Towards team-oriented ICT coordination at school

Job Profile for ICT Coordinators

Characteristics of strong ICT teams

Guidelines for more team-oriented ICT coordination in schools (concept)

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Introduction

Context

This report is one of the results of the two-year project 'Digital transformation in the Flemish education system: reforming ICT teams in schools'. The project is funded by the European Union via the Technical Support Instrument (TSI) and implemented in cooperation with the European Commission. The objective is to support the Flemish Government in the implementation of the priority 'a strongly supportive and effective ICT school policy' of the Digisprong action plan, more specifically by developing a strategy and guidelines to support primary, secondary, and adult education schools in the transition to the effective use of ICT for learning and teaching.

The goal of the project is to help embed the task of the ICT coordinator more broadly in team-oriented ICT operations in the schools. At present, many ICT coordinators indicate that they are solely responsible for ICT tasks in their school. Other schools have already switched to a more valuable model of ICT teams in which, besides the ICT coordinator, other colleagues also take on tasks, such as learning environment management, social media coordination, media coaching, etc., and technical, pedagogical, and administrative ICT tasks are more evenly distributed. This allows the workload of the ICT coordinator to be spread out more effectively and to attract different profiles. Such a model is also in keeping with modern forms of school leadership, in which leadership is more a team responsibility.

To achieve this ambition, the project set three tasks:

1. Developing a **job profile for ICT coordinators** that clearly defines what ICT coordination entails, that can contribute to strengthening the position of ICT coordinators and that can support the evolution towards team-based ICT functioning.
2. A study of the **characteristics of strong ICT teams** with the aim of proposing a new model of team-based ICT coordination.
3. The development of **guidelines for more team-oriented ICT coordination** at school.

Methodology

In order to realise these tasks, a practice-based research was set up, in which the following research methods were applied.

For the first task, developing **the job profile for ICT coordinators**, our approach consisted of two steps:

1. **Desk study**
   In Flanders and beyond (e.g. in some countries from the study visits in an earlier phase of this project), there are already several recent and less recent profiles and job descriptions of ICT coordinators. We made an inventory of these existing profiles and based on that, we made a draft 'integrated task profile'.
2. **Interviews**
   Afterwards we organised 7 interviews:
   - 2 interviews with profile developers;
   - 2 with providers of training for ICT coordinators (based on these profiles);
   - 3 with (ex-)ICT-coordinators with a broad view on the subject.

   During these discussions, it was checked whether the design of the "integrated task profile" accurately reflected reality, whether any tasks should be added or deleted, what the most

important tasks are, to what extent they are part of the core of the job, and what competences are needed to carry out the tasks.

The research into the **characteristics of strong ICT teams** was conducted by means of focus groups.

Based on the conviction that positive stories and good examples can inspire others, we started out from existing good practices in order to find out what lessons can be learned from them. The selection of these good practices was, on the one hand, based on an earlier phase of this project, in which we drew up a current state of affairs in Flanders, and on the other hand, based on input from the stakeholder group (in particular the educational guidance services).

We organised focus groups with ICT coordinators and directors from schools that already apply the model of ICT teams (separately for: primary education, secondary education, adult education, and the meso level of school group/community). There was also a focus group with providers of in-service training and guidance for ICT coordinators and ICT teams, in which professors Jo Tondeur (VUB) and Ruben Vanderlinde (UGent) also participated.

The topics discussed were:

- What are the characteristics of strong ICT teams?
    - Composition: who is involved?
    - Division of tasks and responsibilities
    - Interaction: how are communication, collaboration and learning organised?
- How do you make the transition?
    - How is it realised?
    - How can it be supported?
    - What should general guidelines look like?

Everyone told about their own practice or insights. These practice stories were then further explored together. The reports of these focus groups can be found in Appendix 3 of this report.

Table 1: List of focus groups

Focus group	**Number of participants**
• Primary education	10
• Secondary education	7
• Adult education	6
• School group/community	7
• (Continuing) professional development and guidance	9

The guidelines for more team-oriented ICT coordination at school were drawn up based on the insights from the above research steps. The guidelines in this report are still **draft** guidelines. In the course of the school year '22-'23, they will be tested in some pilot schools. Based on the lessons from this pilot, the final guidelines will be finalised.

Finally, here and there throughout the report there are some boxes with information on good practice abroad. This information was collected during study visits in an earlier phase of this project.

Reading guide

The results of this research are described in the following 3 chapters of this report.

Chapter 1 describes the job profile for ICT coordinators. It should be mentioned straight away that it did not become a 'job profile for ICT coordinators', but an 'overview of ICT coordination tasks'. Four clusters of tasks are distinguished: technical tasks, pedagogical-didactical tasks, policy & vision, and administrative tasks.

We developed it in Excel-format (see Appendix 1), so that it can become a practical working tool for the division of tasks in a team-oriented ICT operation in the context of the further ambitions of this project. After all, it is clear that this division of tasks is necessary: it is a long list, too much for one person. If ICT coordinators are on their own, the pedagogical-didactical and policy-related tasks are snowed under by the many technical and administrative tasks that demand their attention every day.

Nevertheless, the surveyed actors felt that it was necessary to give this long, detailed list. This way, the tasks become explicit and one can think about task distribution in a team. A single fixed job profile for ICT coordinator is therefore not considered desirable: depending on the context and the competencies present in the team, the tasks of ICT coordination should preferably be distributed differently, and job profiles or job descriptions can be tailored to the needs of the team, based on the list of tasks.

Chapter 2 describes the insights gained about the characteristics of strong ICT teams. In the conclusion, we propose a new model of team-based ICT coordination.

Finally, **chapter 3** introduces the concept guidelines for more team-oriented ICT coordination. They are visually represented in the flowchart in Appendix 2.

Chapter 1: Job profile for ICT coordinators

This first chapter is dedicated to the job profile for ICT coordinators. As mentioned earlier, it did not become a 'job profile for ICT coordinators', but a 'task overview ICT coordination' (see Appendix 1).

We developed it in Excel-format, so that it can become a practical working tool for the division of tasks in a team-oriented ICT operation in the context of the further ambitions of this project. It is clear that this division of tasks is necessary: it is a long list, too much for one person.

The only disadvantage is that an ICT-coordinator is asked everywhere where a socket is needed. Nowadays, everything has a computer and/or a control unit.

But everything is almost IT these days. That's not all for the ICT coordinator, eh.

(quotes from ICT coordinators)

This chapter provides explanations and brief background information on the task overview. We will discuss the following in turn:

- The 4 clusters of tasks and their content;
- The competences needed to perform the tasks;
- Possible division of tasks and roles;
- The resources a school can use for ICT coordination;
- Professionalisation opportunities for ICT coordinators.

ICT coordination tasks

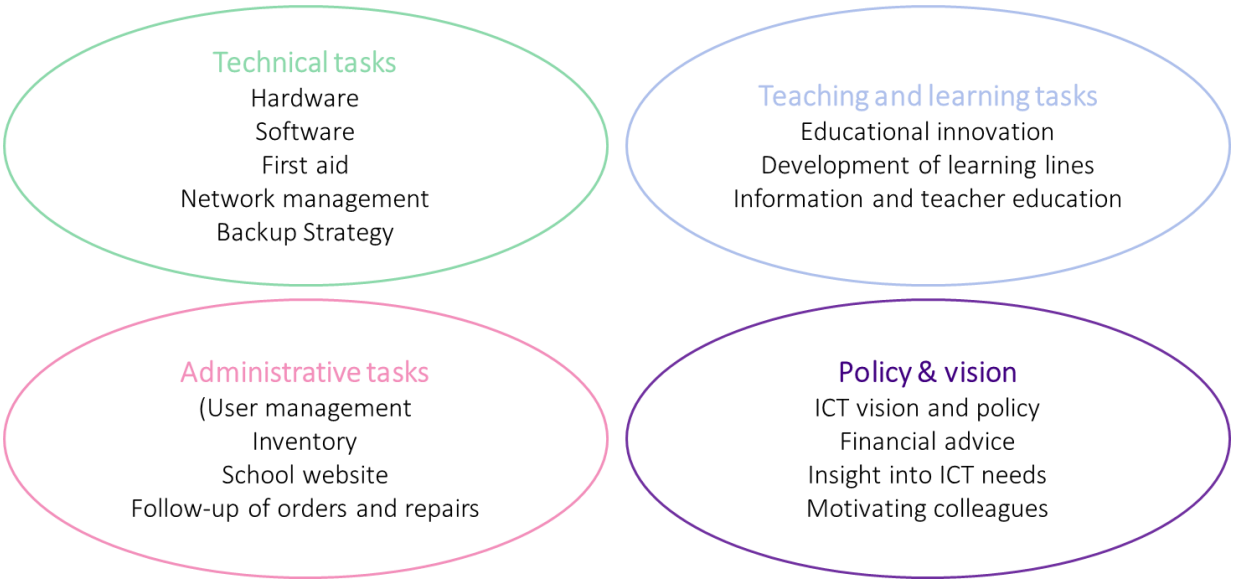
4 clusters

Based on the existing profiles and the interviews, four clusters of tasks can be distinguished.

- **Technical tasks**: include all tasks related to hardware, software, network and server management, backup strategy, first line help, and other technical support.
- **Teaching and learning tasks**: include the tasks related to ICT integration in the classroom, educational innovation, developing curricula, and informing and training teachers and colleagues.
- **Policy & vision:** include all tasks related to the development of an ICT vision and policy, (financial) advice, insight into ICT needs, and motivating and sensitising colleagues.
- **Administrative tasks**: include various forms of management (e.g. user management, management of laptop/tablet pool, management of school network), inventory of e.g. hardware and software, and following up orders and repairs.

The core of the task profile lies in the technical and teaching and learning tasks. In reality, most of the time is spent on these task clusters. However, the administrative tasks, policy and vision are necessary conditions to be able to properly perform the tasks from the technical and pedagogical-didactical clusters.

Figure 1: ICT coordination: 4 clusters of tasks



Recent changes

Compared to the existing function and/or task profiles, there have been changes in the range of tasks related to ICT coordination in schools:

Across all clusters, **cyber security** has become a more important point of attention. Technically, this involves, for example, installing and managing the firewall, working out a disaster recovery plan, etc. Pedagogically and didactically, this means monitoring the responsible use of ICT in the school (use of social media, mobile devices, wireless network) and, in terms of policy and vision, it means designing guidelines on the digital safety of teachers and learners (GDPR).

Below we discuss the most important recent changes per task cluster:

- **Technical tasks**

One of the additions is the operation of a **help desk**. In small schools, this is often a physical place to go; in larger schools or school groups, it often takes the form of a ticketing system. The increase in the number of devices and other equipment present in schools means that the need for a system of monitoring and documentation is growing.

On the other hand, a lot of tasks have become partly automated, such as installing and updating software on the various devices. On the other hand, it is important to have knowledge of non-curricular equipment and software to enable ICT management, such as scripting. In this way, ICT coordinators can optimise and partly **automate** their tasks, and time becomes available for other tasks.

In addition, there is the increasing importance of the **network and server infrastructure**. After all, there is more and more movement to the cloud. It is important that the network and server infrastructure work properly, otherwise school cannot run smoothly. Moreover, the cloud system makes the **security** of school information more complicated. In addition, camera surveillance and more and more other services (e.g. the heating system) are connected to the school network. This IT-based facility managementcan also cause problems that the ICT coordinator needs to solve.

Schools are increasingly aware of the need for a sound and well thought-out **back-up** strategy and **archiving** of data, systems and configurations. Linked to this is the development of a *disaster recovery plan*.

A large part of the added tasks are support tasks, to help colleagues. For example, there is the design and technical management of the school website and social media, coordinating work related to ICT infrastructure, providing support during events and projects, and supporting distance learning. However, it is important to mention them as well, as these tasks can also take up a lot of time.

- **Teaching and learning tasks**

The range of tasks *in itself* has not changed visibly. However, the **importance** of the pedagogical-didactical component has **increased** significantly over the past years. The sudden COVID-19 crisis gave schools a boost to work on the **pedagogical part** of their ICT policy plan. Primary and secondary education, in particular, had no experience with offering remote learning before this. The COVID-19 crisis created the opportunity to reinvent what education means, and how digital tools can create a pedagogical added value.

Policy & vision

One of the additions is the co-development of a pedagogical-didactical ICT vision and a technical ICT vision. Both are crucial in order to be able to draw up the ICT policy plan afterwards. In addition, because of the ubiquitous nature of ICT in the school context, the ICT coordinator increasingly assumes an **advisory role** vis-à-vis the management, for example when recruiting staff or choosing tools for communication and administration.

- **Administrative**

Here too, the **increase** in the number of devices plays a role in the range of tasks. Added tasks include the management of the laptop and/or tablet pool, and the follow-up of orders and repairs (and also

insurance). On the other hand, some of the administrative tasks, as was the case with the technical tasks, can be **automated**. This is the case, for example, with user management and structuring the electronic learning environments.

Differences between education levels and forms

In general, the basic tasks are the same for the different levels of education.

The main difference is related to size or scale. For example, primary schools tend to have fewer devices and less infrastructure, which means that the technical tasks will be simpler. Also, compared to secondary and adult education, there are still few elaborate ICT policy plans in **primary education**. Furthermore, it is often the case that the ICT coordinator is only present in the school for a few hours a week, which means that he or she is not strongly involved with the school's management. The role of ICT coordinators in primary schools is therefore even more limited. In terms of scale, **adult education** is at the other extreme: adult education centres have recently undergone merger operations, have an average of >5,000 students and often have a whole ICT department made up of specialists. Moreover, distance learning is not a new phenomenon for them, which means that the use of digital technology is already well established.

A bigger difference is between schools or centres that only offer general orientations and schools or centres that offer specialised, technical orientations, either additionally or exclusively. Technical schools are often at the forefront of digitalisation, as this is necessary to meet the demands of the labour market. In **technical and vocational schools,** ICT coordinators have specific technical tasks related to the installation and configuration of specific industrial software packages, or certain heavy machines that require control. In these schools, there are usually also technical advisors who play a role in the acquisition and use of these machines and with whom coordination is required.

Finally, there is also a difference between ordinary and **special education**. In special-needs education, the installation and configuration of specific hardware and software for pupils with specific educational needs is also part of the technical tasks. At the pedagogical-didactical and policy-making level, more attention needs to be paid to the integration of ICT and care, which can be done, for example, by combining expertise in an ICT care working group, which would typically include the care coordinator, the pupil counsellor, a number of teachers, members of the multidisciplinary team, some parents involved, a CLB employee, etc.

Competences required

Competences per cluster

For each cluster, certain competences can be distinguished, which are necessary to perform the tasks properly. In addition, there are also a number of generic competences that an ICT coordinator should preferably possess.

Technical

Technical knowledge (e.g. electronics, infrastructure, network management) is a requirement for this cluster of tasks. Further specialisation is possible, e.g. network specialists and smart school specialists are common in schools. The most important competence for the technical part is interest and openness to further training and retraining. Knowledge of the context of school education, however, is not essential.

- **Technical knowledge**

Technical knowledge and skills are required to perform the technical tasks. It is important to know how the technical infrastructure works. When the network breaks down, for example, it is important to be able to respond quickly. Technical knowledge includes: knowledge of electronics, understanding of infrastructure, basic programming knowledge, knowledge of network management.

Several interviewees indicate that this knowledge should be at bachelor level; or if there is a team, that one team member has obtained bachelor level.

- **Specialisation**

Within the technical tasks, specialisations are also possible and more and more recommended. The following specialisations are found in schools:

- Network management
- Software
- Hardware
- Smartschool specialist
- Office Specialist
- Operator helpdesk or ticketing system (first line)
- Cybersecurity

The most frequent split that is made is between infrastructure and software.

- **Open to further training and/or retraining**

Ultimately, the most important thing is that an ICT coordinator is open to learning and has an affinity with the profession. These profiles are are likely to quickly leave their job again in the rapidly changing ICT context. Schools must work with the people who are there. As long as there is interest, they can learn and develop to be able to perform certain tasks.

- **Knowledge of the context of school education is not a requirement**

Knowledge of the specific context of school education does not necessarily have to be a prerequisite for successful completion of the technical part. The technical basics are always the same as in other organisations. This assumptionprobably also explains why, to date, no pedagogical diploma is required to take up the position of ICT coordinator.

Pedagogical-didactical

In order to perform the pedagogical-didactical tasks well, a combination of pedagogical-didactical knowledge and interest in educational technology is important.

- **Teaching experience or pedagogical knowledge**

Pedagogical knowledge and teaching experience are both crucial to be able to perform the teaching and learning tasks. Therefore it is recommended to have followed an Initial Teacher Education programme. In addition, it is important to have insight into the own school's educational vision: understanding the chosen didactic principles and being able to apply these in order to enhance teaching and learning with digital means/ in a digital environment .

- **Technical background or interest**

It is important to also have a technical background, or at least an interest. More specifically, it concerns knowledge of digital tools and aids for educational innovation. It is advisable to have the courage to try out new programmes and tools.

Policy-based

In terms of policy, three competences are important, namely analytical thinking skills, the ability to maintain an overview and social skills. These are usually profiles at master level.

- **Analytical thinking skills**

To be able to carry out the policy and vision tasks, analytical thinking skills are important. In order to draw up a policy plan, it is necessary to analyse all the collected data and information. In addition, one must have the courage to make the case for and take well-reasoned decisions.

- **Being able to keep an overview**

The ability to maintain an overview and structure is also a necessary competence for carrying out policy-making tasks. A helicopter view is needed in order to be able to think in the long term in terms of planning and policy.

- **Social skills and change management**

Mastering some social skills, such as being able to clearly communicate technical explanations, and getting colleagues to cooperate, is crucial. Having the management on board is often an important condition for rolling out an ICT policy, and it is therefore also important to have a certain power of persuasion. In addition, the ICT coordinator must also be able to create support among colleagues and implement changes.

Administrative

No specific competence is required for the administrative tasks. A secondary education diploma is sufficient. What is important, however, is an aptitude and interest in everything to do with ICT.

Generic competences

Besides task-specific competences, it is important that an ICT coordinator also has some generic competences. In the job description of VICLI, the following generic competences were identified:

Being:

- Communicative
- Flexible

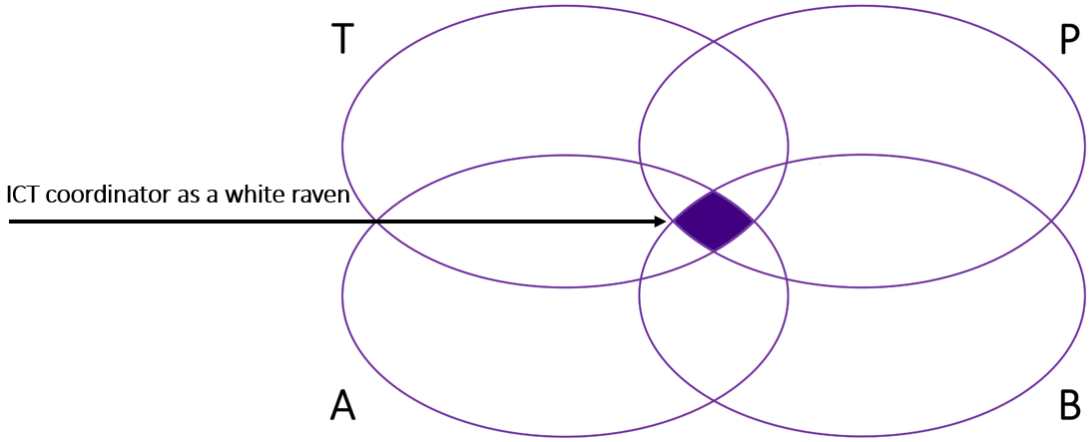
- Stress resistant
- Discreet
- Team-oriented
- Innovative
- Creative
- Independent
- Dynamic
- Empathic
- Eager to learn
- Responsible
- Organisational

But above all: a combination of competences

In order to be able to properly implement ICT coordination, an ICT coordinator should preferably possess a combination of all these competences.

By analogy with TPACK - which stands for Technological Pedagogical Content Knowledge, the specific expertise of a teacher to present the knowledge and skills belonging to a subject to the pupil in an attractive and understandable way using ICT - we could speak of TPAB (this works only in Dutch: 'Technisch Pedagogisch Administratieve en Beleidscompetenties'). With this we refer to specific expertise to coordinate the human and material preconditions of ICT use at school in such a way that an ICT policy can be developed and rolled out to realise the pedagogical vision of the school (see core of Figure 2).

Figure 2: ICT coordination requires a combination of competences (T-PAB)



However, having all these competence areas developed to a high degree appears impossible for one person; only a rare 'white raven' or 'übermensch' is capable of doing this, if they can be found at all in the current labour market... Both 'IT manager' and 'teacher' are high on the list of bottleneck professions: vacancies are already not being filled today.

Schools are forced to rely on the insufficient manpower they dispose of. Distribution of tasks and roles is therefore appropriate or often the only way forward.

Division of tasks and roles

Below, we make a distinction between the core tasks of the ICT coordinator and tasks that can also (or even better) be taken on by others. Next, we distinguish two profiles of ICT coordinators: the technical and the pedagogical ICT coordinator. Finally, there are also tasks that are better taken up, or at least strongly supported, at the central level of the education system.

Core tasks of the ICT coordinator

In the 'Task overview ICT coordination', the tasks that are generally considered to be the most important tasks of the ICT coordinator are marked in purple. These are tasks:

- Which are of **strategic importance** to the school, because they:
    - Are crucial to be able to respond quickly, and on a daily basis, to problems with the ICT infrastructure (e.g. repair of servers and network equipment, helpdesk, etc.);
    - Belong to the core of the administration (e.g. user management and structuring of the electronic learning environments);
    - Are closely linked to the pedagogical vision and policy of the school (e.g. supporting teachers in integrating ICT in the classroom).
- For which **sufficient technical competences *in combination with other*** (pedagogical, administrative, or policy-based) competences are needed.

Tasks that can also (or even better) be taken on by others

It follows from the above definition of core tasks that tasks:

- Which are not of strategic importance to the school;
- For which only technical competences are needed;
- Or just pedagogical, administrative or policy competences with a basic affinity to ICT;

can also be taken on (or even better) by others.

The table below provides an illustrative overview of tasks that can be taken on by others, together with who could do this. Which tasks are distributed in practice, and how this can be done, is **context specific** and depends mainly on who within the school has which **competences, motivation and expertise**. Also outsourcing can be an option for certain tasks.

Table 2: Who can take on which ICT coordination tasks?

Tasks	Who can take it?
Technical - Repair of laptops, printers, copiers,... - Design and technical management of school website - One-off technically complex and time-consuming projects - Development of software packages - Manage camera surveillance and other services via the network (e.g. boiler room) - **...**	External firms Watch out for risks: - Cost - Dependency - Loss of internal know-how The responsible of Infrastructure/Building Management/TA(C)

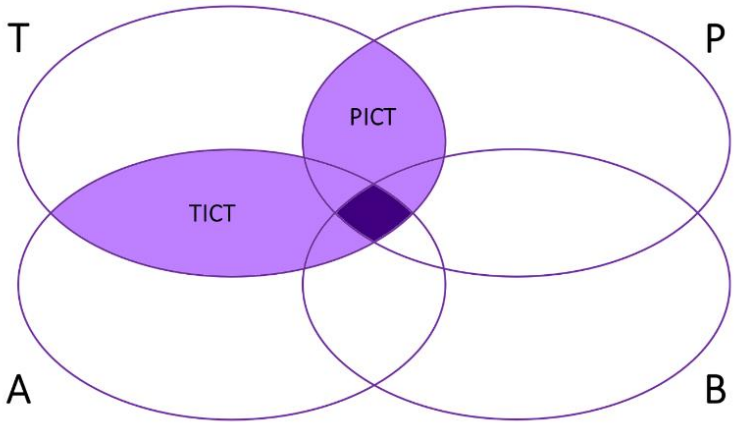
Pedagogical-didactical - Forming networks with other schools in the area of educational innovation - Implementing ICT in an innovative and pedagogical-didactic way on the classroom floor (educational innovation) - Following developments in the field of educational innovation - ...	Teachers with a special interest in ICT integration ('digicoach', 'speedboat teacher',...)
Policy & vision - Motivating, involving, guiding and professionalising colleagues - Participate in project work (Flemish, Belgian, European, etc.) - Attend ICT days and fairs on behalf of the school, maintain contacts - ...	The School's management Teachers
Administrative - Manage accounts, laptop/tablet pool,... after ICT coordinator has set up structure - Updating school website and various (social) media & encouraging colleagues to contribute - Inventory of hardware and software - ...	Administrative Staff Member Teachers Communication officer

Two types of ICT coordinators

In practice, there are two types of ICT coordinators in Flanders:

- The **technical ICT coordinator (TICT)**: this combines very strong technical competences, with the necessary policy-making and administrative skills.
- The **pedagogical ICT coordinator (PICT)**: this is mainly pedagogically strong, with a strong technical basis, and also policy and administrative skills.

Figure 3: The different competences of the technical and pedagogical ICT coordinator



This distinction is often prompted by practice: most technical ICT coordinators do not always turn out to be the most socially and educationally strong people. It is not self-evident to do both:

I notice that the people who used to do the technical tasks are totally unsuitable for the pedagogical tasks. I don't think these two functions are often combined by the same person.

(in-service provider)

This distinction is also reflected in the way courses are organised. For example, the university of applied sciences UC Leuven-Limburg (UCLL) offers two microdegrees: that of ICT coordinator and that of educational technologist. The former focuses on the technical tasks, while the latter emphasises the pedagogical-didactical story.

We also find similar divisions abroad. In Estonia, for example, three profiles are distinguished, namely the IT manager, the educational technologist and the computer science teacher. The IT manager overlaps with the technical ICT coordinator, while the educational technologist overlaps with the pedagogical ICT coordinator. The computer science teacher organises courses in the field of computer science and manages the computer room that goes with it.

Box 1. Some illustrative tasks (Estonia)

IT Manager

- Participation in the organisation's automation programmes and development of work programmes
- Managing the different work environments (user management, rules, service operation, troubleshooting, etc.), which fall under IT
- Managing and ordering the computer workstations, servers and printers, as well as the service provider's network
- ...

Educational technologist

- Mapping the digital competences of educational staff, coordination of (in)training, organisation and implementation
- Development of instructional materials on digital learning and digital learning support, and their dissemination in schools and networks
- Planning and implementing a digital learning strategy
- ...

Computer science teacher

- Organising and carrying out studies and educational work in the field of computer science
- Participation in Olymiades and competitions with talented students
- Organisation of elective courses, study circles, hobbies in a computer class by arrangement
- ...

Central level

For certain tasks, ICT coordinators also look to the central level (i.e. umbrella, government, Knowledge Centre Digisprong) to take over or at least provide strong support.

These tasks mainly belong to the technical part or to policy and vision.

Tabel 3: Central level tasks

Cluster	What tasks?	Who?
Technical	Programming of certain developments or applications	Educational domains
	Single sign-on: call for tenders, then offer service to all schools	Government
Policy and vision	Legal issues: more complex cases	Educational domains
	Purchasing policy: compare offers and suppliers	Educational umbrella organisations or knowledge centre Digisprong
	Tenders, specifications, framework contracts	Educational umbrella organisations or knowledge centre Digisprong

Resources for ICT coordination

Schools finance ICT coordination from different sources:

- ICT hours
- Hours that can be used for special pedagogical tasks
- Other hours
- Operating resources

The ICT hours are earmarked resources from the government, specifically for ICT coordination. All other hours and resources are used at the schools' own initiative.

The amount of the available resources determines how many tasks can be taken up and in what depth and specialisation.

ICT hours

The credit envelope for ICT hours[1] is calculated on the basis of the number of pupils, multiplied by a weighting factor according to the needs of the pupils.

Since September 2021, all institutions in primary, secondary and adult education, including basic education, can make use of these resources. They may or may not choose to pool resources at the level of a school group or community.

The ICT coordination credit envelope should be used for the creation of positions in the ICT coordinator's office. Before 1 September 2021, this existed only in primary education. Today, this exists

[1] See "Mededeling betreffende ICT-coördinatie" GD/2003/04, last amended on 21/01/2022 based on the Flemish Government Decision of 3 September 2021 amending various decisions of the Flemish Government on ICT coordination, https://data-onderwijs.vlaanderen.be/edulex/document.aspx?docid=13401.

in all levels of education. ICT coordinators who hold this position can be permanently appointed. They are part of the support staff.

ICT coordinators can have a diploma of higher secondary education, bachelor or master. Depending on their level of education, they 'cost' more or less credits to a school, which consequently results in more or fewer hours of work.

As a result of the Digisprong initiative, the budget for ICT hours has been increased from €32 million/year to €54 million/year (+70%) since 1 September 2021.

However, the complex distribution mechanism and the choices that schools and school groups/communities can make in terms of how to use the resources make it impossible to make general statements about the impact of this increase on the concrete number of hours/week of ICT coordination available to an average school.

The general message that emerges from our research is that these ICT hours, even after the budget has been increased, are not sufficient to cover all the tasks described.

Hours that can be used for special pedagogical tasks

These are teaching hours or hours that can be used for special pedagogical tasks.

These special pedagogical tasks can only be used for school-related tasks. They are aimed at optimising the pedagogical-didactical organisation. This can be done by assigning well-defined coordination tasks to members of the teaching staff. In this way, if a school so chooses, ordinary teachers can also be given hours off for ICT coordination.

An important note here is that these resources are then taken away from the teaching hours that are actually intended for the pupils (and e.g. class sizes become larger).

Other hours

Some schools also draw resources from the hours they receive for administrative and policy support or care tasks to organise tasks of ICT coordination.

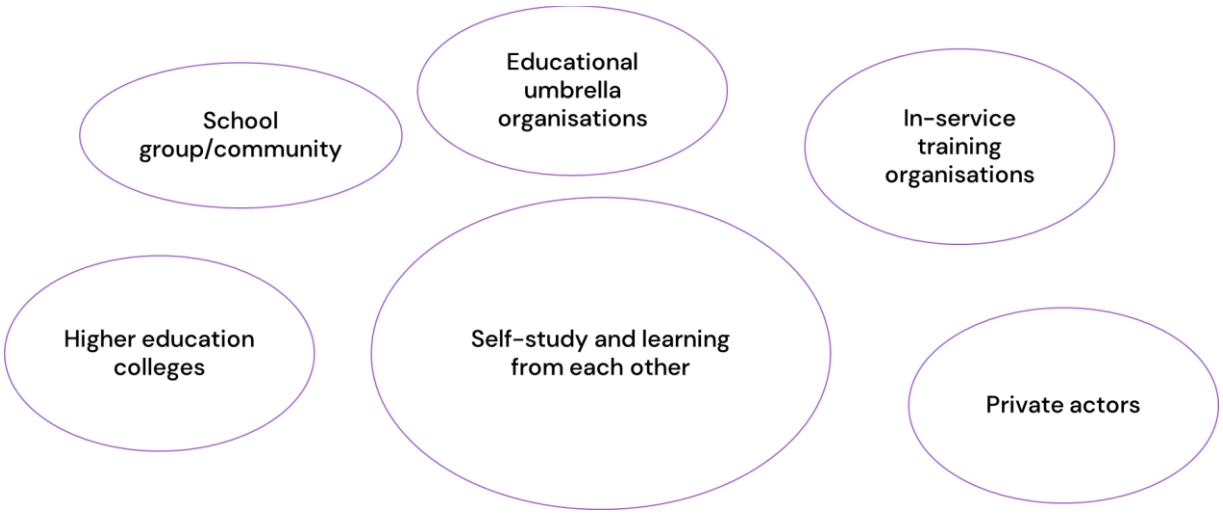
Operating resources

When tasks are outsourced to external partners (companies, consultants, etc.), schools often use their general operating funds, in addition to the operating funds linked to ICT coordination, to pay for these costs.

Professionalisation opportunities for ICT coordinators

Below we offer an overview of the professionalisation opportunities for ICT coordinators. The Digisprong knowledge centre will also play a greater role in this in the future.

Figure 4: Professionalisation opportunities for ICT coordinators



- **Self-study and learning from each other**

ICT coordinators and anyone who takes on ICT coordination tasks rely heavily on self-study and learning from each other. A participant from one of the focus groups confirms this:

We have learned a lot by looking at exhibitions, other schools, literature, the Internet, ... (ICT coordinator)

From our discussions, it appears that the ICT coordinator community in Flanders forms an active and generous learning network (e.g. via Facebook groups). The 'Digital Schools Network' of VICLI and PXL University of Applied Sciences plays a role in this, for example. Important places to learn are also various network events, such as 'Steunpunt ICT', 'SETT-exhibition', and 'ICT-Connect'.

This importance of *peer learning* and cooperation also emerged as good practice from the international examples studied.

- **School group/community**

From and within the school group/community, training is sometimes provided for ICT coordinators and teachers who take on more of a leading or coaching role. In addition, learning networks are set up within the school group/community in which *good practice* can be shared.

- **Educational domains**

The Task 2 report for this project (current situation in Flanders) already showed that all the umbrella organisations for education do offer continuing professional development for ICT coordinators from the educational guidance services (PBDs). Katholiek Onderwijs Vlaanderen (Catholic Education Flanders), for example, has a broad network for the professional development of ICT coordinators, where they can contact teachers for information and *good practice*. Schools can also contact the various educational umbrella organisations for guidelines.

- **In-service training organisations and higher education colleges**

In the focus groups, it was mentioned that a number of schools make use of organisations offering continuing professional development, such as Schoolmakers. The Centrum Nascholing Onderwijs of Antwerp University also has a wide range of courses for ICT coordinators.

Some colleges of applied sciences are also developing a specific offer for ICT coordinators, e.g. Howest (postgraduate didactic ICT coordinator) or UCLL (the aforementioned microdegrees).

The media coach training from 'Mediawijs' (the Flemish Knowledge Centre for Digital and Media Literacy) is also followed by many (pedagogical) ICT coordinators.

- **Private players**

Commercial companies - mostly hardware and software suppliers - also offer training for ICT coordinators and school teams (e.g. Fourcast for education).

Chapter 2: Characteristics of strong ICT teams

In this part of the report, we describe the characteristics of strong ICT teams as revealed by the five focus groups comprised of ICT coordinators, management, and providers of (continuing) professional development and guidance. We then discuss how the transition can be made, to conclude with a new model of team-based ICT coordination.

Strong ICT-teams

What are strong ICT teams? Apparently, for many schools, the school group/community plays a central role in ICT coordination. We will deal with that point first below.

We then discuss how ICT teams are usually composed and how tasks and responsibilities are divided between the management, ICT coordinator(s), teachers, administration, students and parents, and external partners.

The size of the team and the extent to which the team members take on their tasks full-time, part-time, or even in their free time is determined by the resources available.

A strong role for the school group or community

What is striking in our research is that strong ICT teams often operate in a context where there is some or a relatively large degree of centralisation at the level of the school group or community. Resources are pooled and tasks are centralised.

This transition to a more centralised operation sometimes takes time and apparently often proves successful in practice:

It was important for us to evolve from separate schools into one school group. Initially, it was easy to form a central staff administration and central financial department. The central ICT service was delayed because many schools wanted to establish their own IT direction. We were only able to develop a common ICT policy and ICT vision after ICT services were clustered. This gave rise to strategic goals and practical measures with associated resources and hours.

Box 2: Exception CVO

Exception: adult education centres. Adult education centres are already scaled at the school group/community level in compulsory education. The central/decentralised relationship also plays a role in this context, however, because a single adult education centre is required to perform the ICT coordination tasks in and for multiple locations. The discussion about pooling resources is less important (or only important in cases where an adult education centre uses the infrastructure of schools in compulsory education). The merging of the centres is still quite recent (2019) and therefore the integration of existing ICT teams into a larger team still requires attention in several centres.

Tasks

Pooling resources and hours at a central level creates economies of scale. The central organisation for ICT coordination improves support and guidance for individual schools:

- **Technical**: A central technical ICT coordinator can demonstrate his or her added value in at least two areas. On the one hand, he or she can relieve the school's ICT operation by assuming

a large part of the technical tasks. These tasks include troubleshooting infrastructure problems, maintaining the network, and managing accounts and software, such as Microsoft 365 and Google Classroom. On the other hand, in some cases, the school group has a programmer at its disposal. This person develops his or her own tools and applications for the school group, which can also be used by the individual schools.

- **Pedagogical-didactical**: A pedagogical ICT coordinator at the school group/community level, works in both primary and secondary education as a point of contact for schools that require didactic support. The focus is on supporting the school with regard to specific pedagogical innovations, rather than on the translation of content as this is the task of (specialist) teachers. Often, this person also heads a pedagogical working group at the school group/community level.
- **Administrative**: Purchasing devices and negotiating contracts are also often organised at a central level. In addition to expertise, the price advantage for large orders is also an important reason for arranging such matters centrally.
- Moreover, when there is a more centralised organisation, schools usually follow the guidelines and **ICT vision** drawn up by the school group/community. The individual school then translates the ICT vision into the school context.

Benefits

By calling on the knowledge and expertise of the school group/community, more time is freed up for schools to focus on the core ICT task: supporting didactic needs through the targeted use of ICT.

The strength of the school group or community depends on **its scale:**

- Pooling resources at the central level strengthens the negotiating position in group purchasing and framework contracts.
- The number of ICT hours for schools is limited. They therefore often have to use BPT hours (special pedagogical tasks) if they want to establish a coherent and complete ICT team within their own school. However, using these hours for ICT is not an obvious thing to do, as a school has several priorities, of which ICT is only one. If the ICT team is organised at the school group/community level, ICT hours can be pooled. This makes it possible to attract diverse ICT-savvy individuals at that level.
- The 'single point of failure' scenario is eliminated. When people work together as a team, expertise is shared and collateral knowledge benefits occur between individuals at different levels within the school group/community. This avoids having all the knowledge reside with a single person, which entails all the attendant risks should this person be absent.
- A team is created in which technical and pedagogical ICT coordinators can find support from others with similar profiles. This teamwork also makes the job more appealing.

All of this should take place in close collaboration between the school group or community and their contact persons within the schools.

Challenges

Factors that can make cooperation difficult at the school group or community level are the size, culture, and geography of the schools.

- **Size:** The larger the school group/community, the more difficult it becomes to find consensus and implement decisions effectively.

- **Culture**: Sometimes, it is not desirable to cluster the resources of schools with a specific culture with the resources of other schools. After all, their needs and objectives are usually different.
- **Geography**: Schools that are geographically spread out appear less inclined to cluster hours and resources in a school group/community. After all, in practice, greater geographical distance makes a centralised ICT support model more difficult to achieve.

In many cases, top-down decisions initiated by the school group or community help to achieve things effectively. But it is just as important to keep listening to teachers' input and to work decisively from the bottom up:

- Teachers expressed the need for an easily accessible point of contact at school to solve small technical problems. This can be an administrative person who is partly freed up to put out these technical fires. The more complex problems are then passed on to the central ICT coordinators who visit the schools at regular intervals.
- Another approach for gaining acceptance in the schools is to appoint and train focal points. These contact persons are ICT-savvy teachers who can assist their colleagues with problems.

ICT team composition and division of tasks

The composition of the ICT teams and the division of tasks within school groups/communities and schools on the one hand, and within schools on the other hand, differ from school to school. The size of these teams also differs depending on the scale of the work.

Nevertheless, the following common thread arises:

- Actors that are usually inextricably linked to the school ICT team are **management and the pedagogical and technical ICT coordinator(s**). This group is often called the ICT policy team.
- **Administrative staff** provide support regarding technical and administrative tasks.
- Moreover, in many schools, there is also an important role for **(specialist) teachers** who translate the ICT policy to the classroom. Motivating and sensitising fellow teachers is an important task here. Moreover, they provide feedback on didactic needs to the ICT policy team.
- In some schools, **students and parents** are also indirectly considered part of the ICT team because of their roles as sounding boards.
- Finally, successful ICT teams identify what expertise they lack themselves and actively look for **external partners** to support the school's ICT operations.

The remainder of this section provides a detailed description of the tasks and responsibilities that these actors may have within the ICT team.

Management

Management primarily has a coordinating role. In primary schools and small secondary schools, there is often one person who takes on this coordinating role. By contrast, in large secondary schools and in adult education, these tasks are usually taken on by a management team where each member assumes responsibility for a specific domain (e.g. ICT, but also pedagogical, finances, infrastructure, etc.). There is also a management team at the school group/community level.

In this multi-person team, the various ICT responsibilities are divided up among the directors.

- Irrespective of school size, the management or management team is responsible for outlining the school vision and elaborating, implementing, and following up on the ICT policy plan.
    - This coordinating role closely ties management to all four clusters of the ICT coordination tasks.
    - The management acts as the glue between the different ICT team members and keeps the school's ICT operations on the right track.
- The management is usually not involved in the actual work of the ICT operations, but has ultimate responsibility for making ICT decisions, such as purchasing new equipment and – for school directors – defending the school's interests to the school group/community. Although the final decision lies with the management, they must be aware of what is happening in the school(s) and gather sufficient information from the entire school team, especially from the ICT coordinator(s). Everyone should have the opportunity to provide input so that the decision will meet their needs.

The focus groups showed that not all directors have sufficient vision and knowledge to draw up an ICT policy. This often causes problems. It is not only some ICT coordinators who are challenged to contribute to policy and vision. There is also an apparent need for school leaders to engage in professional development to develop their capacity to develop/draw up an ICT policy for their school.

Technical ICT coordinator(s)

On the school floor, the support provided by the technical ICT coordinator(s) consists traditionally of resolving first-line problems and ensuring that all equipment and software work properly. If the school is large enough, there is usually one (or more) local technical ICT coordinator(s). If not, there is assistance from the team of technical ICT coordinators at the school group or community level.

Currently, in practice, it is rare for all technical tasks to be carried out by a single person. It is virtually impossible to find this rare bird in today's tight labour market. Moreover, it is often not desirable to assign all tasks to one person. It is better to divide the technical ICT tasks within a team structure. Individuals can specialise in certain ICT tasks based on their talents and competencies. Examples of specialisations are network management, infrastructure, software packages, etc. In adult education, in particular, we notice that there is a far-reaching specialisation of technical tasks. Individuals in the team are assigned to particular specialisations.

This team of technical ICT coordinators at the level of the school group or community is often coordinated by **one overall ICT coordinator**, often called the ICT department head. This person is responsible for managing everyone who takes on technical ICT coordination tasks within the school group or community.

- His or her task is to maintain an overview and ensure that the school group's ICT vision is followed.
- The overall ICT coordinator creates focal points within the school to resolve small technical problems easily and efficiently. The more complex problems are passed on to the central level via the focal points.
- In addition, the primary ICT coordinator monitors the balance between the centralised work of the technical ICT team and its presence at schools.

- Finally, this supervisory individual is responsible for organising meetings between the technical ICT coordinators, consultation with the management team, and sharing knowledge and expertise by facilitating (continuing) professional development and workshops.

Pedagogical ICT coordinator

The third core member of the ICT team is the pedagogical ICT coordinator. The role of the pedagogical ICT coordinator is primarily to translate the didactic aspect of the ICT operations into the school policy, the vision of education and ICT integration in the classroom. After all, ICT is not an end goal but a means to bolster education.

The position of pedagogical ICT coordinator is becoming increasingly important due to the continued digitalisation of education, which is further driven by distance learning during the coronavirus pandemic. What is striking in practice is that this role is not yet being implemented in all (small) schools. Rather, it usually occurs at the level of the school group or community.

Administration

In fact, ICT coordinators spend a lot of time on administrative tasks. In strong ICT teams, such basic tasks are often taken on by administrative staff or other support staff within the school so that the ICT coordinator can focus on core ICT operations. Tasks taken on by these people include supporting the administration package, student account management, and running the help desk for first-line problems.

Teachers

ICT-savvy teachers are also often part of ICT teams. They are teachers who inspire, sensitise, and motivate colleagues about the use of ICT in both didactic and technological areas. They are pioneers because of their passionate interest in and for ICT. There are various terms for these teachers: digi-coaches, e-coaches, warm coaches, media coaches, special ed. teachers, etc. Their tasks vary, but usually include:

- **Technical component:** these teachers possess the basic skills to provide first-line technical assistance to teachers. This includes student account management, replacement of a projector, support in the use of Chromebooks and iPads in the classroom, etc. Moreover, they are a point of contact within the school that teachers can turn to, often with a link to the technical ICT coordinators of the school group/community (cf. focal point, see above).
- **Pedagogical component:** these teachers support the pedagogical ICT coordinator or take on this role in their school by motivating colleagues to use ICT. They are the first-line helpdesk for pedagogical questions. Moreover, they translate ICT policy decisions to colleagues by providing (continuing) professional development and supporting teachers in ICT integration.
- ICT-savvy teachers in some schools are also given the scope **to experiment** with new ICT applications to enhance didactic teaching. After some time, the success of the innovation is assessed to decide whether it can be extended to the entire school team.

Box 3: i-coach model from the Netherlands

In the Netherlands, teachers are trained as 'i-coaches'[2]. This is about utilising ICT for didactics, coaching skills, and other such skills.
There are six roles that the i-coach can fulfil within schools:

[2] Kennisnet. De effectiviteit van de inzet van i-coaches (The effectiveness of the deployment of i-coaches): Research report.

- a trainer who gives workshops and training sessions.
- a coach who encourages and enthuses colleagues.
- an adviser who gives advice and can communicate advice easily.
- an educational guide who follows up on the didactic value of ICT.
- a change guide who can guide a change process.
- a technovator who knows and communicates new educational technology.

Parents and students

Actors that should not be forgotten in the context of ICT coordination are the students and parents:

- First, they can provide feedback as a **sounding board** about the (digital) teaching practices and the school's ICT operations, so that adjustments can be made when necessary.
- We heard about an interesting good practice from a school that appoints students as **'digi-leaders'**. These students are taught about specific apps and tools. They then take on the role of pedagogical ICT coordinator in the classroom by helping fellow students and familiarising them with new technologies.
- Schools can also draw up a manual so that **simple administrative actions** can be carried out by parents, e.g. student account management.

Box 4: Foreign examples

We also noticed that this occurs in other countries. In Andalusia, teachers can involve parents via the iPasen app, and there is also student participation. All of this is in the context of digital inclusion. Students' assistance can even be utilised further. For example, ICT-savvy students in Estonia can also take on the role of the IT Manager. This is how knowledge sharing and the school community are strengthened.

External partners

Besides outsourcing technical tasks, strong ICT teams also call on external partners to support various school ICT operations and to bring knowledge that was previously lacking into the school.

- These external partners are engaged to optimise existing processes within the school and appoint the right ICT team members in the right place. For example, *Schoolmakers* guides the internal working of the ICT team and shares the good practice examples of other schools.
- A recent trend is that increasingly more schools are turning to external partners, such as *Fourcast for Education*, for pedagogical support of ICT operations.

The financial cost of engaging these external partners is still an obstacle for many schools.

But external partners can also be found within the school's own network.

- In every school, for example, the pedagogical advisory service is an important link in supporting technical, pedagogical, and policy tasks.
- Moreover, primary schools sometimes receive (technical) support from nearby secondary schools, and some adult education centres are affiliated with colleges and/or universities that take care of logistical and technical ICT operations.

Strong teamwork in practice

How does a group of people with different profiles – each with their own contribution to make to ICT coordination at school – become a strong ICT team? Two principles appear crucial: the division of tasks based on expertise and talent, and clear mandates. In practice, teamwork is shaped by different organisations when they consult and collaborate.

Division of tasks based on expertise and talent

Rather than being based on a strict profile description, the division of tasks in strong ICT teams is based on the talents, competencies, expertise, and skills of the people present at the school. The right person in the right place is the crucial element. A defined task profile is usually only needed when looking for external people to reinforce the ICT team.

There is no single task that applies to only one person. It also depends on how the organisation works within the school. If you have a person within the school who is happy to take care of the website and social media, you can 'outsource' this within the school. But it could also be a member of management. You have all kinds of tasks that do not apply solely to the technical ICT coordinator or management. Very often, it is talent and competency related. You should not divide tasks according to profiles but rather according to competencies.

Talent should be used in the right place. It is about talent and understanding talents in relation to the specific needs and policy-making capacity of the school.

Several tools are available for gaining insight into where which expertise is located (e.g. the 'DigiKapitaal-scan' by Schoolmakers or 'Digisnap' that is prepared by the Digisprong Knowledge Centre). However, these are not yet fully aligned with the tasks of ICT coordination that is the focus of this project.

The table below lists some of the benefits and challenges that were cited in the focus groups about the division of tasks based on expertise and talent.

Table 4. Benefits and challenges of the division of tasks based on expertise and talent

Benefits	**Challenges**
- The job of ICT coordinator is more appealing: you can take advantage of in-house talent and leave less interesting matters to others. - The different actors have a feeling for the other parts and can stand in for each other/be a backup.	- Make sure that everyone is not doing a little bit of all of the tasks, which may result in pedagogical tasks being forgotten completely and policy tasks being negatively affected.

Clear mandates

Strong ICT teams therefore do not have a full-time uniform division of tasks. Nonetheless, clear mandates are crucial for strong teamwork. This too may vary from school to school, but in any case, it must be clear:

- who may take which decisions
- who carries out ICT tasks and who manages and monitors everything
- that the individual appointed as contact person takes the lead

Once this is clear, it is not so much that the management must drive the process, but that the ICT coordinators and the rest of the team can take a leading role. However, it is the management's role to ensure that this shared leadership can arise by ensuring that the mandates are specified.

Consultation and collaboration groups

In this section, we describe the consultation and cooperation groups that we see in practice in strong ICT teams.

Policy & Vision: ICT policy team

In most schools and school groups/communities, the triangle of the management, the technical coordinator(s), and the pedagogical ICT coordinator(s) is very important at the policy level. This group is often called the ICT policy team.

In terms of policy, we have a policy ICT group for education. This group includes all ICT coordinators, the general director of the school group, the coordinating director of the school group, one director from each school supplemented by the director of the buildings. Above that is another ICT committee with representatives from the Executive Board.

It is clear that close interaction and good communication are needed between the ICT coordinator(s) and the management team. Opinions are divided on whether the ICT coordinator(s) should be part of the management team.

Table 5. Pros and cons of ICT coordinator being part of the management team

Pro	Con
- ICT determines the general school policy - Can respond to decisions efficiently and effectively - Can weigh up decisions - Frequent consultation	- Excessive time investment - Risk of additional tasks (due to being part of the management team) - ICT coordinator: the profile is currently more operational than policy-oriented

Carrying out technical tasks: daily work for technical ICT coordination

Ensuring proximity and fast service in schools

Organising ICT at a central level does not mean that the entire team is also located centrally. For example, some teams are centrally located and while others are spread across schools. They regularly visit the schools that are part of the school group or community. This is how to guarantee that service is close at hand and action can be taken quickly when needed.

One way to structure the daily technical ICT coordination work is to use a ticketing system for technical interventions. However, some schools deliberately do not implement this system. The table below summarises the pros and cons.

Table 6. Pros and cons of a ticketing system

Pro	Con
• Maintaining an overview • Division of tasks in the team • Tracking the history	• Learning curve too steep for teachers • No more face-to-face contact person in schools • Attitude/illusion 'no ticket, no problem'

• Documenting common problems and solutions	

Fast and efficient team communication

Some schools have a primary technical ICT coordinator who leads the technical team and safeguards an overview of the communication within the team. For example, they use WhatsApp to communicate quickly. Moreover, contact also occurs informally in the corridors. Regular consultation is also important. The frequency and form of these meetings vary from school to school.

Pedagogical tasks: various ways of involving teachers

Sounding board group

Teachers are often involved in the ICT policy via a sounding board group to test decisions and seek input from the school team. In primary education, grade teachers are part of this group. In secondary education, mainly specialist teachers are involved. In adult education, the course coordinators fulfil this role. Besides the ICT-savvy teachers, it is also important to invite some teachers into this group who are less familiar with ICT. Their positive critical attitude increases support for ICT within the school and allows the team to look at ICT through different lenses.

Working groups

Besides sounding board groups, working groups with teachers are set up to work out specific issues together. Some examples:

- An ICT working group to create an ICT manual to be used in the common core curriculum.
- An ad hoc working group comprising the coordinating director, ICT coordinator, and teachers with Digisprong involvement.
- A digital working group for competencies and media literacy that participates in projects where new technologies are tried out.

Professional development and networking initiatives

Internal professional development and networking initiatives for the school or school group/community team of teachers are important instruments for shaping the pedagogical aspects of ICT coordination. These are crucial ways to disseminate knowledge among all teachers and get everyone on board.

Some examples from the focus groups:

- ICT café: a periodic lunch organised by the pedagogical ICT coordinator during which a particular tool is put under the spotlight.
- Numerous webinars are also provided for staff members via newsletter media. Webinars for just teachers and webinars for both teachers and students.
- Forum@9Huis is an annual gathering where all focal points hold a workshop for the school community.
- Specifically for digi-coaches, the school group provides training for some schools. They participate in a specific programme.

- If teachers indicate they have professional development needs, (continuing) professional development is organised for them.

Via all 'regular' channels

Finally, communication with teachers also takes place via all of the 'regular' channels that enthusiastic ICT coordinators try to 'hijack' when needed and as much as possible, e.g. staff meetings, pedagogical study days, service notices, or informal conversations in the school corridors.

How do you make the transition?

This section discusses what we can learn from the studied good practices about how to transition from a situation where the ICT coordinator is more or less on his or her own to more team-oriented ICT operations. It is a change process, which is essentially about policy-making capacity.

In one of the focus groups, Knoster's change model (1991) was explicitly cited. This provides an analytical framework for initiating a change process.

Box 5: Knoster's model of change

The five elements of **Knoster's change model**[3]:

- **Vision**: vision and interest answer the why question and thus form the starting point of a change process
- **Incentive:** answer the question of why someone must adapt their knowledge, attitude, and/or skills; prevents resistance
- **Plan**: a clear plan answers the questions 'who may/must do what, when, and how', and 'who bears what responsibility, when, and about what?'
- **Resources**: to avoid frustrating teachers, one should think beforehand about what resources are needed
- **Skills:** it must be clear at the start of the process what skills you need, what level of mastery you have, and within what timeframe you can/must acquire them

How is it realised?

I filled in that it's still a growth process for us. I try to make it happen by drawing up a longer-term plan together with schools. Change processes in schools must also have a sense of urgency. Schools themselves must realise why they are doing this. Once they realise this the time, means, and hours follow.

Cyclical growth process

As the above quote illustrates, the transition to an ICT team is a growth process for schools. This was confirmed during the focus groups where even schools that have already developed an ICT team are still exploring some areas (e.g. whether or not to work with a ticketing system). Clear expectations and vision are crucial for growth. Only then can a step-by-step plan be set up.

[3] See https://wij-leren.nl/veranderproces-elementen-knoster-sinek.php

More importantly, we must get everyone on board. This is achieved by working bottom-up and providing regular feedback when decisions are made.

Shared leadership is a time-consuming path. You can also announce everything top-down. But if you want to work for the long term, it's a precondition that everyone is moving in the same direction.

During the focus groups, the importance of working in a process-oriented or cyclical way was mentioned several times. This ensures that how the school works is extensively evaluated and the resulting concept aligns with the school's individuality. Such a cyclical operation implies continuous evaluation, which also allows for structural adjustment of the process in keeping with the changes occurring within the school system.

Often, practice compels this because the composition of an ICT team rarely remains stable. People leave and new colleagues start. In this context, it is also important to focus on knowledge sharing, provide backup (e.g. not working with personal mailboxes, but with generic addresses), and draw up written procedures.

Customised

It is important to examine your team and needs within the school context. There is no such thing as *one size fits all*. This is illustrated by the following quote.

You need to look especially at where the needs are located in your context. This is partly a gut feeling, what you hear in the corridors, but is also based on data.

One way of finding out exactly what these needs are is to carry out a new scan within the school. Such a scan (e.g. SELFIE) is based on data and identifies the situation at the school. The director cannot do this scan alone, which means that a form of teamwork organically emerges in the school. The results of the scan are translated into an action plan and a search is made for a structure that fits within the school.

Box 6: Foreign examples

Tools are also used in other countries to evaluate aspects of ICT policy. For example, schools in Andalusia use 'RUBRIC' and 'SELFIE' and Portugal uses the 'Digital Check-In tool for school communities'.

Pedagogical vision

The why is driven by a clear pedagogical vision, which stands alongside the technical vision. In this vision, a link must be made with the educational uniqueness of the school. ICT is a means of achieving educational objectives, not an end in itself. The use of ICT in lessons stimulates innovation and creates variety in the school offering. It is important to establish a link with the curriculum objectives to draw all teachers into the narrative.

Education is not tool-oriented but goal-oriented.

The starting point must be the needs in the classroom, not the technical options.

ICT policy plan

Once the pedagogical (and technical) vision is clear, this needs to be translated into an ICT policy plan. This ICT policy plan should also include a professional development plan. This creates the framework

within which all ICT coordination tasks contribute, namely, the overarching objectives that the entire ICT team works towards together.

Box 7: Foreign examples

In Portugal, 98 per cent of schools have a Digital Development Plan. In Spain, every school has a Digital Activation Plan. In Andalusia, there are government programmes that support schools in drawing up their annual digital action plan, which must then be submitted to the regional department of education.

Support from teachers

An ICT policy plan and team-oriented ICT coordination will not be accepted if the teaching team do not support it. Teachers must therefore be actively involved in the entire process. Co-creation will ensure that the change receives better support.

Over the years, we have gained the trust of teachers. We have also always stayed in contact with the teachers. We always had a triangle of head teacher–teacher–ICT coordinator, although we obviously should have included the students.

Professional development, experimenting, and learning

To enable educational innovation using ICT and provide some colleagues with an associated role, it is crucial to develop a learning culture according to the principles of effective professional development.

I think we really need to focus on the effective professionalisation of teams. This makes a difference because at the same time you are focusing on effective professionalisation and you are also doing something about the school organisational context. […]. You start from the experienced needs and you start from the science, you make the link with didactics and subject didactics, you do it long-term, on the school campus and not in a continuing education centre.

Possible forms that meet the characteristics of effective professional development are teacher design teams, practice-based research, and lesson study. One-off refreshers and courses are less suitable for bringing about changes in a team.

When experimenting, it is important to set clear boundaries and time limits so that the experimenting does not get in the way of the effective teaching task. Individual projects must always fit within the broader pedagogical vision of the school and be embedded within the school.

Levers and preconditions

Support from management

A crucial precondition for setting up an ICT team is management support. It is critical that management has a clear vision of the strategy to be followed and that crucial persons are given a clear mandate.

This support is also reflected in resources. In schools where management believes ICT is important, additional resources and hours are made available. Where this is not the case, schools have to make

do with just the pre-assigned ICT hours. It is also important to set aside hours for pedagogical tasks, and not just for technical support.

Where we are now is because we have invested heavily using BPT hours, but you have to have the resources too. We include our primary schools as a helping hand, which gives us a scale-up that they also benefit from. As a school, you have so many needs (language, care, ICT, etc.), you have to make choices. You will not get anywhere if management does not take the step to invest in the hours.

Learning from each other – peer review – sharing good practices

Learning from each other and sharing good practices among schools can be a lever for change. The focus groups indicated that strong ICT teams find and have found a lot of support from other schools. An added value would be that this information about how they do things could also be found online on the school websites.

Looking how it is done elsewhere does occur but rarely. It is always the same directors who are open-minded. But there is a lack of structural sharing with pedagogical advisory services.

Cross-networking and learning opportunities can also provide a lot of support for schools when setting up an ICT team. Several examples of this are:

In West Flanders, we have an ICT support event three times a year. That is a networking event with ICT coordinators, directors, and people from teacher training colleges. There is also always someone from the pedagogical advisory service to provide feedback about what was decided in Brussels. These networking moments are very important.

We have also already attended a blended learning focus group organised by the government. This is a good way to share good practices.

I also have support and help from KlasCement. This network has grown over the years.

Box 8: Foreign examples

Such networks are also being set up abroad. For example, in Estonia, there is the Association of Educational Technologists, and in Andalusia there is the Seneca platform.

Unambiguous frameworks and instruments

Management and ICT coordinators are looking for unambiguous frameworks and instruments to support their change initiatives. Our project is therefore responding to a clear need.

For example, there is a need for a clear job description for 'the ICT coordinator' including a division of tasks. It was mentioned during the focus groups that when a school needs to post a vacancy, no job profile templates or examples are available. It was also indicated that a clear distinction between the technical ICT coordinator and the pedagogical ICT coordinator would create clarity for teachers so that they could address their questions to the right person.

Schools would also benefit from an ICT policy plan template, including guidelines for drawing up the professional development policy.

A tool to measure the competencies in the four ICT coordination clusters would be useful for schools. First, so that it is clear what talent and working points are of interest. Second, so that schools know what to focus on in their professional development policy.

At the same time, it is also indicated that there are already so many tools and frameworks that it is sometimes difficult to see the wood for the trees. The Digisprong knowledge centre can play a role in creating clarity.

Government policy choices

Finally, the participants in the focus groups pointed out that certain government policy choices determine the context and the preconditions within which school groups/communities, schools, and centres must shape a possible transition to ICT teams.

Long-term certainty of resources

The Digisprong funds for infrastructure will remain available for several years. Many voices are in favour of making resources more sustainable and continuing to inject financial resources into ICT. Schools have very little certainty about this. They see no long-term vision on the part of the government, which also makes it difficult for them to devise a long-term policy.

Box 9: Foreign examples

The importance of this long-term vision was also mentioned among the international examples.

A stronger status for the ICT coordinator?

Before 1 September 2021, the position of 'ICT coordinator' existed only in primary education. Today, it exists at all levels of education and is part of the support staff. ICT coordinators do not always perceive the transition – from an appointment as a teacher using BPT hours to an appointment to perform this work – as positive. For example, it is suggested that the current tasks continue to be performed, but that a few weeks extra must be worked during the holidays due to their on-call hours for the same pay. Whereas an appointment in BPT hours provides the benefits in terms of holidays that a regular teacher also has.

Another element is the level of the position. For example, it is perceived that an ICT department head, who is empowered to join the college of directors and has the main coordinating role over the ICT coordinators within a school group/community, should be classified higher on the pay scale. Some schools create this position, but the lack of an official statute undermines the clout towards suppliers and teachers. This person is situated between the level of the general director of the school group and that of the management of the individual schools. Consequently, this person is given more responsibility and the workload is sometimes as great as that of an ordinary board member, but the benefits are not commensurate. The option of being appointed as a 'technical adviser coordinator' (TAC) was raised during a focus group as a possible solution.

Pre-assigned resources for pedagogical ICT coordination

The demand for pre-assigned resources for pedagogical ICT coordination was also discussed during the focus groups:

If you say that it is very important to organise a pedagogical ICT coordinator, the government should make the necessary funds or pre-assigned hours available.

This refers to the pedagogical ICT coordinator at school level, but also applies to a central ICT service at the school group/community level.

Job appeal

A major problem that schools struggle with is the relative appeal or lack of appeal of the ICT coordinator job.

Those with a strong ICT profile who are currently attracted to education do so from idealistic motives. Private sector salaries are simply higher for similar profiles, and schools are losing more ICT staff than they can recruit.

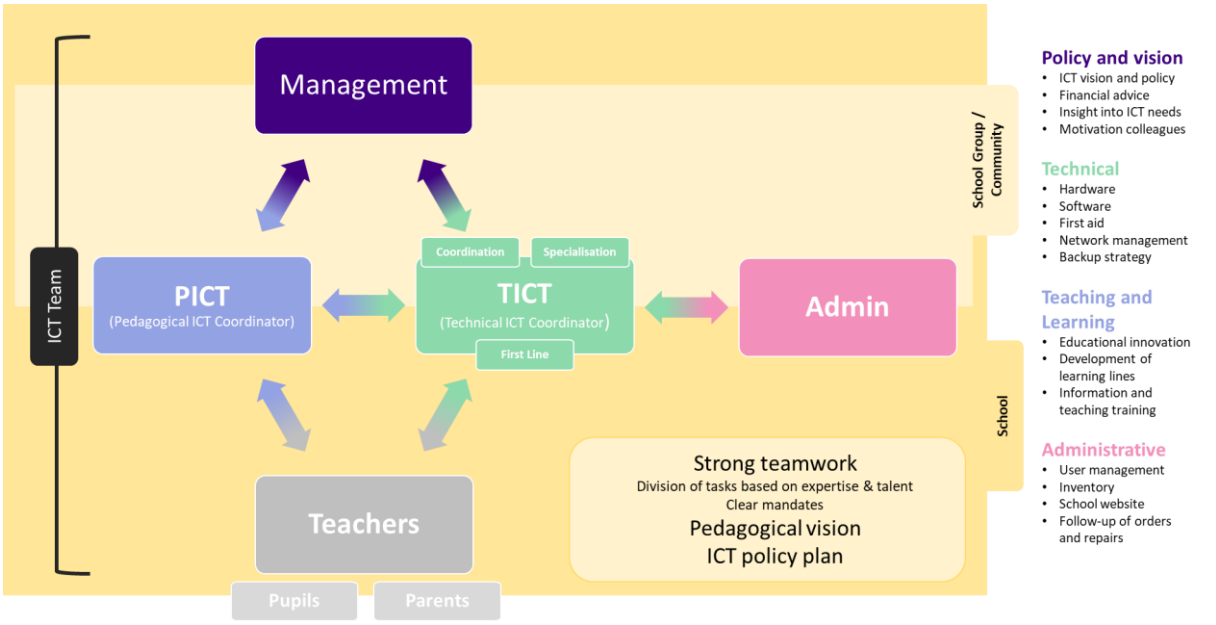
Besides the difference in wages compared to the private sector, the lack of stability also plays a role due to the uncertainty in hours from one year to the next. Schools without a clear ICT vision that do not develop policy on the use of hours and resources are even more unattractive in that context.

Conclusion: a new model for team-oriented ICT coordination

In this report, we described how team-oriented ICT coordination takes concrete shape in schools and centres where the ICT coordinator is already embedded in a strong ICT team. The integration of crucial insights from these good practices gives rise to the following new model for team-oriented ICT coordination (see Figure 5: New model for team-oriented ICT coordination).

In this model an entire team is responsible for the four clusters of tasks that make up ICT coordination: technical tasks, pedagogical tasks, policy and vision, and administrative tasks.

Figure 5: New model for team-oriented ICT coordination



An ICT team is ideally located partly at the level of the **school group/community** and partly at the level of the **school** (for adult education: partly at the level of the centre, partly at the level of the adult education locations). The exact proportion will depend on whether or not and to what extent the resources to be used for ICT coordination (pre-assigned resources and own resources) are pooled (this does not apply to adult education). This choice is based on a pedagogical vision that is translated into an ICT policy plan.

The core of an ICT team consists ofthe triangle of **management – technical ICT coordinator (TICT) – pedagogical ICT coordinator (PICT)** (often called the ICT policy team), both at the school group/community and school level.

Depending on the scale of the school group/community, school, or centre, this involves one or more people with or without a certain **specialisation** . Specialisation is recommended especially for technical tasks. In this case,there are several technical ICT coordinators, which are coordinated by a primary technical ICT coordinator. Also in the management team, it is good to have a director with a focus on ICT.

There is a close **working relationship** between the ICT team – especially the technical ICT coordinator – with supporting services within the school or school group/community (administration, infrastructure, etc.) and with external partners.

Teachers, students, and parents are the ultimate target groups because their needs must be met. So, they are an important **sounding board** for the ICT team. The pedagogical ICT coordinator especially invests in these relationships.

At **school** level, the ICT team not necessarily consists of full-time staff. Teachers with an affinity for ICT can be given some time off to take on pedagogical or technical ICT tasks.The pedagogical ICT coordinator should ideally also be a part-time teacher. As far as technical tasks are concerned, first-line support must be provided quickly at the school itself. Besides teachers, administrative staff can also be involved in these tasks. Finally, management also plays a major role in the pedagogical side of ICT coordination.

All these actors together therefore form the ICT team. **Strong teamwork** in this group is based on two principles. The first is the **division of tasks** based on **expertise and talent**: there is no strict division of tasks based on profiles, but this is based on the competencies present in the school to put the right person in the right place. The second pillar is **clear mandates**: clarity about who is allowed to make which decisions, who will implement ICT tasks and who directs and follows up everything, and who is appointed as the lead and point of contact. It is up to management to continue to ensure there is a clear division of tasks and clear mandates, even if the team composition changes.

To shape the collaboration in practice, there are three types of **consultation and collaboration groups**: policy and vision development is carried out by the ICT policy team, forms of fast and efficient coordination are set up as part of the daily services of the technical ICT coordinators, and teachers are involved in various ways in connection with pedagogical tasks. Within each of these types, there is a link between the school group/community level and school level for optimal implementation of ICT coordination.

Finally, it should be emphasised that team-oriented ICT coordination cannot be assured without an underlying **pedagogical vision** and an associated **ICT policy plan**. After all, all tasks related to ICT coordination serve to implement that plan and vision. That is the shared long-term goal of the whole team, the mobilising ‘why’ to which everyone contributes.

Chapter 3: Guidelines for more team-oriented ICT coordination in schools (concept)

This final chapter introduces the draft guidelines for more team-oriented ICT coordination.

These draft guidelines are conceived as a practical step-by-step plan for schools that want to make the transition to team-oriented ICT operations. **We focus primarily on the target group of school leaders in compulsory education and their ICT coordinators** . However, adult education centres that want to strengthen their ICT teamwork can also draw inspiration from these guidelines.

The guidelines are based on the job profile for ICT coordinators (including the ICT coordination task list) and the new model of team-oriented ICT coordination described in earlier reports.

The complete step-by-step plan is shown schematically in the flow chart in Appendix 2. The ICT coordination task list (Appendix 1) should also be included so that the step-by-step plan can be properly interpreted.

A more detailed step-by-step description is given below.

1. Check: are you aware that the transition to a team-oriented ICT operation is a **growth process**, and are you prepared to make available the time to do this?
    - Yes: go to 2.
    - No:
        - School leader include it as a potential strategic project that must be addressed.
        - ICT coordinator: priorities must be set given the limited amount of ICT hours available. Focus on the core technical tasks, which are the tasks required to keep the ICT infrastructure running.

2. Is there an underlying **pedagogical vision**?
    - Yes: go to 3.
    - No
        - School leader: a clear pedagogical vision makes it clear that ICT is only a means to an end, not an end in itself. Moreover, the process of developing/defining such a vision is necessary to get everyone on the same page. Prioritise this in collaboration with the school group/community.
            - For support, you can contact your pedagogical counselling service or independent consultants.
        - ICT coordinator: focus on the core technical tasks, which are the tasks required to keep the ICT infrastructure running.

3. Is there an **ICT policy plan**?
    - Yes: go to 4
    - No
        - Management: all tasks related to ICT coordination serve to implement that plan. This is the shared long-term goal of the entire team, to which everyone contributes. Prioritise this in collaboration with the school group/community.

        - For support, you can contact your pedagogical counselling service or independent consultants. You will soon be able to use the 'policy planner' of the Digisprong Knowledge Centre.
    - ICT coordinator: focus on the core technical tasks and policy tasks. The ICT coordinator's role is significant when drawing up of a technical and pedagogical-didactical vision jointly with the director and school team.

4. The **ICT resources** that a school receives are usually not sufficient to handle all ICT coordination tasks. Check the available resources. As a school, you can use additional BPT hours or other hours. Another important question: is there a willingness to cooperate/pool resources for ICT coordination at the school group/community level?
    - Yes: the leading role is taken on by the school group/community.
    - No: you take on the leading role.

5. Check '**ICT coordination task list**'
    - If the leading role is the **school group/community**
        - To what extent do all tasks apply to the school/schools in the school group/community based on the ICT policy plan?
          Change as needed in order to obtain a customised task list.
        - For which tasks can economies of scale (financial/efficiency) be achieved by carrying them out for all schools at the level of the school group/community (e.g. writing requests for quotes and specifications, application management, etc.)?
        - Which tasks require specialised expertise and are thus better organised at the school group/community level (e.g. planning and structuring network and server infrastructure, organising and/or giving in-service ICT training, etc.)?
        - Which tasks can best be taken up in the schools because it must be possible to meet specific needs quickly and effectively (e.g. help desk, first-line help with basic skills, supporting teachers with ICT integration in the classroom, etc.)?
    - If the leading role is the **school**
        - To what extent do all tasks apply to the school based on the ICT policy plan? Change as needed in order to obtain a customised task list.
        - Which tasks are essential in the short term? Which tasks can be spread out over the long term? Which tasks can be dropped without jeopardising the priorities of the ICT policy plan?
        - For which tasks is cooperation within the school group/community appropriate? Provide feedback on this to the general or coordinating director.

6. Find out who – besides the current ICT coordinator(s) – has the necessary **motivation and expertise** to carry out the tasks. Is the expertise available within the school/schools?
    - Yes: go to 7
    - No: consider how the gaps can be filled the best.
        i. The tasks are strategically important (technical, administrative, or pedagogical) and require sufficient technical competencies in combination with other skills (pedagogical, administrative, or policy): recruitment.
           Use the 'ICT coordination task list' to draw up a specific job vacancy.

ii. The tasks that are not strategically important to the school and/or require only technical skills: consider outsourcing these tasks to an external company.

7. Towards **team-oriented ICT coordination**
    - School leader: assemble the relevant people in an ICT team.
    - Use the 'ICT coordination task list' to divide the tasks in consultation and based on motivation and expertise.
    - Recognise this motivation and expertise by utilising the necessary hours/resources.
    - Create clear mandates: clarity about who may make which decisions, who will implement the ICT tasks, and who will direct and follow up on everything, and who is appointed as the lead and point of contact.
    - Agree on knowledge sharing, backup, and documenting the work.
    - Agree on the organisation and method of cooperation tailored to your specific context. Set up three types of groups for consultation and cooperation:
        - ICT policy team (management – technical ICT coordinator(s) – pedagogic ICT coordinator(s)): policy and vision.
        - Fast and efficient coordination between technical ICT coordinators in terms of providing daily services.
        - Sounding board for teachers about pedagogical tasks.

      Within each of the three types of group, provide a link between the school and school group/community levels.
    - Regularly evaluate the ICT teamwork
        - Check whether the collaboration is running smoothly
        - Check whether the composition of the team and the division of tasks should be adjusted
    - It is going smoothly: great, team-oriented ICT coordination is a fact!
    - It is going poorly: call in a process supervisor.
      For support on process supervision and change management, you can contact your pedagogical counselling service or independent consultants.

Appendixes

Appendix 1: Tasks of the ICT coordination

See Excel "Tasks Overview ICT Coordination".

Appendix 2: Flowchart guidelines for team ICT coordination