribution to the classroom learning community, because they are approaching the course from a different perspective.

The students we have talked to were all motivated to complete their courses when they began them. They believed that they had found a professional field that they would be happy to work within. However, they also started out with the feeling that they wanted to get to know the subject area better and to find out what work opportunities it could offer them.



**||** *When I started training as a bricklayer, I didn't really know anything about the job. It was completely new to me. Some of the others in my class knew a lot more about bricklaying than I did when we began. I felt like I was the dummy in the class, because I needed to go and ask one of the good students whether my wall was right."*

/ Student, bricklaying course



**||** *My friends and family had said that work conditions were good for process operators, and that's why I wanted to try it. I had heard the pay was great, about 43,000 kroner a month, apparently."*

/ Student, process technology course



!! *We were often told ‘You must really care about this’ and ‘You really have to put your heart into this if you want to be a good brickie,’ and so on and so forth. And you’d be thinking, ‘Okay, but why do I have to put heart and soul into this?’ We were often told ‘You really have to want this – you might as well drop out, if you aren’t prepared to put everything into it’ – we were really told that we might as well give up if we weren’t totally in love with the course. So naturally you’d find yourself thinking, ‘Okay, I’m not utterly committed to this – so should I just pack it in now, or what?’*

/ Student who dropped out of a bricklaying course

Some of the students that we spoke to were strongly focused on their professional knowledge and on the skills they had to acquire in order to pass the foundation course examination after 20 weeks. Such thoughts began early in the foundation course, and a number of students said that they could not believe that they would be able to learn all that was required when some parts of the course were so difficult. That could lead to them feeling it was tough to come to college the next day, and thoughts about giving up began to set in.



**||** *When things get difficult, you soon start to wonder, is this really what I want to be doing? And when you start to feel unsure, you naturally lose courage and start to draw back a bit.”*

/ Student, hairdressing course



**||** *I had no problem with anything else, just with that. It completely ruined my day. I just didn't feel I could face coming back to school the next day.”*

/ Student, retailing course

## Sector familiarity and professional networks

We have identified potential for improvement through focusing to a greater extent on helping students to acquire broader experience of different sectors and to expand their participation in professional networks during their foundation course. Such an expanded focus would offer students, as a complement to the skills directly related to their subject, everything else that they would need to know as a trainee in a firm. These elements would include, for example, social skills, professional interaction with colleagues, and customer contact in different types of firm. How and when can you ask questions, if in doubt? What does working with colleagues actually entail? What do you do if you find you have made a mistake? What constitutes good customer service in this particular sector? In short, all the things that their supervisors would consider also to be important.

We have learned through our development work that it is important to many of the students who opt for vocational training that they should actually create something that is of value to other people – preferably people in “the real world”. Because of this, we see potential in establishing closer links between students, teachers and firms even at the foundation course stage. This could give students both tangible experience of their chosen sector and the beginnings of a professional network, inspiring students by helping them to see the opportunities that the sector offers them.



**||** *I feel that I'm really involved in building a house, because we lay the floor, build the walls and put down the tiles. I feel as though I've created half a bathroom now. That's why I want to be a builder, so that I can say 'I built that.' It's just a bit of a shame when you have to tear it all down again, because then you think, 'Damn. You can't see my work any more.' You just have to take a whole lot of pictures of what you've done, because in a couple of days it won't be there any more."*

/ Student, bricklaying course

“ On this course – if you’ve made a stool or something, you can take it home to your parents and say ‘I made this myself.’ When I’d finished my stool, I put it on my bike and took it home. And I showed it to my mother and my sister. They’re actually still using it ... I took it home four days ago, and they’re still using it. My sister has put it in her room as a little bedside table.”

/ Student, carpentry course

“ Imagine that you’re driving down the street and you can look up and say, ‘Hey, that’s where I took out the bathroom and put in a new floor.’ That would be so cool. Or that you’ve been involved in putting up a multi-storey building out in Vestmager, where they’re building like crazy at the moment. It’d be awesome to be able to drive by and think, ‘I helped to build that – that bit of brickwork right there, I did that.’”

/ Student, bricklaying course



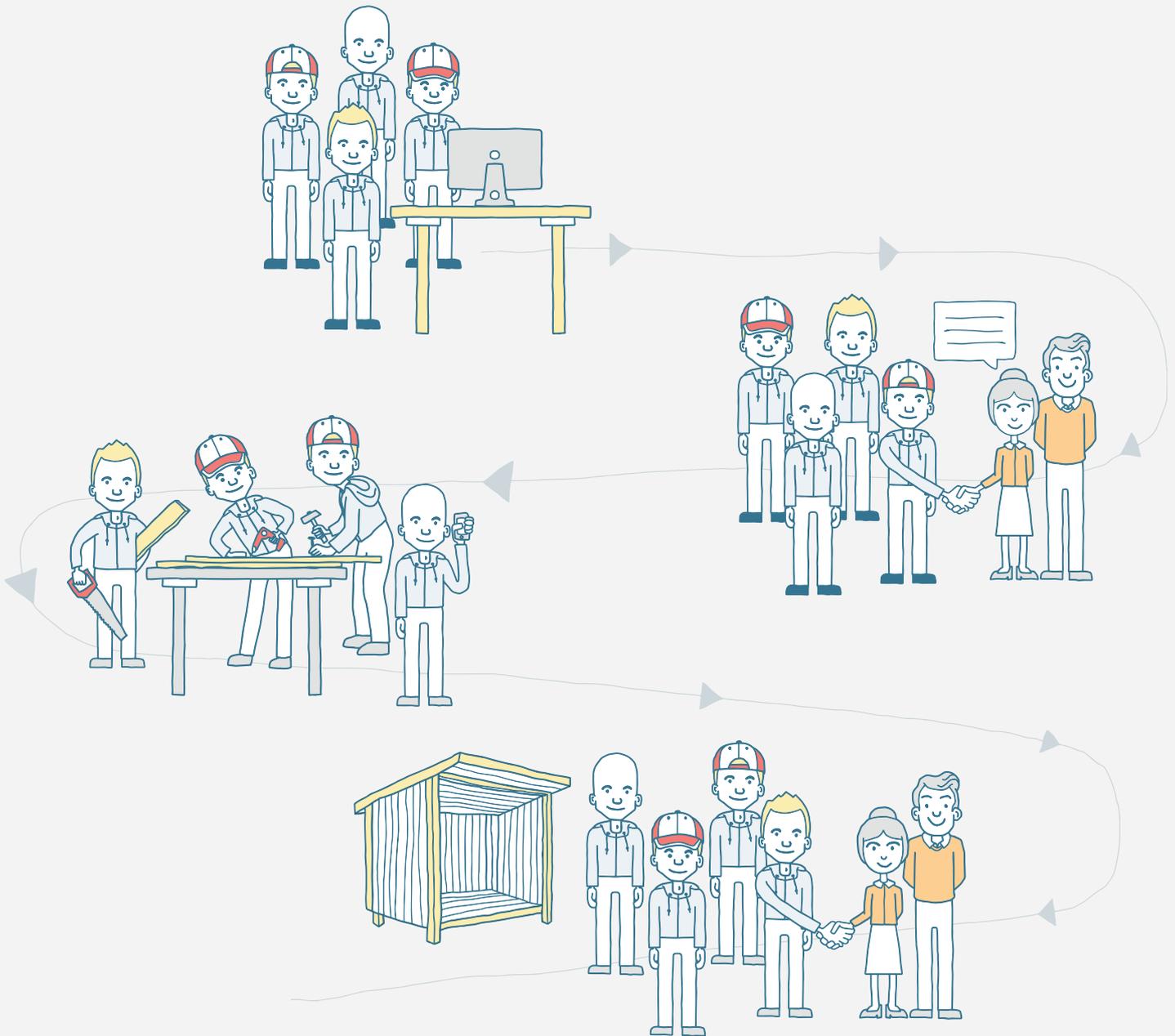
## Insights from the prototype trials

We have trialled new methods of working with sector knowledge on the foundation course using an initiative called “Elevbyg” (student production), which has been developed in cooperation with NEXT. The initiative has been implemented and tried out on a small scale using two foundation course classes for carpenters and involving two teachers and around 50 students. No impact evaluation has been made of Elevbyg, and consequently we do not know whether the initiative leads to more young people completing the vocational training courses they originally started. We are using the interim findings we describe here in our overall concept development work.

### Elevbyg (Student production)

The initiative represents an attempt to give students on foundation courses at vocational schools experience in producing something which people can use in the real world. The programme is carried out over a one-week period (around Week 9 of Foundation Course 2). Students work in groups to produce a piece of carpentry for a real client. The programme in the Elevbyg week is as set out below.

1. A group of four students chooses an assignment from a task bank, which consists of requests from private customers for pieces of carpentry that they require. Typically, these requests come from clients who do not have much money, but who are flexible in terms of the completion date required. The course teachers have ensured that the requests in the task bank match approximately with the skills of the students and the time available.
2. The student group visits the client and agrees details of the work – measurements, materials, etc. In this way, the students have the chance to experience what working as a carpenter actually entails.
3. The students work on the task in the school workshop, staying in touch with the client if they need any clarification as they proceed.
4. The teachers ensure that the work is of appropriate quality.
5. The client collects the completed work, gives feedback to the students, and pays for the work at a rate equivalent to the cost of the materials.



## What do the students say?

“It was great to have some contact with clients. I’ve never had that experience before, and it was fun and exciting. Best of all was that it was our customer. We had the responsibility for getting things right. And we were responsible for all the small details – for example, when we should meet.”

/ Student, carpentry course

“I’m glad that the customer was satisfied with the product and bought it. And I’m proud that it was us who had made something a customer paid for, even if we are only students. And she said she thought it was really beautiful.”

/ Student, carpentry course

# Opportunity space 2

*A reduction in the emphasis on individual goals in the foundation course, and a greater focus on establishing a classroom learning community among the students.*

## Individual goals

We have seen that students often feel that vocational training schools expect them to take responsibility for their own learning. When we talk to the students, we find that many of them are worried that starting at a vocational training school will simply involve returning to the bad experiences they remember from their time at lower secondary school. This anxiety is often amplified when a great deal of responsibility is put onto individual students.



**||** *I was just glad to have got started. I was really a bit nervous about it till then. You think, ‘Oh, no, it’s back to school again. Will it be hard? Will I be able to keep up? Can I cope? And the others in the class – will they be good friends, or will I just find them irritating?’*

/ Student, carpentry course



**“** *This time, I’m going to wipe the slate clean. I’m making a new start, and this time I’m going to succeed.”*

/ Student, retailing course



**“** *I think there are a lot of students who daren’t say anything in class. They’re scared of saying something wrong, or of being laughed at. I don’t think it’s much fun to say something, and it turns out to be completely wrong. So I’d rather just keep my mouth shut. If you know you’re right, then of course you want to say something, but if not it’s better just to keep quiet.”*

/ Student, retailing course

Furthermore, some of the students we have spoken to find that it is difficult to find a sense of community in the classroom and, for example, to ask other students for help if they get stuck with a task. They may also feel that it is altogether too difficult to say anything in class discussions if they are not certain they have the right answer. This may be because of uncertainty, or because they do not want to be a nuisance to other students in the class who appear to be well ahead of them in their progress.

**“** *Anyone can get through a vocational training course, I thought. It comes as quite a shock when it turns out to be difficult and soon there are only a few of you left in the theory lessons.”*

/ Student, bricklaying course

## Classroom learning communities

Our prototype trials with foundation course classes have shown us that some students achieve more success in their studies if they are invited to join the classroom learning community in a structured manner. This indicates to us that there is a potential for improvement through focusing on building inclusive classroom learning communities based on subject-specific tasks.

## Insights from the prototype trials

We have tested the relevance of building classroom learning communities on the foundation course by prototype trialling of the initiative “Makkerteori” (Partner Theory), which has been developed in collaboration with the vocational training and upper secondary school EUC Zealand. The initiative has been implemented and trialled on a small scale using two foundation course classes – one for carpenters and one for bricklayers. Four foundation course teachers and around 50 students were involved in the trial. No impact evaluation has been made of Makkerteori, and consequently we do not know whether the initiative leads to more young people completing the vocational training course they originally started. We are using the interim findings we describe here in our overall concept development work.

### Makkerteori (Partner Theory)

“Makkerteori” is a method of inviting all students to participate in and contribute to the classroom learning community. It provides a structured framework for pair-work, with students taking turns in assuming the roles of “navigator” and “driver”. Makkerteori is best suited to theoretical exercises. The navigator keeps track of

the task and tells the driver what to do next, and the driver carries out the work. Roles are exchanged every 25 minutes. This method of working together has demonstrated positive effects in the IT sector, with benefits for both the quality and the speed of carrying out tasks.

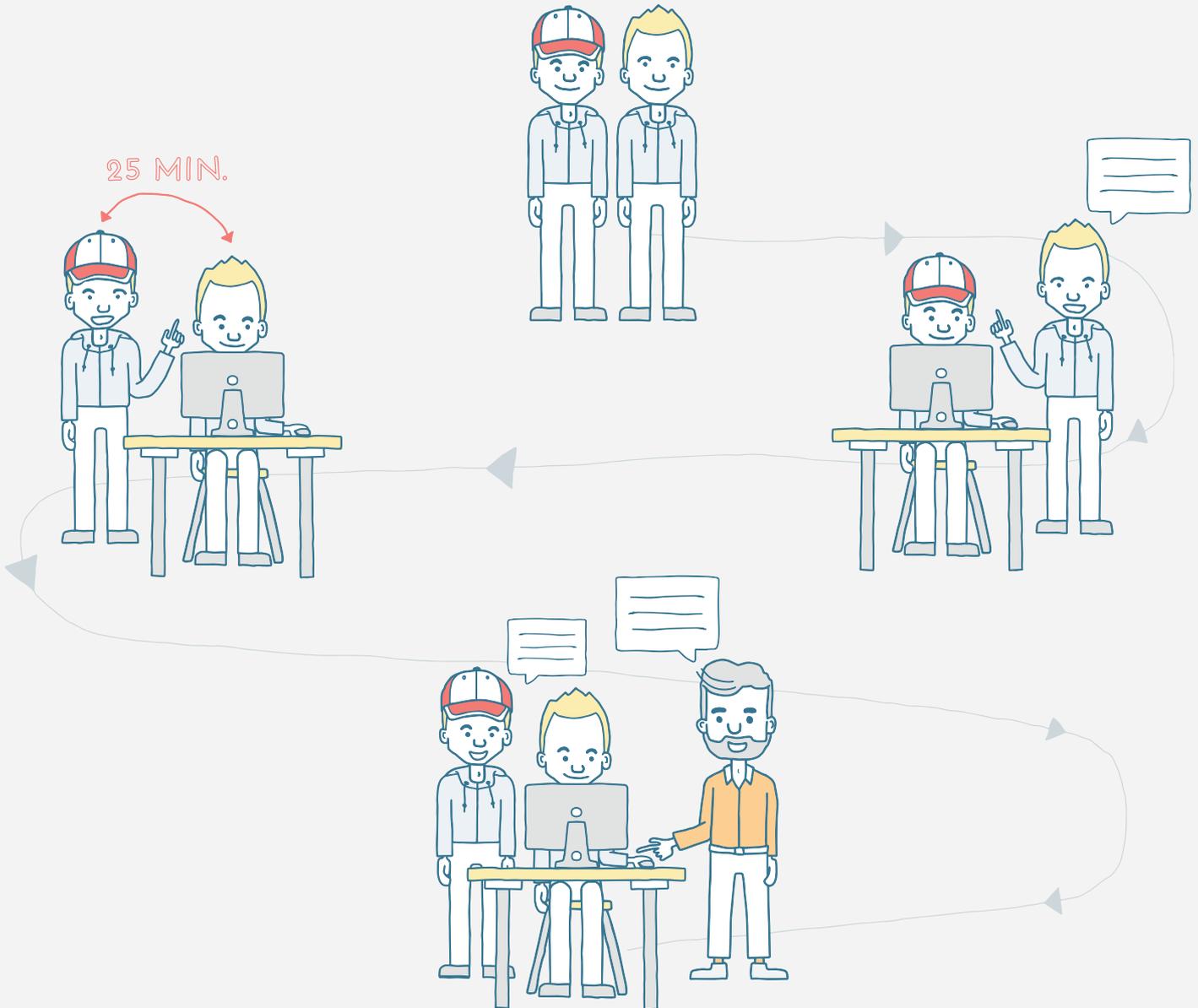
### *What do the students say?*

The students have provided us with the following feedback on what they think of Makkerteori.

**||** *It's much easier to concentrate when you have someone to discuss the task with. This partition wall, I would have got nowhere with it if I'd been working alone.”*

**||** *A lot of the time, I can end up just feeling frustrated about not being able to get anywhere.”*

**||** *Here, we have to work together. Otherwise people aren't so willing to help each other, or, I don't know, they'd rather do things for themselves. They just want to work on their own and get finished more quickly.”*



## What do the teachers say?

The teachers have provided us with the following feedback on what they think of Makkerteori.

“ The students make more progress with the theoretical tasks than when they work on their own.”

“ I get fewer questions from the students.”

“ Makkerteori has shown me some new sides to the students.”

## Contact the ROCKWOOL Foundation Interventions Unit

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## Partners



The Danish version of this text was completed on 13 September 2019.



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