# 1. Virtual teamwork in my work environment

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#### Learning outcome

In this session you will reflect on the relevance of virtual teams in the context of a changing work environment and identify typical characteristics of virtual teams as well as basic skills and competencies needed when working in a virtual environment

Objectives

At the end of the session, you will be able to

* explain the meaning of virtuality
* discuss the relevance of virtual teamwork in the context of a changing work environment
* distinguish different types of virtual teamwork
* identify and name required competencies in virtual work places

## 1.1 Prelude

Working in teams has become commonplace in both academic as well as in business contexts. With advancements in information and communication technologies as well as the increasing affordability of technological innovations, more and more of these teams now work in a virtual environment. This 'virtual' environment ranges from the simple use of electronic mail systems or instant messaging to working from home and meeting colleagues through web conferences, and linking up with team members in different locations around the world.

This is an introductory session in which we will discuss the relevance of virtual teams and examine the factors that actually make a team virtual. Since we can all improve our skills in this area, we will be discussing the basic skills and competences needed when working in a virtual environment.

#### Download: Learning journal for session 1

[Learning journal (.docx)](https://edubox.consilia-cct.com/documents/Learning-Journal-VIT-01.docx) [Learning journal (.odt)](https://edubox.consilia-cct.com/documents/Learning-Journal-VIT-01.odt) [Learning journal (.rtf)](https://edubox.consilia-cct.com/documents/Learning-Journal-VIT-01.rtf)

## 1.2 Virtual teamwork, an introduction

Today working in a virtual environment is ubiquitous, and for this reason many researchers have proposed moving away from the dichotomy of virtual as opposed to face-to-face teamwork, preferring to consider the level of virtuality involved, as well as the specific nature of teams and the challenges to be overcome. With this in mind, the aim of this session is to analyse and classify the central characteristics of virtual teams as well as outline the associated challenges and the impact they have on teamwork.

Before we get started, let's listen to a few voices explaining what has changed for them in their work environments and why it is beneficial and necessary to work in virtual teams.

### Task: Changes in work environments

Watch the short video and in brief, note down in your learning journal what Sayah Berjandi, James Kirwan and Natalia Bialobrzewska have to say about the changes in their work environment. Then think about what has changed in your work environment in the context of virtuality and teamwork.

At first glance, working in teams appears to be quite a straightforward activity: A group of people get together and are responsible for tackling a specific task. This could be creating a product, accruing knowledge or providing a support function. When the team does this predominantly by using the internet as a support system, they are a virtual team. However, on closer inspection it is a little more complex.

This complexity relates to the team itself, which can take various forms. So, for example, what ties the team together? Also, with regard to virtuality, how virtual does a virtual team need to be in order to be considered virtual? Answering these questions and outlining the associated challenges is the objective of this session.

Every time you open a business magazine, you are likely to read about a new tool for video conferencing or managing virtual teams. Although the worldwide corona pandemic accelerated the trend towards virtual teamwork, it had already been gaining momentum long before that. According to a survey carried out among more than a 1000 executives in 80 countries   
in 2016, 85% were working in at least one virtual team ([Trends in Global Virtual Teams (PDF document)](http://cdn.culturewizard.com/PDF/Trends_in_VT_Report_4-17-2016.pdf))

But what exactly is a virtual team? Let us start by exploring some of the general characteristics of a work team. According to Köppel (2007, p.10), a work team is:

A small collective of individuals who

* work on the same task
* feel somehow connected as a social entity
* are interdependent due to their common tasks
* are embedded in one or more larger social systems
* share a common goal
* should aim to develop specific team practices and routines in order to work well together

A collective of individuals can be as small as two persons (which is a very special type of team), and as large as 25 or more. What is important in this context is that the size of the group will have an influence on the potential and possibility for interaction. The larger the group, the more likely it is that sub-groups will emerge within the team. Also, specific group dynamics will be relevant depending on the number of members. So a five-member team, for example, will experience quite different communicative dynamics than a three-member team.

There are in fact many reasons for forming a team and teams may be short lived or relatively permanent. Whereas work teams tend to endure over a longer period of time, project or ad hoc teams are created for a specific purpose and are disbanded when the work has been completed. Reasons for establishing a team may include for example solving a problem collaboratively, generating innovative new ways of working, implementing services and managing organisational entities.

Having a common purpose supports the 'we-feeling' and each member's identification with the team as a social entity. This mini social system thus supports the development of a feeling of cohesion, while creating a boundary to the outside world. The team is acknowledged as such by outsiders, while the permeability of the boundaries depends on various factors.

The extent to which members of a team feel interdependent and influence each other depends on factors such as the task to be accomplished, the size and location of the team as well as the personalities involved.

Work teams are embedded in one or more social systems. This means that they are usually part of a larger system such as an organisational unit and/or company. However, members of different organisational units can form a team which is then embedded in further systems. A work team in a university context is embedded in a course structure and this course is embedded in the university structure, for example. Considering that teams are part of larger social systems helps us understand the possible constraints as well as opportunities the team might face, such as the availability of resources.

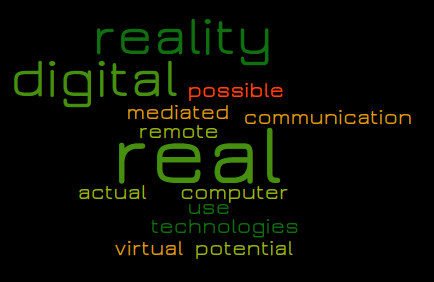
Recent advances in information and communication technologies including their affordability have changed the way teams work, while supercharging the development of virtual teams. Generally speaking, these can be understood as teams in which members are geographically dispersed and interact using technology-mediated communication in order to achieve their goals. Because virtual working ranges from writing emails with colleagues next door to working from home or communicating across national borders, the line between a face-to-face-team and a virtual team is blurred. Virtuality should hence rather be seen as a continuum, whereby a higher degree of geographic dispersion and dependency on technology-mediated communication correlates with a higher degree of virtuality. In this context it is therefore important to unpack the characteristics of ‘virtuality’ in more detail in order to understand the challenges linked to virtual teamwork.

### Task: Virtuality – what are we talking about?

In your learning journal, note down what comes into your mind when you think about 'virtuality' or 'virtualness'.

###### Sample answer

**Some associations of other participants with 'virtuality'**



* not real, remote
* virtual reality
* digital technologies
* digital reality
* real but not actual
* possible, potential and real
* use of computer mediated
* communication

#### An etymological definition of virtuality

According to the online etymological dictionary the word virtual appeared in the late 14th century and draws its meaning from the medieval Latin word virtualis and the Latin virtus meaning "excellence, potency, efficacy". But by late 1950s, it started taking up a new meaning of "not physically existing but made to appear by software". Today the common meaning of virtuality and working virtual refers to people meeting and communicating using electronic devices and the internet, in other words, being online.

Source: <https://www.etymonline.com/word/virtual>

## 1.3 Virtuality, what are we talking about?

According to Gibson and Gibbs (2006) and Köppel (2007), a number of different criteria are used to characterise virtual teamwork, although most authors agree on the aspects of geographical dispersion and communication that is dependent on electronic devices. These are also the most prominent characteristics commonly studied by scholars. However, as Gibson and Gibbs (2006) argue, the variables dynamic structure, diversity as well as communicative climate need to be added if we want to understand the challenges thrown up by virtuality. This is because they are likely to have unique effects on the performance and satisfaction experienced within the team. Let us look at them in more detail:

* geographic dispersion
* electronic dependence
* dynamic structure
* diversity
* communicative climate

As **geographic dispersion** of team members can mean both communicating with colleagues from our home office as well as communicating with business partners located in another country, it therefore makes sense to consider geographical dispersion as a continuum, rather than a binary either/or proposition. Thus we can speak of 'the degree' of virtuality or physical dispersion, and this degree is likely to influence the flow of communication into the team and within the team. One of the reasons for this is that team members who are highly dispersed are likely to be embedded in different external contexts and therefore have less shared contextual knowledge, and a far greater understanding of their own specific context. For example, team members who are situated in the same city are likely to anticipate common knowledge related to their environment and may take this knowledge for granted and therefore not feel the need to articulate its relevance to team members from other locations. *Co-location* is hence likely to facilitate interaction and the development of a common ground of understanding, which in turn supports information sharing. It becomes even more complex when some of the team members have a low level of virtuality and can meet in person, whereas the other members of the team are limited in their interaction due to their geographical location. Physical proximity also influences the possibilities for synchronicity in the team members' virtual interactions. And as the following quote shows, geographical dispersion also means being able to work independently of location and/or time:

*"It's awesome that you can communicate with each other regardless of TIME, regardless of location. This means that I don't have to be in a room with two people to discuss some topic, I just write a message in a group chat at eleven o'clock on Thursday evening and get an answer on Friday morning from someone somewhere in [China]."*

Given the fact that geographical dispersion has an influence on possible time windows for synchronous meetings, the degree of geographical dispersion is also likely to have an influence on the logistical administration required for gathering and coordinating resources. Making sure that team members are appreciated and not left out of decision processes because they are not physically present is one important factor here. In summary, geographical dispersion poses challenges when dealing with reduced contextual knowledge among team members as well as extra costs for coordinating resources.

Because some teams rely more on technology-mediated communication than others, **electronic dependence** should also be considered as a continuum along which teams can be located. A team which communicates entirely through e-mails, text exchange and video conferences, for example, is much more electronically dependent than teams which have the opportunity to meet face-to-face at least occasionally. According to research results, reliance on technology-mediated communication influences factors such as monitoring, opportunities for informal feedback, and the ability to interpret information correctly. A crucial side effect of communicating virtually is that it encourages the use of a more direct style of communication with fewer social cues. In text communication, for example, non-verbal cues such as the tone of voice are extremely important in conveying how you wish a message to be understood. Also, opportunities for informal feedback are fewer, and therefore the social framing of messages is less distinct. Difficulties in interpretation not only lead to misunderstandings but also to wrong conclusions and often judgments and assumptions about other team members. In sum, it can be said that the level of electronic dependence may influence the understanding of messages and thus the quality of teamwork.

However, exposure to new technologies and the developing the knowledge and skills related to them is certainly a distinct advantage:

*"And ALSO dealing with new technologies. In other companies, which don’t practice working in virtual teams, the technical mindset of employees is developed accordingly."*

The next factor, **dynamic structure** (Gibson & Gibbs, 2006) refers to the frequency with which team membership changes, roles are rearranged and relationships among team members shift. We are therefore talking about the nature and the dynamics of the team structure and its relationships. On the one hand some people might partner with others through informal, temporary and relatively unstructured arrangements, whereas on the other, some teams might be characterised by relative stability, long term duration and established role sharing. The structural dynamics of a team influences the development of trust, the level of uncertainty and perceived risk, and the potential for establishing routines and thus a collective virtual culture. The level of uncertainty felt when working in a team in turn influences the willingness and openness to share information. A high turnover of team members influences the propensity to develop relationships and establish an organisational memory, thereby strengthening social ties and relationships among team members. The strength of these ties guides the amount of interactions, the emotional intensity and the level of reciprocity between team members.

Another feature which requires consideration is **diversity**. Because technological advancements provide the opportunity to work across national boundaries, in the early literature on virtual teams, scholars such as Gibson and Gibbs (2006) focused their attention on national diversity and thus ‘passport identity’. However, given the fact that team diversity exists along many different dimensions, this is a narrow perspective assuming a high level of homogeneity within countries and nationality as a superordinate determinant of identity. It therefore makes sense that more recently Gibbs et al (2017) started to turn their attention to cultural and functional diversity. Functional diversity is understood to be the degree to which different areas of expertise are present in a team. One of the specific challenges in such teams relates to knowledge integration, since team members from different professional backgrounds may use specific jargon and face conflicting priorities due to their specific function and roles.

Diversity in its broad sense encompasses aspects such as age, gender, educational and work background, socio economic status, parental situation or caring responsibilities. These might be strong sources of identity and influence the teamwork to varying degrees. As the following quote indicates, appreciating and managing diversity has become an important part of most companies' culture:

*"At Henkel, we promote a holistic Diversity & Inclusion approach. The diversity of our employees, their backgrounds, experiences, talents, knowledge, creativity, and the appreciation of all their individual differences are the foundation for our competitive advantage. As a multinational corporation, Henkel employs people from 120 nations in almost 80 countries. About 85 percent of our employees work outside of Germany, with more than half of them in emerging markets. We believe that a company culture focused on diversity and inclusion is the key driver of creativity, innovation, and invention."*

Source: <https://www.henkel.com/company/diversity-and-inclusion> (accessed on 30.10.2020, used with permission)

The challenge for virtual teams is thus to identify diversity domains which have a strong influence on teamwork and subsequently clarify the differences in work behaviour which may be linked to these. The team's task is use this diversity as a means to work productively, while viewing differences as an opportunity, and the basis for developing a shared overall work culture and vision.

Cultural diversity encompasses a range of differences in organisational, national and individual cultural affiliations. Despite the fact that national diversity is a rather broad and generalising categorisation, Gibbs et al (2017) argue that it is particularly salient because perceived national cultural differences may be a source of stereotyping, communication barriers and interpersonal conflicts which may hamper team communication, cohesion and shared understanding. They maintain that teams working across national boundaries need to pay particular attention to be aware of and tackle these challenges and communication obstacles.

If we understand cultural diversity based on an open definition of culture, then this means acknowledging membership of a variety of obvious but also less obvious collectives. A collective in this context is a group of people for whom it makes sense to come together for any number of reasons, ranging from a rowing club to a corporate organisation or nation state. This refers to a *lifeworld,* or living environment understanding of culture, which emphasises the heterogeneity present within the confines of a nation or an organisation, and allows for multiple layers of cultural affiliation and involvement which may overlap or even contradict each other. Team members can thus be considered to be *multi-collective*. The challenge, when working together, is thus to identify individual membership of collectives which have the potential to support the group's orientation around  commonalities and therefore encourage team cohesion and the creation of normality. Overall it is crucial to identify hitherto unknown differences but also commonalities relevant in the context of the teamwork.

The last feature to be considered relates to the **communicative climate.**This can be understood as the atmosphere, or the social tone in which a communication takes place or the overall feeling or emotional mood between team members. It focuses on a broad set of communication behaviour and the way team members interact with each other. According to Gibson and Gibbs (2006), a psychologically safe communication climate is one in which team members trust each other and therefore are ready to assume that the behaviour and actions of the other team members will be of benefit to the overall team goals. As a consequence, they are also willing to accept reflective or friction-causing actions such as being vulnerable, admitting mistakes, questioning routines and searching for feedback in order to deal with problems. It is also characterised by mutual support and respect, openness and readiness to take risks. As such, the level of perceived communication climate plays a critical role in supporting team learning and sharing among team members. A positive communication climate supports people's propensity to engage in spontaneous and informal communication, provide unsolicited information, suspend judgement of other team members, raise differences in discussion, remain open to other ideas and perspectives, and engage in active listening. A safe psychological climate also has the potential to bridge any differences which may occur due to the diversity of team members and support people's readiness to use differences as an opportunity rather than a threat or disturbance. In this way the team can develop a shared, positive framing of the concept of difference and thus build a productive virtual team culture. By developing a psychologically safe communication climate, many of the challenges posed by virtuality can be mitigated and even transformed into an opportunity, thus supporting team satisfaction and task performance.

In conclusion, it can be said that virtual teams are teams whose members use a variety of information and communication technologies, are geographically dispersed, are diverse and pursue a common purpose. The degree to which these features are relevant vary, and they may be complemented by other features such as temporary dispersion. The virtuality of a team should thus be considered as a continuum ranging from low to high virtuality. A team with the highest degree of virtuality would be one in which members are located in opposite time zones, are heavily dependent on technologically mediated tools, whose members never get to know each other in persona, and display a high level of cultural and functional diversity.

## 1.4 Different types of virtual teams

If we consider key characteristics related to teams such as geographical dispersion, team members' objectives and roles, the flexibility of structural arrangements, the level of diversity and finally the team's electronic dependence, then we can distinguish some emergent team types:

**Project or product development teams**

These can be considered to be the most traditional virtual teams, which started to come into existence in the 1990s. They consist of experts on a subject matter, sometimes from different places across the globe, who get together to work on a very specific task, for example a new product. Such teams are often characterised by a high level of professional homogeneity but also a high level of cultural heterogeneity. An example of such teams are software development teams. However, they can also include a high level of functional diversity, for example when a team is tasked with finding a technical business solution, which may include expertise in engineering, user experience design and graphic design, for example.

**Work, production or functional teams**

These are teams which tend to have a high level of structural embeddedness in an organisation. Team members typically have clearly defined roles and tasks, enabling them to work independently. However, they are members of teams that need to combine their work in order to produce an end result. Hence they come together to exchange views on the development of their work, streamline work processes and coordinate tasks.

**Action teams**

Action teams are teams that get together on an ad hoc basis, for example because there is an urgent issue to be tackled. They are often asked to offer an immediate response to a problem, whereby the minute the problem has been solved, they also disperse. These teams are strictly task oriented and therefore other characteristics are subordinated.

**Agile teams**

These are self-organised and self-dependent teams which are able to handle complex tasks in a very productive, flexible and creative manner. They are cross-functional teams, so every team member has a broad set of social and professional skills, which are required to fulfil the project. As self-responsibility is one of the main characteristics, hierarchy levels are flat. Agile teams act autonomously and are generally not dependent on other teams. They are therefore responsible for risks and delays, since they often do not depend on other teams.

**Management teams**

Management teams are formed by managers of an organisation, who may come from different countries and cities around the world. They operate and coordinate at the higher levels of an organisation and may or may not be geographically dispersed.

### Task: Teams and their level of virtuality

When looking at virtual teamwork from a perceptual perspective we can consider its discontinuities. Considering a team you have been working with or intend to work with, note down in your learning journal how you would assess its level of virtuality. In order to do this, refer to the five factors that were discussed and, for each one of them, rate your team’s level of virtuality from 1 (low) to 2 (medium) to 3 (high):

1. Geographical dispersion
2. Electronic dependence
3. Level of diversity of team members
4. Flexibility of structural arrangements
5. Safety of communication climate

## 1.5 Virtual team competencies – a general introduction

In the previous section we outlined the different types of virtual team and their characteristics. On this basis we can now start to consider which general and specific competencies might support virtual teamwork. What follows therefore, is a discussion of the challenges of virtual teamwork and the competencies needed for good team performance and satisfaction among team members.

A competence can generally be understood as a cluster of related knowledge, skills and attitudes (KSAs) that influence and guide performance and team satisfaction, which can be enhanced through training. In this context, it can be understood as the ability to establish ‘routines’ and a sense of 'normality' in teamwork, which facilitate the desired outcome successfully. In the context of working remotely, Wang and Haggerty (2009) define virtual competence “…as the extent of an individual’s KSAs to work and communicate in virtual environments for the purpose of completing collaborative virtual work projects” (p.578). We can say in general that when acquiring competencies, the ability to apply self-reflection and critical thinking in order to assimilate and analyse new knowledge and skills is critical. This in turn requires an openness, curiosity and respect towards others and the ability to empathise with team members while considering their perspectives. Competencies thus need to be seen as complex multi-dimensional constructs.

In the context of the multi-faceted nature of virtual teams, competencies are required in order to tackle challenges linked to technology and geographical dispersion as well as cultural diversity and team related challenges. Schulze and Krumm (2017) mention that research on required competencies for effective and satisfying virtual teamwork is still scarce. The approach taken here is to discuss the specific competencies which might positively influence team effectiveness and team satisfaction.

#### Technology-related competencies

Having the skills and proficiency to apply available communication technologies such as email, instant messaging, telephone or video conferencing is a basic requirement for teamwork. In fact it is the enabler of virtual teamwork. Digital media skills go beyond the mere technical expertise of simply operating the respective tools. It also involves exploiting their potentials appropriately, in order to facilitate collaborative activities in a virtual setting. At times this is also referred to as digital fluency, understood as the ability to select and use the technology that is most suitable to achieve a particular outcome in a particular context.

One important choice to be made is, for example, between synchronous and asynchronous media. Whereas synchronous media such as video conferencing enable teams to move together at the same time, asynchronous media allow team members to access information when time and circumstances allow. Generally speaking, therefore, a synchronous medium such as video is a better choice for goals such as the development of mutual understanding, collective sense making and defining goals, whereas asynchronous media is more appropriate for disseminating and processing large amounts of information.

Media skills are performative and a lack of proficiency influences the entire communication flow and coordination. For example, although it can be assumed that the functionalities of emails are widely known, when and how best to use them in a virtual team setting requires consideration and expertise. This means that the competency level refers to the ability to use  information and communication technologies for the benefit of the team's objectives.

A competency closely linked to technology use is remote self-efficacy, which relates to an individual’s belief and judgment about his or her ability to use and orchestrate an expanding IT toolkit. In addition, each member's confidence in their ability to work well with others in a remote setting is key. This is of particular relevance because working remotely in different contexts is, for many, still an uncommon way of working and the lack of face-to-face contact can have profound effects on how the team works.

Individuals with a high level of self-efficacy in virtual environments tend to be persistent in their search for mechanisms that will overcome obstacles. These individuals are motivated to mobilise efforts when dealing with non-technical issues in the absence of face-to-face interaction. With the confidence to deal with both technical and non-technical issues, they are able to develop effective communication strategies and thus improve knowledge transfer. Self-efficacy in the virtual environment is thus a key concept in enabling team members to cope and persist through difficulties in their work context.

Whereas virtual media competency is linked to concrete capabilities and skills in the use of the technologies available to them, emphasising the 'how', virtual self-efficacy focuses more on the ‘knowing what’ which is belief and attitude oriented. Both are vital to ensure team performance.

Media skills are an important stepping stone for the development of common ground as they can support relationship building, cohesion and ensure effective and trustworthy communication within a team.

#### Geographical dispersion related competencies

Geographical dispersion also brings about specific challenges, which need to be addressed.  A key issue here is that the further away team members are, the more likely they are to span different time zones. This can easily lead to communication and emotional disconnects. When only one or a few team members work from further afield, their geographical dispersion may result in low visibility and a feeling of being isolated and not included. Such a working environment will undoubtedly require keen coordination skills on the part of the team leader or leaders and the team members themselves. It will also require the willingness to deal with time issues, make an extra effort to ensure the accessibility of information and readiness among team members to extend their working hours beyond the norm.

Temporal dispersion means that working hours do not necessarily overlap, and vacation times also may not coincide. On a micro-level, it also requires understanding among team members that considerable time might elapse before receiving a response to an email, for example. This understanding will avoid frustration and feelings of rejection or accusations of incompetence.

Geographical dispersion may mean less interaction and a greater degree of work autonomy, which requires enhanced self and time management skills such as careful planning, strategising and scheduling. Time and self-management skills are particularly relevant in companies which are keen to ensure a work-life balance or are compelled to do so by governmental regulations. In such contexts, setting clear limits for times when meetings should take place, either early mornings or late evenings in order to accommodate different time zones is of particular importance.

All areas related to virtual teamwork overlap, as do the competencies that are required to mitigate its challenges. Even though the causes can appear to be quite different, all challenges can be subsumed under the dominant issues of communication, trust, relationship building and developing common ground. Dealing with these issues is thus central to ensuring good team performance and satisfaction.

#### Diversity related competencies

Diversity in general and in particular cultural diversity increases the likelihood that team members will not share common ground. This means that they may not share meanings, have similar communication styles or relationship building strategies, common understandings of team goals, shared mental models of work processes or media skills. One of the major challenges in virtual teams is thus to recognise in which areas the team shares common ground, and in which areas development is required through implementation of appropriate knowledge and skills.

Virtual diversity competencies thus converge on the ability to positively influence collaboration and the development of supportive relationships among diverse team members in a virtual context. Generally speaking, this includes the ability to communicate with people of other cultures in a way that supports mutual understanding, earns their respect and trust, while encouraging a cooperative and productive virtual workplace conducive to the achievement of team goals and team satisfaction.

This skill set represents both the ‘knowing what’ and the ‘knowing how’, because it refers to understanding the uniqueness of encounters in virtual settings and having the skills to handle them adequately, effectively and efficiently.

Broadly speaking, three areas of virtual diversity competence can be distinguished: openness, emotional strength, and willingness to communicate. When it comes to openness, this is an attitude that involves being receptive to a wide range of ideas and ways of doing things. Having an open mind is a necessary requirement in order to think critically and rationally.

Being open minded means being ready to step out of one's comfort zone and the readiness to listen to and consider a variety of factors that might contribute to effective teamwork or resolve a problem. This is not necessarily as easy as it might sound, and requires a readiness to change and maybe also revising beliefs and work routines. It is only openness that bears the potential for learning and personal growth.

Emotional strength is also key to negotiating one's way through ambiguous and unfamiliar work situations. It is understood as the capacity to respond to uncertain situations in an open and vulnerable way and to acknowledge the emotions linked to dealing with uncertainties.

Another vital area is linguistic communication. Communicative competence includes an awareness of barriers to communication, especially when a team uses a common language, which is not the mother language for some or all of the members. In this respect, the different accents used in virtual team meetings can hamper understanding, as can a lack of vocabulary. This can lead to considerable misunderstandings and information gaps. Here it is crucial to be ready to practise active listening, i.e. the act of listening attentively, checking and clarifying issues where the need arises, rather than assuming common understanding.

Another area closely linked to this is the understanding and interpretation of intentions. This refers to our automatic ability to ‘read’ other people’s intentions, which we use to interpret and predict what someone is going to do. However, in a virtual context, there are different cues than in a face-to-face interaction, which means that we are not necessarily exposed to the same visual, verbal and auditory codes that we are used to in order to anticipate the other's intention. Of course, even in a face-to-face situation, we do not always interpret these codes correctly, but in a virtual context we need to make a special effort to understand the intentions of our team members correctly. Hence it is important to create an environment that supports virtual team members being transparent and vocal about their intentions. This is even more important in an intercultural context where the likelihood of misreading intentions may be even higher. The goal in a virtual team should thus be to share intentions and develop common habitual social practices.

#### Team related competencies

Virtual team competencies are closely linked to communication and include the flexibility and ability to develop interactional routines. With regard to flexibility, the ability to both adapt behaviour as well as suspend judgement are key. Adaptive behaviour can be understood in the sense that team members need to flexibly select from a repertoire of actions those that fit a range of different social and intercultural situations as well as unexpected circumstances. Closely linked to flexible behaviour is the willingness to suspend judgement, meaning that we withhold judgement and don’t become attached to conclusions which may be based on assumptions and subjective perceptions. Instead you willingly and purposely postpone a judgment or a decision until you have the relevant information, while questioning your assumptions and perceptions.

In many instances, teams are put together because they seem best fit to carry out a task but often teams are thrown together due to circumstances. They may not know each other and if they have come from different disciplines or backgrounds are likely to have different ways of working, cooperating and problem-solving. In such an environment it is important to develop and synchronise interactional routines, meaning that team members need to develop an understanding of how they want to work together and how best they can make use of the resources in the team in order to achieve good results and a positive working climate. 'Reflected awareness' can help here, which includes the ability to become conscious about one’s own pattern of communication and routinized work behaviour within a team. This could be summarised by the phrase ‘how I usually do things’ and can be complemented by considering how this behaviour is perceived by others. This is of particular relevance in teams whose members do not know each other and are highly diverse.

A further requisite for successful virtual teamwork is the willingness and ability to consider different perspectives. This may be more difficult than it sounds, as it requires not only the readiness to acknowledge that there may be more than one way of looking at something, but also giving the other idea sufficient attention and value. It also implies a readiness to incorporate others' ideas into the team's consensus-built 'way of doing things'.

If team members are able to see issues from different angles, then they can shift gears and take a fresh look at developing cooperative and inclusive work behaviour. This also opens avenues into possible solutions that nobody would have been able to think of had each party been solely concentrated on their own ideas. This is often referred to as the ‘third way’ or new thinking. If team members are receptive to new ideas and ready to venture into new and unfamiliar fields, they are not only exposed to new ideas and approaches but lay new pathways for exploring novel ways of thinking and thus become more innovative.

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In conclusion, it can be said that a high level of virtually denotes a team in which members are located in opposite time zones, are heavily dependent on technologically mediated tools, whose members never meet their team members in person and are culturally and functional diverse. Virtuality thereby should be seen as a continuum ranging from low to high levels of virtuality. Whereas early scholars of 'virtuality' used objective measures such as physical distance between office locations, the number of countries involved and the frequency of face-to-face meetings, there has been a gradual shift towards regarding virtuality as a subjectively and psychologically perceived experience.

Virtual teams can be defined as:

*"…teams whose members use technology to varying degrees in working across locational, temporal, and relational boundaries to accomplish an interdependent task."*

Source: Martins, L. L. et al. (2004). Journal of management, p. 808.

This definition stresses membership of a team and working at a certain level of virtuality.

No matter whether we refer to the attribute of communication, behaviour or knowledge, the starting point is always the awareness of the self and our own multiple cultural affiliations as a reference point. Being aware of our own communication style, behavioural patterns in a specific environment and the knowledge we have of a specific culture helps us to assess, question and adjust in intercultural virtual work contexts. In this way we can be sensitive to other team member’s perspectives and values, no matter how strange and puzzling they might seem initially. All these elements help to develop a common ground of understanding, which is key for team performance and satisfaction in a virtual environment.

### Task: Competencies an virtual teams

Below are listed some competencies supporting the effectiness of virtual teamwork. You will also find this list in your learning journal, together with the above mentioned categories in which these competencies can be classified: Please click on the dropdown box next to each item and choose the category of competencies it belongs to.

* Professional usage of information and communication technologies
* Open-mindedness towards different ideas
* Managing teamwork across different time-zones
* Flexibility in dealing with unexpected circumstances
* Readiness to change one’s beliefs and work routines
* Suspending judgement
* Perceiving communication- and language-related challenges and addressing them adequately
* Ensuring the visibility of each team member
* Interpreting communicative cues to understand other person’s intentions
* Choosing between synchronous and asynchronous media
* Working autonomously
* Emotional strength in dealing with uncertainty
* Time- and self-management skills
* Reflected awareness of one’s own concepts, perceptions and routines
* Virtual self-efficacy and confidence in one’s skills of working in a remote setting
* Developing and synchronising interactional routines
* Avoiding isolation and emotional disconnection
* Switching between different perspectives
* Readiness to step out of one’s comfort zone

## 1.6 Summary

In order to meet the challenges of today’s business environment, working in teams has become commonplace. With the opportunities made possible by technological developments, these teams are becoming increasingly virtual, i.e. geographically dispersed and using technology-mediated communication. Because almost all knowledge workers use technology-mediated tools and thus work virtually, it is important to acknowledge the 'level' of virtuality when discussing the development and challenges of virtual teams.

As working with different levels of virtuality is becoming more common, the competencies required to perform these tasks need to be investigated and refined. The areas in which skills will need to be honed are, along with general teamwork skills, the optimal use of technological devices and  communication strategies to deal with geographical dispersion and diversity.

## 1.7 Learning review

Having discussed the relevance of virtual teamwork in the context of a changing work environment as well as the importance of recognising the degrees of virtuality, you should now be able to define and identify the level of virtuality of a team as well as the required competencies in virtual work places.

The following two case studies will help you to assess your learnings.

### Task: Case "IT problems"

Thiago works as an IT specialist in a company that produces equipment used in farming in Brazil. He was assigned to implement a national customer management system with a project team. He is of Brazilian descent, and even though his company has its headquarters in India, his teammates all work from Brazil. He feels fortunate, as he finds communication easier when everyone speaks the same language. Of course, it also helps that everyone in his project team has been working in this company for many years now, including the colleagues from Sales. Now 12 sales managers and specialists are collaborating with the 4 people from the IT department to reach the goal. As the sales department ordered this system, it is crucial that the new platform will be tending to their needs.

What Thiago finds challenging is that almost all of the sales colleagues in the project team are constantly working on the road, some of them in places with bad internet connection. It makes simple things as video calls immensely difficult. Even simple phone calls can pose a challenge, as because of the nature of their product, many sales representatives work in areas with bad network coverage, which makes it only possible to connect when they are back in their hotels in the evening.

Of course, whenever Thiago works with people outside of his own department, he is used to a very different knowledge level on IT-systems. He knows how important it is to get everyone on board first. However, his company also just went through a major upgrade in IT-hardware and software systems, which is great. Unless you see that some of his team mates have not upgraded their systems yet, and thus work with very different hard- and software specifications.

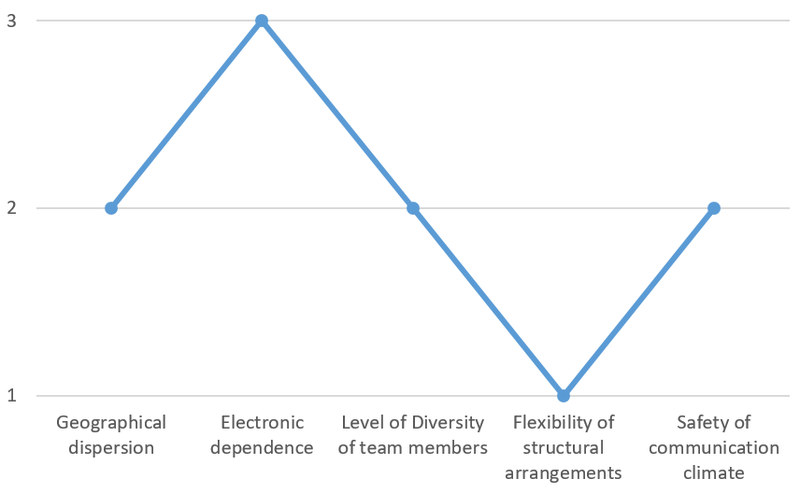
Where do you see the level of challenges on these dimensions?

Please rate it from 1 (little to no challenges expected here) over 2 (probably some challenges here to focus on) to 3 (highly challenging- strong focus on this needed).

Most importantly, also write down your reasons for your ratings. Please also keep in mind that there is no strict "right" or "wrong" answer. Depending on the interpretation, many different evaluations could be argued.

1. Geographical dispersion
2. Electronic dependence
3. Level of diversity of team members
4. Flexibility of structural arrangements
5. Safety of communication climate

###### Sample answer



**Geographical dispersion: 2**

Even though the team all works in Brazil, we should keep in mind that this country (including its offshore islands) is spread within 4 different time zones. Also, given the sales team might not often come into the headquarters to learn about new developments here, we might want to take the gross difference of environment of the different team members into account. Thus, the Geographical dispersion of the team should be considered, but might not be the largest challenge in this case.

**Competencies needed**:

We would have to keep in mind which regions in Brazil the team is working from, and thus how to deal with possible different time zones.

**Electronic dependence: 3**

Given the information in this case, we might expect the highest rate of challenge here. Which challenges of electronic dependence do we expect?

The sales representatives ordered the system, which means the IT department is likely dependent on their constant input. This is being made difficult by the fact that those representatives are constantly on the road, which make face-to-face meetings rarely an option. The need for virtual communication is thus high.

As many customers and thus the sales people are located in remote areas, the network connection seems to pose a challenge. Internet is as unreliable as phone coverage. This makes it difficult to spontaneously ask questions when they arise from both sides. It also makes it difficult to use visual contact for team conferences, limiting the format more often to audio-based conversation. The low bandwith also enforces more communication via Email or file sharing platforms like clouds. Sending large amount of data might also prove to be difficult with slow connections.

Another challenge here is the diversity of IT-knowledge, which means not everyone in the team might be aware on how to use e.g. cloud software right away. The IT-Team would need to make sure everyone is on the same knowledge level where it is needed.

The members of this project team also use different soft- and hardware platforms. Software like videochat or cloud platforms might have certain technical requirements that not everyone in the team meets. Even certain documents might look different depending on the software version, which might lead to misunderstandings in the collaboration.

**Competencies needed**:

As the need for communication in this case is high, and only possible on virtual basis, we need to ensure that following factors are kept in mind when choosing a strategy:

What are the communication needs of the team? What needs to communicate what at what time? How is the reporting and decision making flow?

Based on this, we need to come up with a technical platform that is as low-tech as possible, but still serves the communication needs. One example could be to design a well-structured cloud, in which to collect all needed information. It would enable to the team members to access the information on their own terms, instead of being overly dependent on synchronous methods like phone or video conferences.

The third step would be to make sure every team member has the needed hard- and software as well as the training needed for this particular virtual team collaboration.

**Level of diversity of team members: 2**

In this given case, we do not find any explicit mention of a high level of diversity. The majority of the team members have been working for the same company for a longer time, all speak the same language. Also, the team most likely grew up in the same country. However, even in a case like this, which shows many common areas, we should not forget that a high diversity is still possible.

We do not know anything about the age structure of the team members. People of different generations might have different perspectives on teamwork or project goals. Some of this team members might also have children, which might lead to a different focus on works-life balance. Of course, the individuals will likely also have their own personalities and strengths, which also might lead to a different preference in communication styles or work processes.

We see that even in a superficially homogeneous team as the one presented in this case, high level of diversity is generally possible. Since there should always be a higher awareness in this area, we would position this point on the level 2. We will discuss the details of possible diverse backgrounds of individual team members in session 4: Team roles.

**Competencies needed**:

One way to deal with a possibly hidden diversity in the team is with an anonymous survey, e.g. to ask about expectations, goals and feedback for the process so far. It could make possible differences within the team more transparent, and would enable the project leaders to deal with them.

**Flexibility of structural arrangements: 1**

Given the fact that the described team members in this case have all been working for the company for many years, and no turnover of staff is being projected, we can assume a rather low challenge in this area.

**Competencies needed**:

If a turnover within the team should arise, it would be important to put effort in a proper on-boarding on the milestones and decisions made so far.

**Safety of communication climate: 2**

The case does not explicitly state larger challenges here, like e.g. emotional conflicts between the team members or a gross difference of goals within this project. As with the point of "Diversity of team members" though, it is always important to have a focus on possible upcoming challenges here, as well as making sure that the atmosphere within the team stays positive.

**Competencies needed**:

Based on a possible survey on point 3, the team leaders could present the results in a proper way, and could discuss or present a possible way to deal with different expectations and goals within the team. Also a feedback cycle could be designed to ensure that possible challenges are also being addressed on time in the future. Lastly, it is important for the communication climate not only to discuss challenges, but also to celebrate successes. When particular sales representatives are back in the headquarters for some time, it could be a good idea to take some time to bond with these people, based on the individual needs.

### Task: Case "Designing a new office chair"

Maryam from Dubai in the United Arab Emirates works for a US-American company that produces office furniture. She is working in the Marketing Department, and was assigned by her supervisor to work in a project team to brainstorm new ideas for a new premium office chair. Since it is important that this new chair will fit the customs and needs of customers worldwide, the designing team consists of members from China, Japan, Germany, France, South Africa, Brazil and the USA – all the major markets of the company. Instead of having the new product go over different stations one by one, her company decided to have the 15 project team members to come from different departments. This way, possible roadblocks and needs of all relevant departments can be aligned from the first step of designing this new product. Thus, several members of the team are from Research and Development, whereas others are from Sales, Production, Logistics, Purchasing or Marketing like Maryam.

Even though the cooperation is purely virtual and she has never really met any of her colleagues outside of Duabai, she enjoys working on her first international project. From the first week on, she notices several differences on how the project manager from the USA would create a meeting, or how her colleagues from different countries and departments would communicate with each other over email or in a phone conference. She also notices that the commitment level of her colleagues seems to differ at times. She assumes one of the reasons for this might be the different hierarchy level of the team members, as there are specialists and different levels of managers on board the team.

What Maryam finds challenging though is that some of the colleagues have not been in the company very long. She feels there is an especially high turnover from countries with high speed emerging markets, such as her own contry. In the three months she has been working on this project now, four of the colleagues have changed to another department or to another company, and it always took some work to get everyone back on board. Since this project was initiated from upper management, and it was made clear that there are high hopes in the company for this new product, she feels that at least everyone is highly motivated and responsive. The company has invested in new IT equipment and training, which makes the virtual collaboration a lot easier.

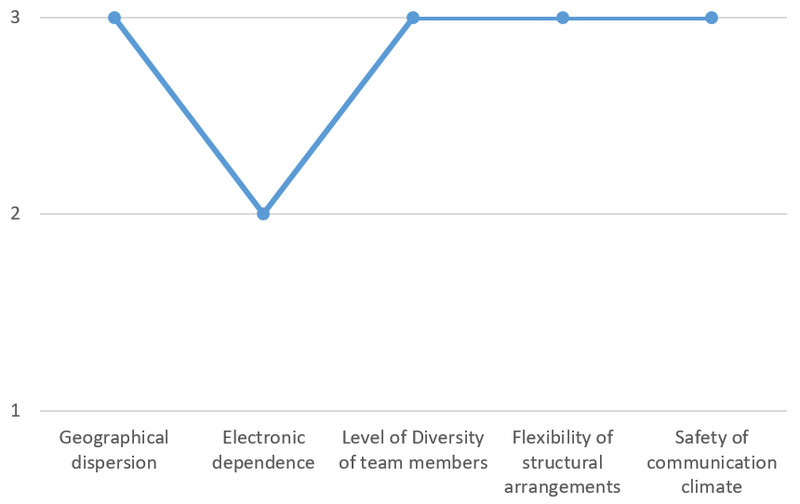
Where do you see the level of challenges on these dimensions?

Please rate it from 1 (little to no challenges expected here) over 2 (probably some challenges here to focus on) to 3 (highly challenging- strong focus on this needed).

Most importantly, also write down your reasons for your ratings. Please also keep in mind that there is no strict "right" or "wrong" answer. Depending on the interpretation, many different evaluations could be argued.

1. Geographical dispersion
2. Electronic dependence
3. Level of diversity of team members
4. Flexibility of structural arrangements
5. Safety of communication climate

###### Sample answer



**Geographical dispersion: 3**

This dimension is certainly highly challenging in our case. The team consists of members of 8 countries spanning 5 continents, which will make dealing with different time zones challenging.

**Competencies needed**:

It will be important to find ways to incorporate these different times into deadlines or conferences of any kind. Also, we should consider how to get as much work done as possible in an asynchronous matter- which means with people working on the project on their own times, and without e.g. daily conferences.

**Electronic dependence: 2**

The Electronic dependence could be rated with a 2. On the one hand, the technical environment seems to be conducive of virtual work: The team shares the same hard- and software platforms and is trained to used them. On the other hand: Because the entire team is spread around the world, it will be difficult for the team members to meet each other face to face to work on this project. The team will have to depend heavily on electronic communication.

**Competencies needed**:

Given that the technical platforms and training seem to be in place for our case, our project leaders will have to ensure that they are using the right tools and methods to accommodate for the variety of geographical and other backgrounds (see later challenges)

**Level of diversity of team members: 3**

This is clearly another big challenge for our team. From the fact given in our case, we have a high level of diversity amongst our 15 project team members. Here are some examples of the types of diversity we are presented with:

a) The team consists of members of different functions and hierarchies.

The different hierarchies in this case might mean that there are different interests to bring together. Some of the managers might be able to prioritize the work for this project themselves, whereas some specialists might have to coordinate their work for this project for example for some other urgent work for their supervisors.

b) Members of the team are based on 5 different continents, and might be used to other ways of work.

For people in some countries, it might be very normal to conduct phone conferences at night, in order to accommodate for other time zones, whereas this might be highly unusual in other areas. Some of the team members also might be used to different styles of leadership, based on the socialization in their countries. As deadlines in some areas of the world are considered to be fixed, they might be in constant negotiation in other places, due to the general dynamic nature of their work environments. All of these different expectations need to be aligned in order to avoid misunderstandings within the team.

c) The project team comes from different departments.

The engineers within the team might also be used to a different set of communication than the marketing people. Of course, the different departments might also have different interests or working speeds that need to be aligned. While Sales might look into the costs of the final product, the engineers within Research and Development might rather look for a perfect function and design of the final product.

d) Other diversity backgrounds not mentioned:

In paragraph b, we discussed that team members might have different work preferences due to their different cultural backgrounds. Of course, all of these different preferences might also be attributed to different personalities. One team member might come from a place where it is generally unusual to work after office hours, or on vacations, but might personally not have a problem with it. Another one might come from a region where late work is expected, but see this as a challenge because he has a baby a home demanding attention at night. All of this diversity concerning the personality or situation of the individual team members might influence their performance.

**Competencies needed**:

We can see that the explicitly as well as implicitly mentioned diversity in this case is highly challenging. To communicate and bridge these differences will be highly important for the success of this project. One tool we can use here will be introduced in the chapter MBI: How to Map, Bridge and Integrate diversities. We will also discuss this topic further in the chapter on roles and expectations. It is important for the project leader and team members that we need to create a culture where the diversity in this team is being appreciated, and seen as a resource rather than only a challenge.

**Flexibility of structural arrangements: 3**

We can see that there is a high turnover of staff, which means that new team members need to be constantly “on-boarded”: They need to know and be aligned about former agreements made. They also need to be constantly informed about the general status quo of the project.

**Competencies needed**:

Given the indication of the past, we can assume that the high turnover within this project might continue. It will be important to install a proper knowledge management system, which includes good documentations on the most important steps to date. It is not enough to assume that “everyone is on board”, but we need to ensure that this will also happen for the future. The project managers might want to install mentors, who are direct contact persons for new members, as well as a good documentation platform that installs all previous agreements and milestones so far.

**Safety of communication climate: 3**

Even though we did not gain much information on the communication climate, we can see from Maryam's perspective of the case that differences in working styles already emerged. Given the high diversity of the team, as well as the high turnover rate, we can assume that these factors might have a strong impact on the communication climate. The project leaders will thus need to ensure the individual communication needs, based on their respective diversity, is being met.

## 1.8 Sources, further reading and web links

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