

# Information practices in coopetition context: the case of a large video game company

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## Abstract

**Introduction.** *Studies on the information practices in a cooperative context are rare. Yet, issues of access, sharing or retention of information are crucial. This study investigates how professionals in a global digital entertainment company define their information source horizon and the factors that influence them.*

**Methods.** *Using Savolainen's information horizon methodology, we conducted an exploratory study based on interviews organised at the Montreal studio during which our 29 participants had to place their sources of information on mind maps.*

**Analysis.** *Quantitative data was collected and analysed on participants' preferences for information sources. We also employed grounded theory techniques to review our interview transcripts using NVivo software.*

**Results.** *We propose a new categorisation of sources and confirm the typology of Savolainen's criteria. The results revealed that coopetition and technological contexts shaped information practices of gameworkers.*

**Conclusions.** *The results of our study on the informational practices of gameworkers could find application in strategic information and knowledge management.*

**Keywords:** *information horizon, organisational culture, coopetition*

## Introduction

At the heart of a highly competitive globalised market video game companies are confronted with constantly renewed issues of information and knowledge management. In this context, work has emerged to understand the creation and innovation practices of the actors in these companies. However, it is difficult to understand game production practices without reference to the social and situated context in which games are created and developed (Whitson, 2020). In this article, we focus on a particular aspect of this production environment, that of cooptation, where competition and cooperation exist between firms and between units that are part of the same organisation (Chiambaretto, et al., 2019). It has emerged as an interesting paradigm for understanding corporate innovation strategies. This can lead to tensions between information retention strategies and those of sharing between firms (Fernandez and Chiambaretto, 2018).

Among the major video game publishers in the world, Ubisoft has more than 20,000 employees across 31 countries (Ubisoft, 2021). Interdisciplinary collaboration, multiculturalism and knowledge silos are all critical issues for this leading company in the entertainment industry. Despite this openly multinational organisation and corporate communication about remote collaboration as a pillar of work, competition between projects and studios remains strong. Ubisoft fights against compartmentalisation by silos thanks to the multiplication of projects created collaboratively by several studios. To date, the majority of games are now developed in multi-studio collaboration. To be able to optimise multi-studio collaboration, the teams had to share the same tools and the same deadlines in the delivery of the game elements. Collaboration can be perceived as inherent to the business for Ubisoft, and the culture of knowledge sharing is therefore essential to team performance. Ubisoft tries to promote access to expertise and its transfer as well as the improvement of individual and collective ways of working. Thus, workshops intended to promote collaboration have been organised, where nearly a hundred people took part in (Ubisoft, 2016). In production specifically, a major part of the management has been trained in multi-studio collaboration. The company even prides itself on having '*10 years of experience in the culture of inter-studio collaboration*' in the latest financial annual report (Ubisoft, 2021).

To enforce this global movement, many communications and sharing tools have been deployed, such as intranets or internal directory. These traditional systems are supplemented by collaborative knowledge management platforms such as SharePoint (<https://www.microsoft.com/fr-ww/microsoft-365/sharepoint/collaboration>) or the internal social network, launched in 2011. With its successful brands such as Rabbids, Rainbow Six and Assassin's Creed, Ubisoft stands out from the competition by its desire to control in-house the creation process of its products, from the idea to the final product. Enhancing a collaborative mindset and digital workspace among its talents is all the more critical, especially because collaboration is inherent to the activity. This strategy is confronted with strict rules of confidentiality which rather encourage a strong compartmentalisation of information. They hamper employee collaboration and knowledge sharing. The international and multilingual dimensions of the company are also additional factors in the compartmentalisation of information.

The objective of this article is to clarify certain existing tensions in the policies of cooptation between openness and control of information by focusing on the informational practices of gameworkers. In order to do so, we distinguish two groups of users: those who are in production and those who come in support of the production teams, also called *non-prod* (for non-production).

We ask the following questions: 1) How do video gameworkers access the information they need on a daily basis? 2) What sources do they use? 3) What criteria do they apply to select a source?

We used the information horizon methodology to organise interviews where participants had to place their information sources on a mind map in three concentric zones of decreasing importance. This theoretical and methodological approach has initially been developed by Sonnenwald (1999; 2005) and taken up by Savolainen (2007; 2008).

## Literature review

Recently, authors have studied the informational practices of architects, artists, musicians or designers but also video game players. However, there are few in information sciences on global video games companies, and the information practices of their employees.

There is a diversity of professions in the field of video games ranging from management, technology, design and image, to support. It also relates to the difficulty to pick one term that would truthfully describe all the participants of our study. That is why we chose the term *gameworker* to include anyone working as part of a video game company (Deuze, et al., 2007).

Miller (2014) examines the information needs of a group of 11 undergraduate video game design students at an academic institution. He shows the importance of technical information related to specific computer programs as well as the need for inspiration and visual references. These students rely heavily on the web and social resources to get this information. Makri, et al. (2019) offer an ideation-focused framework from their information-based ideation (IBI), which systems designers can leverage to reason about how best to support certain behaviours to drive motivation and design ideation. For his part, Karch (2020) presents a case study on the 10 participants including four freelance professional game designers. The most common information need expressed by participants was related to marketing and business. Next comes the need to have information to improve their programming skills. The two most common sources are human contacts and Internet resources (e.g., Google). Harviainen et al. (2022) studied information sharing practices by members of the Finnish game design community. Sezgin (2018) shows that in the Turkish case, employees and young managers tend to share information while companies are reluctant to this practice. Kultima reviews Sotamaa and Švelch's book *Game production studies* (2021) and notes that they covered a huge range of essential topics related to game production. In her critic of the book, she also warns that any lessons learned during the previous decades about the video game industry have to be cautiously kept in mind because '*time is critical in studying games*' and '*something drastic and sudden as a pandemic can outdate the findings in an accelerated manner*' (para. 5).

In our previous work, the use of folksonomies as a knowledge management tool implemented and managed by information specialists was of particular interest to us at the scale of Ubisoft worldwide (du Hommet, et al., 2015). The analysis of the social construction of the knowledge qualified by the group folksonomy ultimately allowed us to study the interactions between individual and collective knowledge. Historically, Jo, D. (2020) showed how the reproduction and distribution of video game machines as well as the building of information networks in the Cheonggyecheon market contributed in the 1970s to the emergence of the Korean video game industry.

### Information horizon methodology

In 1999, Sonnenwald hypothesises that, given a context and a situation, there is an *informational horizon* within which we can act (Sonnenwald, 1999; Savolainen, 2007). Savolainen quotes Sonnenwald whom considers that colleagues, documents, libraries and web pages are all elements of an informational horizon (Savolainen, 2007). Taking the method further, Savolainen, et al. (2001) developed the idea that respondents can place information sources on a map in order of preference. In 2008, Savolainen used this theoretical framework to study the informational practices of ecological activists and unemployed people. Including the work of Savolainen (2007; 2008) and Tsai (2012a; 2012b), studies of everyday information seeking have focused on activity groups such as students, artists, unemployed and environmental activists. We seek to pursue this body of work in a professional context by analysing the information practices of employees of the Montreal studio of Ubisoft, the biggest location of this organisation specializing in video games and digital entertainment.

From November to December 2016, we interviewed 29 employees from the studio. 24 of the participants were French-speaking, and five interviews were conducted in English. We went to meet them for sessions ranging from 20 minutes to an hour, organised during their working time. Of the 29 people questioned, men represent 72.4% and women 27.6%, which is slightly higher than the rest of the company (23.5% in 2021). Our participants have between one month and 12.5 years of seniority at

Ubisoft. The average is eight years and three months, which seems unrepresentative of the reality since in comparison, the average seniority within Ubisoft is 5.2 years.

19 of the 29 participants are attached to the production of video games, which represents 65% of our sample but differs from the rest of the company where 84% is dedicated to it. Among these 19 participants who come from production, we find the following families of trades and professions: gameplay programming, gameplay team lead, generalist or online programmer, tools and automation lead. Business teams do not work directly on the production of video games. Their activities support the work of the production teams with whom they work in close collaboration. Among our ten participants, here are some job titles examples: internal community manager, content specialist, project management controller (finances), product ergonomist for support team, research moderator (user research).

Following the example of the work of Savolainen (2008) and Tsai (2012a; 2012b), we used mind maps to illustrate the informational horizon of the participants. Three concentric circles are drawn around a character that symbolises the participant. Each circle represents an area where the participant is invited to position their sources of information in order of importance: the closest, the more important the source is. Figure 1 below illustrates the use of the card by one of the participants.

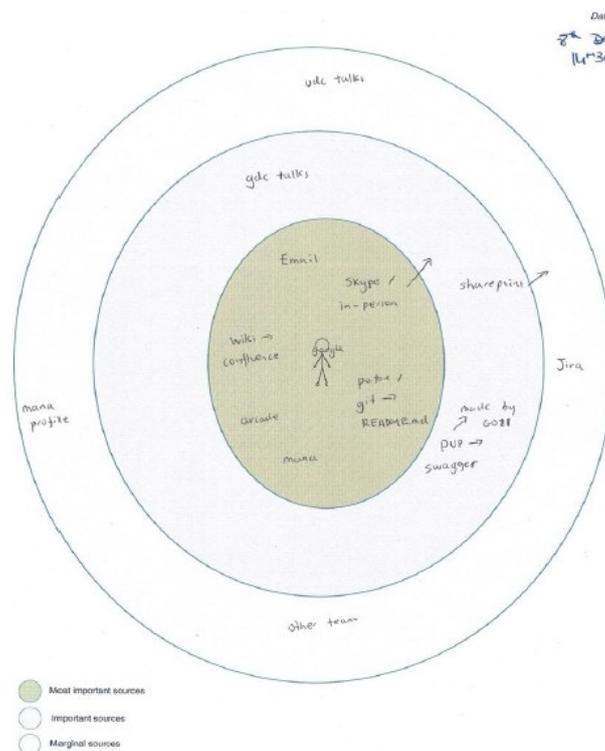


Figure 1: Model of the information behaviour of a participant

The maps were filled in by the participants during semi-structured interviews. These interviews allowed us to examine all the mechanisms that lead participants to use the sources they cite.

Replicating Tsai's experience, the critical incident technique was used to identify the various information-seeking situations encountered by the participants. To illustrate our expectations, we guided the participants by offering to describe how the day begins when arriving at work. The participants could then jump into description of the tasks and the reasons leading them to follow their informational rituals.

The maps have been analysed by calculating the weight of a source. Zone 1, the most important one, was rated 3, the middle zone 2. and the last one 1. The interviews have been recorded and transcribed later. Then, the verbatim have been coded using the NVivo software. It helped us to go through our material (more than 300 pages) and easily identify recurring concepts in the verbatim.

## Results of the study

Based on the analysis, we have identified six main reasons that led gameworkers to seek information. The first one is tied to finding information about someone (their profile, competencies, current position and project, quality of their work). The second one is relative to the code (bugs and programming errors, files, software and API, libraries, frameworks, comments to know more about the original intention). The third one regroups anything related to project management (projects milestones, finding who works on the project, methodologies, information about past projects, projects of others teams, expenses, etc). Then comes the fourth reason: knowing about design (design documentation, game features, textures, feature sign-off, etc.). The fifth reason regroups anything related to technological and industry watch to find inspirations. And finally, HR motivation to know more about career guidance, HR management, job opportunities, employees' holidays or HR policies.

At the end of the 29 interviews, we identified a total of 193 different sources proposed by users. Since some of them were referred to several times, the total number of mentions of sources amounted to 454 (224 in zone 1, 147 in zone 2, 83 in zone 3).

The heterogeneity of participant profiles leads to a large number of sources. We obtained an average of 16 sources per participant, with a minimum of 3 sources and a maximum of 29.

For analysis purpose, we started by regrouping the sources according to the categories proposed by Savolainen (2008). We also ranked the sources according to their average location on the maps.

The distribution of the sources in the Savolainen's categories are displayed in the Table 1 below.

Table 1: Types of sources according to Savolainen

<b>Sources</b>	<b>Average score</b>	<b>Total score (3A+2B+1C)</b>	<b>Total sources (%)</b>	<b>Zone 1 (n=224)</b>	<b>Zone 2 (n= 147)</b>	<b>Zone 3 (n= 83)</b>
<b>Printed sources</b>	2,33	14	6 (1,32%)	3	2	1
<b>Human sources</b>	2,55	217	85 (18,72%)	57	18	10
<b>Other sources</b>	2,5	317	127 (27,97%)	78	34	15
<b>Networked sources</b>	2,16	389	180 (39,65%)	76	57	47
<b>Organisational sources</b>	2	112	56 (12,35%)	10	36	10

We found that the categories proposed by Savolainen do not allow for a detailed analysis in the context and related informational practices of our study. It can mainly be illustrated by the massive number of sources classified in the *networked sources* category (76 in zone 1, 57 in zone 2 and 47 in zone 3) while the *printed sources* one weighs only 6.

We estimate that the average scores are very close one another and do not provide a clear view of the actual information horizon of our participants. We also reckon that the professional context of our study and the importance of online collaborative platforms in the company impact the observation.

Table 2: Comparison of the type of sources

<b>Sources</b>	<b>Production</b>		<b>Non-Production</b>	
	<b>Average score</b>	<b>Occurrence (% of the total)</b>	<b>Average score</b>	<b>Occurrence (% of the total)</b>
<b>Printed sources</b>	2	3 (0,66%)	2,75	3 (0,66%)
<b>Human sources</b>	2,37	66 (14,54%)	2,83	19 (4,19%)
<b>Other sources</b>	2,37	97 (21,37%)	2,34	30 (6,61%)
<b>Networked sources</b>	2,17	115 (25,33%)	2,09	65 (14,32%)
<b>Organisational sources</b>	1,75	36 (7,93%)	2,3	20 (4,4%)

We proceeded by comparing the results between the participants working in production (19 persons) to those *not working in production* (also called *non-prod*). We notice some significant differences between the two groups (see Table 2).

At this stage of our analysis, if we rely solely on the Savolainen's categories, we could not identify which type of source is more important than the others. That is why we propose a new information sources categorisation (see Table 3) and apply the same distinction between the score.

Table 3: Proposition of a new categorisation of informational sources

<b>Typology</b>	<b>Average score</b>		
	<b>Both groups</b>	<b>Production</b>	<b>Non-Production</b>
Meetings Occasional, regular, SCRUM ceremonies, spontaneous	2,36	2,27	2,66
Human sources Colleagues among the project, same team, team lead, HR, previous teacher, husband, ...	2,54	2,45	2,78
Development platforms GitLab; Hubble, software editors, Anvil, Perforce_CL history, ReSharper; Stack Exchange	2,51	2,51	2,5
Communication tools Instant messaging tools like Skype or Slack, emails, newsletters	2,64	2,78	2,43
Collaboratives platforms Slack, Skype groups, Internal wikis, Microsoft OneNote, SharePoint, Confluence, internal social network	2,27	2,28	2,24
Specialized medias / Internet Books (about user research), Kotaku, Gamasutra, Google Translate	2,23	2,15	2,35
Events Internals (Ubisoft Developers Conference) or externals (Game Developers Conference, USA)	1,89	1,71	2,5
Organisational sources Intranets, portal, corporate search engine, showcase sites	1,89	1,81	2,03
Internal training E-learning portal, classroom training	1,80	1,57	1,67

Some Savolainen's categories are kept but their definition has been adjusted to the context. The remaining categories have been dispatched in all the categories. For example, we have dispatched some printed sources in specialised medias/Internet.

When we compare the distribution of sources for production or non-production, we note that the hierarchy is not the same. For example, the most important categories in production are:

1. Communication platforms
2. Development platforms
3. Human sources

But for non-production, it is sorted as following:

1. Human sources
2. Meetings
3. Development platforms

In both groups, human sources (both directly or indirectly, for example, the means to discuss with one another online and to reach to other people), are the main information sources for our participants. But the prevalence differs from one group to another. Also, we are surprised to find the development platforms in third place, like for the production participants.

These observations come with two unexpected realisations. Development platforms are very important for both groups, even if the non-production people, by definition do not participate in the game programming. And both groups do not rely on organisational sources (meaning the tools, the sites and other corporate content) to do their job or be better at it.

We consider this new information source classification as a first step in the analysis of the informational horizon of gameworkers in the videogame industry. It could be used as a tool, a matrix to compare gameworkers practices and the various companies that compose this vibrant industry. In a further step, it needs to be validated in other context to ensure its relevance and also help (or not) to distinguish the specifications of gameworkers environment.

### Sources selection

Participants apply many criteria to select their information sources. Still following Savolainen's methodology (2008), we used the same categories to regroup the criteria we identified during the axial coding of the interviews verbatim.

Table 4. Selection criteria

<i>Criteria typology</i>	<i>References</i>	<i>Examples given of codes from the verbatim</i>
Situational factors of information seeking	273	(self) censorship, need, recipient of the documentation, difficulty (and difficulty/lack thereof), time difference, lack of time, naming, "poking" the people, organisational silos, validation...
Content of information	87	Basics (information), sharing criteria, criteria to pick his/her source, who writes the documentation, reusability, dissemination of information...
Availability and accessibility of information	55	Accessibility of information, availability of information...
User characteristics	41	Autonomy, expertise, habit, language, passionate about his/her job, routine...
Usability of information sources and channels	14	Confidentiality, utility...

The unavailability and inaccessibility of information can therefore be material but above all, human. The availability of resource persons also varies depending on the stage in which their project is at a given time. Exchanges will be easier in the prototyping or even production phase than when the project is coming to an end.

Another criterion is related to physical proximity. Some gameworkers implicitly consider that for the accomplishment of their task, their informational horizon takes shape around their location.

Finally, when a gameworker accesses a third-party space, it is not easily possible for him to determine what is up to date and what is not. The difficulty of access up to date documentation on code, raw material for Ubisoft, is key in information access strategies. Although imperfect, the *versioning* functionality, offered by many collaborative tools, seems to be very little used.

### **Information tensions in cooperation context**

In any given knowledge organisation, sharing practices naturally occurs, and we saw that they were officially encouraged. But these practices and ambition inevitably come with competition and strategies. These phenomena have surfaced during the analysis part of our study, though these information tensions were not part of our initial quest. At first, we implicitly considered that sharing practices were obvious and somehow unified across the organisation, but even if sharing is publicly considered as a positive activity, intricate barriers limit those practices at an individual or projects levels (Bez, et al., 2016). Any given environment where competition is induced will see strategies, whether they may be conscious or not, to help jugulate or bypass the injunction to share knowledge. The video gaming industry is not exempt of this ascertainment, and the innovation and productivity race are at the roots of this cooperation context.

Reviewing our interview transcripts allowed to realise this and gather some evidence to it, though we did not dig into that subject yet. The results revealed indeed that cooperation and technological contexts shaped information practices of gameworkers. The analysis of the criteria gathered via the coding of the material refers to all our participants, from both production and non-production teams.

Among the obstacles to high quality information listed by our participants, we chose to highlight the following:

- Reuse of game content
- Difficulty to find the right person
- Language barrier
- Resistance to change
- Organisational silos
- Bad reputation of social networks
- Temporality
- Difference in priorities between production and non-production teams

### **Reuse of game content**

For any game with a launch date, it is key to optimise the production period and reduce the production costs. One way to be more efficient is to reuse some content or assets, from one project to another (e.g., door, tree, characters, clothing, etc).

Ubisoft gameworkers seem inclined to reuse content, if we are to believe the comments made by P12, who himself relies on opinions from fellow veterans.

*P12 'You're probably very aware that with every project, people start again, they make, they build everything anew. Or they use legacy software most of the time. So, our project mandate is to reuse as much as we can from other existing projects [...].'*

The notion of *reuse* was discussed with 9 participants. Among the obstacles to the reuse of knowledge and assets of a game, there are the delays in which they may be available. P10 is particularly confronted with this challenge since she works on a daily basis to make content available to

production teams through the creation of dedicated sharing tools. P10 is not in production: her team is considered more as support or more largely *non-prod*. In addition, after a certain amount of time, the assets are no longer usable due to changing needs, formats and technologies.

The company therefore invests time and money in the preservation of unusable elements while the needs of the teams are not met. The P10 team has therefore contributed to the implementation of an asset sharing flow that reduces the time it takes to make (re)usable assets available in a game. This way, the production teams thus free up time and energy to devote to new elements contributing to innovation in new productions.

### **Difficulty to find the right person (at the right time)**

If human sources are the first relay of the information to which our participants refer to (according to the sources analysis), they nevertheless experience difficulties in identifying the right person to contact. Ubisoft gameworkers face several difficulties in identifying the right person:

- Know who to contact first and not waste too much time looking for that contact
- Being able to physically locate this contact
- Being able to evaluate the quality of the information received, and figure out which answer to use among the information provided by these contacts

For new employees who have a restricted network, this is an increased difficulty, as testified by participant 24:

*P24 'So, when I started, I was sort of introduced people but I was sort in a corner. Like, a temporary desk, so, actually going and talking to people is kinda hard. And, again, they're in crunch time, they're busy, they don't really want to see people. So, a lot of it was, "hey where's it?" and then maybe like an hour or a day later, they'll come back with an answer for you. So, for me, like, it was sort of unacceptable. If I want to get things done now, I try to look for sources myself [...].'*

In a production context, meetings are a major source of information, and are very frequent. The need to circulate information is paramount, and inviting the right people becomes a key issue that is probably impossible to achieve and maintain over time.

### **Language barrier**

To be able to identify the right people, we observed that the gameworkers of Ubisoft Montreal also call on their personal knowledge and not only their close colleagues. They show a lot of ingenuity for this. This practice transcends the seniority of the participants, junior or senior, with or without video game experience.

However, Montreal is a predominantly French-speaking city, and Ubisoft a French company. The language barrier occurs at a time when the English-speaking and non-French-speaking workers of the company accumulate obstacles to access to information: newly arrived in a company where they have not yet established contacts.

*P24 'Local communities... no, not really. The people I talk to are friends of others people that I talked to before. I'm hoping to slowly build on that network of people that I know. But yeah, for me, it's... just... I just moved to the city. I come from a town that slightly away from Toronto. And particularly not knowing French.'*

The importance of the language of communication takes another turn when it comes to collaborating remotely with teams located in other countries.

French-English bilingualism is not the only language barrier our participants face. Speaking the video game vocabulary also goes hand in hand with learning Ubisoft jargon.

## Resistance to change

Collaboration in the organisation is encouraged by official messages from senior management based in France. For example, P8 explains to us that emails to the attention of all employees are sent on behalf of the CEO, and which place sharing and collaboration as key elements of collaboration.

A process has been put in place to allow the sharing of content and information at a fixed time during the life of the project. Once a project validates a key stage called first playable publishable (FPP in the jargon) by following the stage gate process then in theory, the content can be shared with other teams.

But this practice is far from being known by all, even less put in practice.

*P8 'I have a perfect example, this was \*\*\* [anonymized project name] passed their FPP and everything, so they're on their full steam ahead and make a new game. And recorded, I recorded one of the... an AI thing. And I recorded it in June [2016]. And the article on it was only released on it was released only a couple of weeks ago [Fall 2016] because of all the blockings of it.*

*They did not want us to share. They didn't want that information to be shown at a conference cause it was at Montreal, but like I said, it was something that could be used globally. We had like to send emails after emails and asking and telling the law, the Ubisoft laws says once you passed the FPP it's open to all productions. Like this information is not secret anymore. So, see, and that's, in that example, that's all difficulties there in getting that information so they don't want.'*

P8 is the only one that talked about this official policy for sharing content. It is another illustration of the difficulty to reuse game content and how barriers to information sharing are intertwined.

## Organisational silos

The organisation of projects put in place by the company hinders the sharing of knowledge and the reuse of content mainly because of corporate finances. As a matter of fact, some projects put forward the argument that since they have *paid* for their content, i.e., it has been billed from the game's budget, then they do not want to share this content because it would be to their detriment. The *free* reuse of content by others would be to the detriment of those who created it.

The resistance to knowledge sharing, which effectively partitions the information horizons of Ubisoft players, is circumvented on a daily basis by the huge motivation of the organisation's talents. If contact between individuals is the main source of information, this is also due to the need to circumvent organisational silos.

P2 also tells us '*I know very few people who are on the other projects, with whom I have worked and with whom I will be able to share things, so here it is*'. The limitation of the network to the project therefore proves to be an additional obstacle for the employees because the development of their network depends, among other things, on the experience and time spent on a project.

## Bad reputation of social networks

The responsibility for adopting the sharing and collaboration tools implemented internally cannot rest solely with the organisation or the hierarchy. One of the difficulties in information accessibility lies within the societal context in which the organisation operates. The company now has some perspective on social networks and all these tools also regrouped under the name Web 2.0 and how it could benefit its employees.

With the massive use of social networks, companies relies for the deployment of the system on the same level of adoption in a professional context than in the private life (Mettler, 2016). But meanwhile, employees are citizens who have their own private, sometimes very strong, opinions on them.

**P3** *'Mana is a kind of Facebook, so already I can't stand Facebook, so it's that kind of stuff. But Mana is news that can be scrolled, I should watch Mana. So if I watch Mana, it would be once a day, forcing myself.'*

Even if the group's internal communication focuses on the expected benefits of an internal social network, the perception of some Ubisoft gameworkers remains unchanged and tinged with prejudices on mainstream social networks.

### **Temporality**

One of the key elements that emerges from the interviews is the important impact of deadlines and other times associated with tasks on the information seeking strategy. P11 testifies:

**P11** *'Lot of things are growing really fast. We are, it's a new problem, new fields, our expectations, what we deliver, our products, are still new. And we still develop, and in the same time there's a lot of people asking for help, which is good, but then, they have some expectations and we need to deliver to them and like, we need to, I feel like we need to catch up all the time. But it's ok. [Laughs].'*

Gameworkers in production suffer particularly from these short spans of time, and the quantified examples some of our participants gave us to illustrate their reaction delay may seem disproportionate in a more traditional professional context.

**P1** *'I'm going to get up, go see the person, and look at their code (inaudible) so we save a lot of time, because we find oh it takes **12 seconds**, I'm going to do it right away rather than going through the process from creating a task, to being approved, and then... **it's two minutes versus two days**, for me I think it's a return on investment.'*

**P2** *'But the stuff where I'm stuck on a day-to-day basis, for sure, I'm going to go through Skype or **live** [...] Nah because when I'm in a stuck situation, I don't want to stay stuck. But it's certain that when I'm at the end of the project and I'm there, I might not get up **if I see that the guy doesn't answer me within 10 seconds**. And then I'll see if it's just because he's talking to someone, well I'll wait but I'll go fishing a lot more quickly.'*

The support and business teams, as known as the *non-prod* teams, are mostly responsible for supporting the production teams according to their area of expertise. Despite their intensive work pace, this does not correspond to the pace of the production teams, which is much faster.

### **Difference in priorities between production and non-production teams**

Support and business teams need production teams to stay informed but also to be able to carry out their own mandate properly: either promotion of a project, internal communication, KM, user research, etc. It turns out that the production teams prioritise their activity according to their own objectives: to ship a game. This objective is both important, since it is their *raison d'être*, but also urgent. After all, the launch date of their game, therefore the income of the company, depends on their velocity. Responding to requests from cross-functional teams is important from a strategic point of view, but not for the production workers whose daily job is to deliver the game's features and keep the game project in the right track to respect the delays.

The gap between prod and non-prod accentuates the barriers that hinder access to information such as confidentiality or the lack of documentation. P29 explains this state of affairs but also maintains that, aware of this obstacle, she no longer does research on internal tools because of the lack of results:

**P29** *'After looking for info when you try on Arcade or Mana, well, it's not... To have information on precisely the different products, or the prods, at what gate are they, details, that's... there's not a lot lot [intentional double term] of information. Worse, I admit that I hadn't had the reflex to go and look for it.'*

According to our observations, a lot of energy on the part of the *non-prod* teams is spent going to the production teams in order to stay informed, collect needs or follow-up on joint projects and communicate. Though it needs to be further studied, it could be the reason why all sources cited by

non-prod people are located on the most important zones (scored from 2 to 3) to the participant on their information horizon maps.

## **Conclusion**

As a creative and technological company, Ubisoft faces the dilemma between traditional project management and encouraging innovation through collaboration within its teams. In a world where there are many restrictions on access to sensitive information, projects usually managed by location and employees faced with multiple silos, the issue is strategic. To release on time the products on which the future of the company depends, the organisation had to adapt: this results in the implementation of new processes and tools for sharing information for the multiple internal teams. Microblogging platforms, video sharing, local or group intranets, directory and collaborative content management platform, sharing tools have multiplied while direct communication tools (e.g., instant messaging, e-mail, etc.) have been acclaimed by employees. Through the deployment of a corporate social network and its reflection on the digital workplace, the KM team works to improve the work environment of employees by providing tools that most are familiar with. The official strategy that encourages knowledge sharing is balanced by the information tensions lived by the gameworkers who have to regularly overcome barriers to information accessibility, whether it may be on an individual or project level.

Our study has shown the different needs for information, the sources used and the obstacles to accessing this information. In the future, we need to focus on strategies for hiding and sharing information by considering the diversity of the professions and performing in-depth analysis of the criteria and the needs that drive the gameworkers in their daily life. Our work should be continued by trying to apply prod/non-prod distinction to the rest of our material to extract new findings and challenge our first observations. We could also go further by studying the information horizon of gameworkers in a smaller context, more dependent on the multi-studio collaboration though still in Ubisoft context to keep things comparable. Information tensions should also be further studied as they should be reflected in the knowledge management strategy. It makes us wonder how the barriers are tackled by the organisation to help innovation thrive in this competition context.

Though it allowed to achieve another year of records sale, the Covid-19 pandemic had a major impact on the video game industry production.

Going a step further than the information behaviour in the video games studies, the production practices analysis would allow us to study what has been impacted in information access and sharing practices. And the new world that arises with the Covid-19 pandemic adds another level of pressure to this necessity.

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