

# “A Train We Can’t Miss” for Economic Recovery: The Sociotechnical Imaginary of Artificial Intelligence in the Walloon Region

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## Abstract

The Walloon Region adopted its own AI strategy in 2019, called DigitalWallonia.4ai. This paper analyses it and explores the coproduction (Jasanoff, 2004) of AI adoption and of Wallonia’s future by means of Jasanoff and Kim’s (2009) concept of sociotechnical imaginary. Given its industrial history, the Walloon Region is an interesting case to analyse the interplay of cultural traits, artefacts, and imaginaries, which has been scarcely explored in the interpretive literature on AI. Studying this Region also contributes to the broadening of the scope of research on sociotechnical imaginaries. A document analysis was conducted, along with interviews of prominent AI promoters. The data were interpreted through discourse analysis, and tropes were used as heuristics to reconstruct the desirable future at the heart of the imaginary. The results show that the latter is entrepreneurial and deeply embedded (Jasanoff, 2015b) with the Region’s economic history and connected with transnational, continental, and national imaginaries.

**Keywords:** Sociotechnical Imaginary, Coproduction, Identity, Trope, Wallonia

## Introduction

In 2019, the Walloon Region released its artificial intelligence (AI) strategy, called *DigitalWallonia.4ai*. Even though the government allocated initially €875,000 to the programme, nearly €2,000,000 was invested in total during the 2019-2021 period (Digital Wallonia, 2019a). In 2021, Willy Borsus, Wallonia’s Minister in charge of the digital economy, announced that *DigitalWallonia.4ai* would receive €20,000,000 for the next three years (de Bergeyck, 2021; Digital Wallonia, 2019a). This sharp increase in budget allocation reflects the importance AI promotion has gained in the Region. Wallonia

faced a brutal economic recession from World War II until the 1980s when its mines and metalworking industries were shut down or offshored. Rebuilding an active industrial base has thus been a major challenge for decades. The Region intends to take advantage of what it frames as the emergence of “Industry 4.0”, that is, the Fourth Industrial Revolution (Digital Wallonia, 2020; Service public de Wallonie, nd). The promotion of AI – in Wallonia as well as in other regions and countries – takes place in this perceived context of a fourth revolution (Bod-



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dington, 2023). This paper studies the imaginary underlying AI promotion in Wallonia.

Jasanoff and Kim (2009) launched a broad-based research programme centred on the analysis of sociotechnical imaginaries through cross-national comparison. Following this seminal publication, much research has been conducted at the national level, at the expense of research on sociotechnical imaginaries in fragmented and subnational contexts (Rudek, 2022: 231). This article intends to shed light on a regional imaginary, contributing to efforts to broaden the scope of research on sociotechnical imaginaries beyond the initial focus on nation states (Jasanoff, 2015a). It aims specifically at examining the embedding (Jasanoff, 2015b) of the Walloon AI imaginary in Walloon culture and artefacts. The embedding of such imaginaries in regional cultures, rather than nation-state cultures, has been scarcely explored in the interpretive literature (Cath et al., 2018; Kim, 2023; Köstler and Ossewaarde, 2022). This contribution unravels the imaginary's discursive entanglements with perceptions of Wallonia's past, and its material embedding within a sociotechnical network. Wallonia was an industrial powerhouse during the nineteenth and the early twentieth century. It built its economic prosperity on coal mines, textile manufacturing and metalworking industries. The region's economy collapsed after the Second World War and stagnated until the 1980s, as a result of the closure of mines, the ageing industrial infrastructure, the lack of investment in industrial processes, and the fierce international competition (Leboutte et al., 1998). As Wallonia's economy was on the decline, Belgium evolved into a federal state following the 1970 and particularly the 1980 state reforms that established the Regions. Nowadays, Wallonia is a post-industrial region with great control over territorial and economic matters, thus making it an interesting case when it comes to studying the imaginary of technologies such as AI.

This paper analyses AI adoption from a constructivist perspective, viewing it as an intrinsic and transformative aspect of Walloon identity. In other words, it attempts to find out the extent to which the promotion of AI coproduces (Jasanoff, 2004) the identity of the Walloon Region. This

question is of special interest given the performative effect that the imaginaries underlying AI promotion have on public expenses and on the empowerment of specific stakeholders. The promotion of AI in Wallonia and the ways in which this technology is envisioned as a key to a brighter future for the Region are discussed by means of document analysis and interviews, and through the lens of 'sociotechnical imaginaries' (Jasanoff and Kim, 2009). As part of this endeavour, great emphasis is put on the analysis of tropes related to the reconstruction of the desirable futures, an idea at the heart of this Walloon imaginary.

The next section provides an overview of seminal publications on imaginaries and collective identities, and a review of existing research on AI sociotechnical imaginaries. It is followed by a description of the methodology used in this study and an introduction to Wallonia's AI policy, *DigitalWallonia.4ai*. The main part of the paper then describes the nature and evolution of the Walloon AI imaginary, from its origin to its embedding (Jasanoff, 2015b), with an emphasis on the latter.

## Literature review

### *Imaginaries and identity in STS*

This section reviews the applications of the concept of 'sociotechnical imaginary' (Jasanoff and Kim, 2009) in publications dealing with the coproduction of technoscientific developments and identities<sup>1</sup> in AI imaginaries.

Jasanoff and Kim's foundational work on Korean and American nuclear power provided the first definition of sociotechnical imaginaries, i.e., "collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific scientific and/or technological projects" (Jasanoff and Kim, 2009: 120). While Jasanoff and Kim's initial definition revolved around national policies, several scholars have argued that sociotechnical imaginaries should encompass other types of collectives such as international organisations, multinational companies, or public protests (Sadowski and Bendor, 2018; Smith, 2009, among others). Therefore, Jasanoff (2015a: 4) redefined sociotechnical imaginaries as "collectively held, institutionally stabilised, and

publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology". This second definition is used here to account for the role of heterogeneous organisations involved in the construction of Wallonia's sociotechnical imaginary of AI. By coining the concept of sociotechnical imaginaries, Jasanoff and Kim (2009) initiated a research programme (Lakatos, 1976) led by STS scholars. Amid many contributions, Hilgartner's (2015) concept of 'sociotechnical vanguards' aimed at describing more accurately the origin of sociotechnical imaginaries. These vanguards are defined as "relatively small collectives that formulate and act intentionally to realise particular sociotechnical visions of the future that have yet to be accepted by wider collectives, such as the nation" (Hilgartner, 2015: 3). In this case, the concept of 'vanguard vision' is combined with Jasanoff and Kim's (2009) definition to describe the nature and the evolution of the AI imaginary.

### **AI imaginaries**

Although the existing research on AI imaginaries does not predominantly apply Jasanoff and Kim's (2009) concept of sociotechnical imaginaries, some scholars have studied AI policies from an interpretive perspective. This literature includes two strands, namely publications that analyse the way artistic productions envision AI and the ones that employ document analysis to explore the imaginaries associated with national AI strategies. The former are overlooked in this paper since they do not deal with the link between AI and community building, but rather tend to focus on ethical issues (e.g., Hermann, 2021).

Cath et al. (2018) compared three parliamentary reports on AI to unravel ways in which "good AI societies" are envisioned. The American report emphasises the need to ensure AI remains safe and fair while working for the "public good". The report issued by the European Union asserts that AI should preserve "intrinsically European and humanistic values" (European Parliament Committee on Legal Affairs cited by Cath. et al., 2018: 524). The British report urges AI developers to take ethical and legal stakes into account in the

future and calls for "socially beneficial" AI (House of Commons Science and Technology Committee cited by Cath et al: 524). Cath. et al. showed that even though the three reports suggest guidelines to deal with social and ethical issues in AI strategies, they do not propose any idea of what a "good AI society" could look like (Cath et al., 2018). They suggest filling this knowledge gap by using multi-stakeholder consultations and urge governments to address this question given the private sector's inability to do it.

Köstler and Ossewaarde (2022) reviewed policy and media documents in order to analyse the framings of AI in Germany. Their study revealed that the German government envisions AI as a competitiveness-enhancing technology necessary to protect the country's leading economic position in Europe and in the world. They observed the German government's tendency to emphasise the progress made by the USA and China in order to challenge all German AI stakeholders. Furthermore, Köstler and Ossewaarde (2022) indicated that AI promoters often display a specific vision of the country's past, which is based on its strong industries. Moreover, they stressed that the way Germany's past is envisioned prevents potential AI futures from being materialised since the capitalist history of the country is transposed to AI imaginaries.

Similarly, Ciuriak et al. (2020: 13) analysed the Chinese, European and American AI policies and highlighted the existence of an "adversarial" narrative that leads to contentious political and commercial relations at the global level. AI is indeed seen by each country as a powerful tool to increase economic competitiveness. Although China, the EU and the United States (US) have all embraced this "adversarial" narrative based on competitiveness, they have adopted different positions on the type of AI that should be favoured and the way it should be promoted. China views AI as an opportunity to become a global economic powerhouse by "build[ing] up an 'AI first mover advantage'" (Ciuriak et al., 2020: 8). The EU regrets its marginal position in the global AI landscape and seeks to achieve strategic autonomy in AI while stressing its ambition to develop a human-centric use of this technology. The US wants to protect private initiatives in AI development and

commercialisation against national regulations (Ciuriak et al., 2020).

Bareis and Katzenbach (2021) conducted a discourse analysis of national AI strategies in China, the US, France, and Germany. These strategies were conceptualised as sociotechnical imaginaries in order to shed light on the wider implications of the former on resource allocation and public policy. Their results overlap with some of Ciuriak et al.'s (2020) and Köstler and Ossewaarde's (2022) findings in so far as they indicate that the 'inevitability' narrative, which is pervasive in AI policies, comes from this emphasis on competitiveness, along with standard technological determinism. Interestingly, Bareis and Katzenbach's contribution conceptualises the interplay of global and national imaginaries. They state that the perceived inevitability of AI adoption leads to the belief that AI adoption is necessary to preserve national competitiveness. This belief engenders policy initiatives, which are always underpinned by national cultures and aspirations (Bareis and Katzenbach, 2021: 11). This perception of inevitability is created by the discursive inclusion of AI in the "historical legacy of technological progress" (Bareis and Katzenbach, 2021: 11) and by the framing of AI as a 'technological fix' for social problems (Katzenbach, 2021). Kim (2023) analysed the Korean and French national AI strategies using the sociotechnical imaginary framework as well. Like Bareis and Katzenbach (2021), he emphasised that there are substantial differences in the way AI is promoted in different countries. However, he also noted that Korea and France share a sense of urgency regarding AI adoption. According to Kim, both national AI strategies indeed incorporated an "AI essentialism" stemming from the digital industry. Nevertheless, the two IT imaginaries diverge as each state has its own history of successful and failed projects.

Paltieli (2021) studied the national AI strategies of eleven countries and two international organisations using discourse analysis. He argued that the imaginaries underlying these documents rely on national myths and reproduce the existing national narratives. Furthermore, he argued that such imaginaries are valuable since they show how citizens and states could profit from better data control.

All the publications reviewed in this paper used document analysis techniques to examine *the framing, narratives or imaginaries* of national AI strategies. Interestingly, they stress the existence of common emphases on technological determinism, competitiveness and "adversarial" discourse (Ciuriak et al., 2020: 13). However, they fall short in studying the material and cultural embedding (Jasanoff, 2015b) of those discourses, except for Köstler and Ossewaarde's paper, which stressed the salience of Germany's past in discourses promoting AI. Moreover, they are either publications that provide extensive accounts of single actors' discourse or contributions that focus on very few policymakers. This paper aims at going one step further by adopting a coproductionist perspective (Jasanoff, 2004) on AI promotion and regional identities. Therefore, it provides an original contribution to the field by presenting in-depth empirical research on the coproduction of an AI sociotechnical imaginary and Wallonia's identity through an analysis of multiple stakeholders' discourses, at the level of the region. It also includes an innovative analysis of tropes with a view to rebuilding a sociotechnical imaginary.

## **Methodology: Reconstructing a sociotechnical imaginary**

### ***Data collection***

Policy documents are often the primary sources for researchers working on sociotechnical imaginaries because they present the goals of public and private policies. Sadowski and Bendor (2019), for instance, analysed "as many documents as possible" from IBM and Cisco to study the concept of smart city as a sociotechnical imaginary (Sadowski and Bendor, 2019: 8). In a similar vein, this paper is based on the collection and analysis of all the public data sources that were likely to offer valuable insights into the sociotechnical imaginary of AI in Wallonia, including official documents and the website of Digital Wallonia, websites of the Walloon organisations that promote AI, and press articles. Appendix 1 specifically presents the websites that were analysed. The documents and press articles are listed in the bibliography.

In addition to document analysis, semi-structured interviews were conducted with representatives of organisations that promote AI in the Walloon Region between March and May 2022. Face-to-face interviews were preferred, but the covid-19 policy of the interviewees' organisations forbade it most of the time. The analysis of these interviews confirmed the hypotheses formulated after examining written sources, and guaranteed the triangulation of the results. In fact, the use of interviews in the context of sociotechnical imaginary research is well established. Rudek (2022: 230) showed for instance in his meta-analysis that interviews were used in forty-one percent of the forty-three papers dealing with sociotechnical imaginary in energy studies that he analysed. Fourteen semi-structured interviews were conducted. In addition to this selection, the snowball method was applied to ensure that no major player in AI promotion within Wallonia was forgotten. Fourteen interviews were sufficient to reach data saturation. Five interviewees were officials from the institutions steering DigitalWallonia.4ai (Agence du numérique, Agoria, Infopôle Cluster TIC and Réseau IA), and three others were managers of AI companies based in Wallonia. The remaining interviewees came from public institutions – including the Research Department of the Service public de Wallonie (Walloon Public Service), a public funding agency, and a "Pôle de compétitivité" (Competitiveness cluster), – as well as representatives of Walloon companies, of the research consortium Trusted AI Labs (TRAIL) and the Walloon Digital Affairs minister. Appendix 2 lists the interviewees' profiles.

### **Data analysis**

The essential features of the Walloon sociotechnical imaginary of AI were unraveled using discourse analysis. Tropes were analysed to identify the essential facets of the imaginary's desirable future. In this case, the tropes used to reconstruct the Walloon AI imaginary were identified inductively and manually in the research material, as they are pervasive in the stakeholders' AI adoption discourse. They serve as a powerful tool to grasp the essence of discursive productions (Angelo and Vormann, 2018; Jasanoff, 2015a: 27; Haraway, 1989;

Hermann, 2021) as they are travelling pieces of an imaginary, revealing the imaginary's desirable futures. Tropes are thus useful for understanding the future that AI actors envision for Wallonia when they promote this technology. First, they are helpful in identifying intertextual coherence (Kövecses, 2023) in discourses building the sociotechnical imaginary. Second, they enable the researcher to account for the historical context of salient discourse traits that may create and transform collective identities. They also transform the framing of public and private technological policies, as they are performative. Therefore, examining their form and circulation is highly relevant to the study of sociotechnical imaginaries.

## **Results**

### ***The sociotechnical imaginary of AI in Wallonia***

Even though sociotechnical imaginaries can arise from individual visions, they are only labelled as such when these visions are disseminated within a collective, thus becoming "communally accepted" (Jasanoff, 2015a: 4). In the case of AI in the Walloon Region, the imaginary originates from a combination of several factors, including a vanguard vision, multilevel pressure and Wallonia's master narrative of economic "recovery". It is a key aspect of the Region's digital policy and is unsurprisingly enshrined in the DigitalWallonia.4ai programme, which is dedicated for the support of AI adoption. The following sections present the origin of Wallonia's AI imaginary, the institutional architecture of AI promotion in Wallonia and the Region's AI strategy.

#### *The origin: When a technological vanguard meets multilevel agenda settings*

The adoption of an official regional AI policy and the emergence of a sociotechnical imaginary of AI in Wallonia stems from the creation of the Réseau IA (AI Network) in 2019 by Frédéric Peters and Christophe Montois. At the time both of them worked for Thelis, a Walloon company specialised in IT management. They felt that many companies were willing to include AI models in their processes or products but were unsure how to proceed in practice. This was confirmed by the survey they conducted on small and medium-sized companies



(Digital Wallonia, 2020b). Furthermore, some companies wanted to find information on possible AI software solutions (Lovens, 2021a). Besides, Frédéric Peters was struck by the ubiquity of Asians and Americans in AI keynotes during the Barcelona Mobile World Congress and wanted to “put Wallonia in the race” (Lovens, 2021b). Frédéric Peters and Christophe Montois’s core aim was thus to gather companies and other organisations active in the field of AI in Wallonia through the Réseau IA:

(...) Is it worth doing it alone, knowing that Wallonia is lagging far behind Asia and the United States which are leading the sector? And one must bear in mind that even if a 20-person design office put in 100% of its resources, it would never be more than a drop in the artificial intelligence ocean. So, based on this observation, we thought ‘well, rather than adding a drop to the ocean, let’s try to gather a few drops of water that we have around us and do something bigger’ (...) (interview 14) (All verbatim records and quotations were translated into English by the author).

This idea that “little drops of water make the mighty ocean” is strongly related to the trope of the “critical mass” which is widespread in Walloon AI promotion discourse. Building on the global ‘adversarial’ (Ciuriak et al., 2020: 13) sociotechnical imaginary of AI, the network was built on a vanguard vision in which Wallonia’s AI companies would join forces and ideas to “catch up”, and “jump onto the bandwagon” (Kiwix, 2018). By establishing the Réseau IA, Frédéric Peters and Christophe Montois constituted a sociotechnical vanguard (Hilgartner, 2015). Their initiative was indeed intended to trigger a larger sociotechnical revolution (Hilgartner, 2015: 3) involving a wide adoption of AI in Wallonia. Nonetheless, this vanguard vision was competing with another vanguard, led by IBM and Google. The latter were at the time discussing the possibility of collaborating with Digital Affairs Minister Willy Borsus and his staff to promote AI adoption in the Region (interview 14). Eventually, the discussions between Wallonia’s Digital Affairs Minister, on the one hand, and IBM and Google, on the other hand to form a partnership stalled. Among other things, Willy Borsus was not eager to spend public money on a project involving those multinational companies

(interview 14). Consequently, the Walloon Digital minister endorsed Montois and Peters’ vision of a networked, and competitive ‘AI-adopting’ Wallonia.

Wallonia’s Agence du Numérique (Digital Agency) planned to put in place a new branch of Digital Wallonia fully dedicated to AI. Its managing team wanted to fill the gap it perceived in the Walloon digital strategy but feared it would not gain political support without the backing of influential partners (interview 2). To strengthen their initiative, they joined forces with Réseau IA, Infopôle Cluster TIC and Agoria before submitting the project to Wallonia’s Digital Affairs Minister (interview 2). Simultaneously, the European Union adopted a “Coordinated Plan on Artificial Intelligence” (European Commission, 2018) and put pressure on each member state to adopt their own AI plan. The adoption of Wallonia’s AI strategy was also influenced by an ongoing initiative launched in 2018 by the federal minister in charge of the Digital Agenda, Alexander De Croo. The Federal Minister had gathered forty experts from companies, public institutions, universities, and other organisations to discuss a Belgian AI plan, which led to a series of 48 recommendations to federal policymakers supported by AI4Belgium. This multilevel political pressure strengthened Agence du numérique/ AdN (Digital Agency) and its partners’ resolve to formulate an AI policy, as well as the momentum built by the Réseau IA (AI Network).

In 2019, these converging processes led to the start of the Walloon DigitalWallonia.4ai partnership and strategy. In short, the creation of the Réseau IA, combined with multilevel political pressure and with the Walloon Digital Agency’s projects, resulted in the formulation of the regional AI policy, DigitalWallonia.4ai. Progressively, the enshrinement of their *vanguard vision* in public policy led to the emergence of an AI socio-technical imaginary.

#### *DigitalWallonia.4ai: A partnership and a strategy*

The Réseau IA, the first initiative entirely dedicated to AI adoption in Wallonia, received support from the Digital Affairs Minister. At the time, the Digital Agency did not have any programme focusing exclusively on AI, and the Réseau IA brought

together companies that developed or utilised AI software in order to spark discussions on their shared concerns. In 2019, DigitalWallonia.4ai was created on the basis of a partnership between the AI Network, the Walloon Digital Agency, the business federation Agoria, which represents Belgian technological companies, and the Infopôle cluster TIC, a network that unites stakeholders in Wallonia's digital sector. It is also supported by the Service public de Wallonie (Walloon public service, department of research) and AI4Belgium.

DigitalWallonia.4ai is both a strategy and a partnership. Its strategic layer, unveiled in 2019, is predominantly intended to foster company development through three programmes, namely Start IA, Tremplin IA and Cap IA. It is based on four pillars: "Society and AI", "Companies and AI", "Education and AI", and "Partnerships and AI" (Digital Wallonia, 2021a). The first pillar aims at raising public and professional awareness of AI and its potential opportunities. It primarily involves organising events and seems less significant than the second pillar for DigitalWallonia.4ai stakeholders.

The second pillar, which focuses on companies, is the core of DigitalWallonia.4ai. It is dedicated to the promotion of AI adoption by Walloon companies with a view to offering "augmented products and services" (Digital Wallonia, 2021a). To this end, DigitalWallonia.4ai offers three funding schemes: Start IA and Tremplin IA, which were launched along with the strategy in 2019, and Cap IA that started in February 2021. They represent a crucial facet of the AI sociotechnical imaginary in Wallonia, namely AI as a competitiveness enhancer. Start IA funds three days of coaching with AI experts, who assess a company's activities, identify opportunities for AI implementation in its processes or products, and prioritise the company's investments. Tremplin IA was designed to encourage the production of proofs of concept with the help of an AI specialised company. It aims at helping companies implement any ideas they developed independently or as a result of Start IA coaching. Cap IA differs significantly from Start and Tremplin IA. While Start and Tremplin IA are generic programmes targeting any company interested in improving its production or commercialisation processes, Cap IA is aimed at companies

specializing in AI development. Its objective is to support the growth of startups and their potential development into scaleups and medium-sized businesses (Digital Wallonia, 2021a).

DigitalWallonia.4ai's third pillar focuses on training and education in the field of AI. In practice, businesses and the general public are provided with a series of AI training courses in which Agoria emphasises the need for companies to adopt AI processes to keep up with their competitors. This is also a key feature of the Walloon AI sociotechnical imaginary. Companies therefore seem to be the main targets of DigitalWallonia.4ai even in the context of the third pillar.

The fourth pillar of the strategy is entitled "partnerships, innovation, research and AI". Its goal is to spur collaborations between the four institutions that founded DigitalWallonia.4ai and thirty official partners (Digital Wallonia, 2021a). For instance, DigitalWallonia.4ai supported the creation of the research consortium "Trusted AI Labs" (TRAIL) and contributed to the development of the project "Applications and Research for a Trustworthy Artificial Intelligence" (ARIAC), which aims at making AI tools available to improve the Region's competitiveness in four sectors: medicine, media, mobility and manufacturing (Digital Wallonia, 2021a).

### *The performance of the Walloon AI imaginary*

This section examines how the sociotechnical imaginary is made visible to the public and to the main targets of DigitalWallonia.4ai, i.e., Walloon-based companies. The imaginary is displayed publicly through the brand DigitalWallonia.4ai whose main goal is the promotion of AI in Wallonia. The branding is managed by the Walloon Digital Agency, as part of its communication mission (Agence du Numérique, 2022). Moreover, the Agency has established a network of "Digital champions" whose mission is to promote Wallonia's digital strategy, to bolster digital transformation and to push forward innovative ideas (Digital Wallonia, 2019b).

Wallonia's AI promotion landscape is complex. Public agencies collaborate with limited companies under public and private law, non-profit organisations, research centres and universities, funding agencies, educational institutions, companies and business federations, Pôles de

compétitivité and Clusters. These diverse actors cooperate to promote AI adoption in the Region. DigitalWallonia.4ai is thus used to increase the visibility of of AI support programmes for companies.

The website of Digital Wallonia outlines the goal of its branding as follows:

The Digital Wallonia brand aims to embody the digital character of Wallonia. It aims to unite public and private players and initiatives involved in the implementation of the Digital Wallonia strategy and, more generally, in the digital transformation of Wallonia. (Digital Wallonia, 2018).

The branding of DigitalWallonia.4ai serves as a means for institutions in charge of AI promotion to facilitate partnerships (Digital Wallonia, 2018) and create an impression of unity (interview 5). Such unified branding is also necessary because companies may struggle to find their bearings in the complex network of organisations they could collaborate with (interviews 3, 4, 14). By associating a brand with the main public initiative dedicated to AI adoption in the Region, the Digital Agency seeks to increase its visibility for Walloon entrepreneurs and thus foster the use of its AI adoption programmes in companies that do not operate in the digital sector but wish to enhance their productivity and competitiveness through AI processes:

(...) When you take a look at Wallonia’s business landscape, there are so many players and so many support schemes that everything turns into a confusing mess. There are too many things to see clearly. On the other hand, if you come up with a brand which everyone can latch onto, well, everyone will only remember one thing, they’ll only remember DigitalWallonia.4ai, Start IA, Tremplin IA and so on, and everyone can grab hold of it. And the advantage is that you don’t muddy the waters,



Figure 1. Digital Wallonia’s logo

you make them crystal clear in this case. (interview 14).

In practice, this branding translates into public communication campaigns that use a specific style guide and a specific logo (Figures 1 and 2).

The DigitalWallonia4ai brand is also intended to enhance the international visibility of the Region’s digital programme. The brand is used by the Agence wallonne à l’Exportation et aux Investissements étrangers (Walloon agency for exportation and investments - AWEX) during its trade missions, and within the context of the so-called Digital Wallonia Hubs, which support the international expansion of Walloon-based companies active in the digital sector.

In addition to the brands promoting AI initiatives, a group of “Digital Wallonia Champions” was established by the Agence du Numérique (Digital Agency). The mission of these champions is to advocate for AI adoption in Walloon-based companies. The digital champions are a network of 150 individuals who have been contributing to the Digital Wallonia strategy and have been involved in at least one partnership in their area of digital expertise (IA, cybersecurity, etc.) with another specialised organisation (Digital Wallonia, 2019c). They have three missions. The first and most important one is to promote the use of digital technology. It involves highlighting the opportunities digital technology offers and acting as “ambassadors of digital excellence in Wallonia” (Digital Wallonia, 2019b: 33). The second mission of the “champions” is to promote the Digital Wallonia strategy and showcase projects successfully completed within this strategy. Finally, they are supposed to serve as “bridges” between the



Figure 2. Digitalwallonia.4ai’s logo



needs of their sector and the Walloon government (Digital Wallonia, 2019b: 33).

Therefore, the promotion of AI in Wallonia is based on what could be described as “evangelisation” efforts conducted by individuals recognised by the Agence du numérique as leaders in promising digital technology projects. Successful AI companies are encouraged to produce a virtuous cycle in which the Walloon AI “ecosystem” grows, enhances its overall competitiveness and reaches “critical mass”, which is of paramount importance at the international level. The adoption of AI in Wallonia’s companies is further evidenced and encouraged through the “champions” network and widely disseminated use cases. The imaginary is embedded (Jasanoff, 2015a) in the Region through these use cases disseminated by DigitalWallonia.4ai. There is therefore a direct link between the way the socio-technical imaginary is performed (Jasanoff, 2015a) and the desirable futures (Jasanoff, 2015a: 4) it includes.

### ***Desirable futures ‘requiring’ technological advances***

This section examines the core of Wallonia’s AI sociotechnical imaginary, specifically how the Region’s future and identity are coproduced (Jasanoff, 2004) with the promotion of AI adoption, i.e., how Wallonia’s desirable futures (Jasanoff, 2015a: 4) are envisioned to depend on AI adoption and how this adoption reshapes the Region’s identity. This review of the features of this imaginary is based on the identification of recurrent tropes in the documents and interviews of AI promoters.

#### *“A train we can’t miss”*

This trope is unequivocal evidence of technological determinism in AI promotion. AI adoption is said to have its own development pattern which is independent of local stakeholders’ action. Walloon entrepreneurs, policymakers and civil servants that are in favor of wide-scale AI adoption argue that the latter is bound to happen given the existence of other countries’ AI strategies, the global commercial competition, and the marketing needs of Walloon companies.

Walloon AI promoters refer specifically to the Region’s position in the world when they discuss the need to adopt this technology. They present Wallonia as being caught between the two main actors in the field of AI research and adoption, namely the United States and China (interviews 7, 10). Then, they affirm that there is no real choice to be made if Walloon companies want to remain competitive (interview 8). The goal is not to be overwhelmed by foreign companies in the context of a global and highly competitive market (Connect, 2021). This part of Wallonia’s AI socio-technical imaginary corresponds to a broader European narrative based on the idea that the Union should make its way between two giants (the United States and China) to become more autonomous and to spread its own vision of AI (Ciuriak et al., 2022). While the EU seemingly used to be primarily concerned with mitigating the risks associated with AI and other digital technologies, it now appears to be focused on increasing investments in AI research and commercialisation in Europe. The EU Commission and member states adopted the Coordinated Plan on Artificial Intelligence in 2018, and revised it in 2021. Although both versions emphasise the EU’s ambition to promote a “human-centric” AI, the second one goes one step further, aiming at “creating EU global leadership in human-centric AI with member states” (European Commission, 2021: 1). The coordinated plan advances another objective: fostering Europe’s competitiveness by optimising industrial processes through AI adoption (European Commission, 2018). The Walloon Region has partly endorsed the EU’s imaginary. In 2020, the TRusted AI Labs (TRAIL) were created to gather researchers around the development of AI processes that do not jeopardise citizens’ fundamental rights. The EU and the Walloon Region have also promoted AI adoption to enhance their competitiveness. Therefore, the Walloon AI socio-technical imaginary partly overlaps the EU’s. It is “adversarial” (Ciuriak et al., 2022: 13), and centred on the global sale of a “human-centric” AI that enhances competitiveness.

There are also marketing and commercial stakes that reinforce the need for AI adoption. As this technology has drawn so much attention, some companies fear that they will lose consumers

if they do not propose services or products that include AI:“(…) as of 2022 there has been so much hype around AI that many businesses, especially medium-sized and larger companies, are thinking ‘if I don’t do it I’m a has-been and therefore I’m screwed’” (interview 11). The “hype”, as the interviewee frames it, is not to be overlooked. Such a trend is influenced by- and impacts long-term and wide-scale dynamics such as globalisation, public investment in technology or national innovation policies. This phenomenon should thus be investigated rather than left behind under the pretext that it is nothing more than marketing discourse (Hockenhuil and Cohn, 2021; Rieder, 2018). In the present case, Walloon companies feel compelled to adopt AI in their processes or to provide services and products based on this technology. This sense of obligation and even urgency to adopt AI among entrepreneurs is increased and consolidated in discourses spread by trade associations. For instance, in 2022, the federation of Belgian technological companies, Agoria, published on its website an article that highlighted the importance of raising awareness of AI adoption:

(…) Because even though more and more companies in our country are already using artificial intelligence, many are still lagging behind. It is very important that these companies also realise as soon as possible that AI can help them given its wide range of applications (Agoria, 2022).

The train trope exemplifies the way AI promoters frame this technology. From their point of view, it appears there is no credible alternative to AI use as for smart city development (Sadowski and Bendor, 2019) and digital data conservation (Markham, 2021). Its wide adoption seems unavoidable and Walloon stakeholders feel powerless regarding the choice to adopt it or not, a situation that Deetz’s concept of ‘discursive closure’ (Markham, 2021) describes perfectly. This concept describes “how certain patterns of thought, talk, actions, or interactions tend to function like negative feedback loops in social ecologies, discouraging evolution and change” (Markham, 2021: 393). The sociotechnical imaginary of AI in Wallonia is strongly linked to a type of ‘discursive closure’ regarding general AI adoption.

### *Reindustrialising Wallonia*

In Wallonia, AI is also framed primarily as a means to restore the Region’s leading economic position. During the first ‘Industrial Revolution’ massive earnings were yielded by coal, followed by metallurgy, but by 1960s and the following decades these sources of profit began to decline. Digital technology and AI in particular are nowadays seen as a new potential for economic development. This subsection shows how AI promoters envision Wallonia’s future through the lens of its industrial history.

The promotion of AI in Wallonia is based on- and builds the Region’s history. Wallonia’s misfortune is said to come from its inability to transition from the first industrial revolution to subsequent ones, resulting in an economic downturn in the 1960s and 1970s (interview 10; Agoria, 2020). Therefore, AI advocates believe that it is vital for the Region to take advantage of what they perceive as a new industrial revolution that includes the rise of AI:

Wallonia owes all its wealth to its success during the Industrial Revolution in the last century. In the era of the digital revolution, we must take the lead, dare, be enterprising and capture the full potential of this new digital society (Digital Wallonia, 2019e).

This discourse suggesting that Wallonia should make the most of global AI development to increase its economic performances is underpinned by two key rationales. The first one posits that Wallonia can take on a prominent role in the international development of AI, which would boost the region’s economy (Digital Wallonia, 2019d). The second one, which is more salient, views AI primarily as a tool to foster the growth of Walloon-based companies.

Driven by their resolve to deindustrialise the Region, former and current Walloon ministers tend to embrace the second rationale, pleading for the reshoring of industries to create more jobs and stimulate economic development (Borsus, 2022; Gouvernement wallon, 2014, 2021). Rather than abandoning its industrial legacy, Walloon policymakers plan on using AI to transform the Region into a strong industrial hub. In that vein, Walloon Digital Affairs Minister Willy Borsus asserted that “For our region, AI may be one of the levers that contribute to our tools for redeployment, reconver-

sion, and renewed growth for our region, and one of the tools, also paradoxically, for the reindustrialisation of our region” (Borsus, 2022). The importance of AI for reindustrialisation is also visible in the implementation of a public programme called “Industry of the future” aimed at fostering the adoption of digital technology in the Region’s factories (Agence du numérique, 2021).

The consortium approach used in the “industry of the future” programme highlights another feature of Wallonia’s AI sociotechnical imaginary, namely the importance of cross-sector partnerships symbolised by the use of the concept of ‘ecosystem’. Reindustrialisation through AI adoption is thus also strongly linked to competitiveness concerns, as the following subsection will demonstrate.

### *Competitiveness*

Competitiveness is one of the most pervasive themes across AI-related policy documents in Wallonia, but also in the discourse of private stakeholders. It seems there is a general tendency to justify public support for AI adoption by referring to competitiveness matters, as illustrated by the Walloon Digital Affairs minister<sup>ii</sup> and key stakeholders’ discourse (interviews 1, 5, 7, 12; Union Wallonne des Entreprises, 2021). This subsection shows that the two-sided perception residents of Wallonia have of their Region leads them to frame AI as a major opportunity to build a future in which Wallonia rebuilds its wealth.

It was confirmed through document analysis that policymakers in Wallonia, such as the government and members of parliament, acknowledge the effects of globalisation and share concerns about its impact on the Region’s future economic opportunities. Walloon digital affairs minister Willy Borsus, declared for instance that “The global competition is underway, at any moment, at any time, it is not even a question of choice anymore” (Borsus, 2022). In fact, the concerns seem less about globalisation itself than the risk of facing more economically competitive companies (interview 8).

The adoption of technology is therefore envisioned as a Hobson’s choice if Wallonia wants to remain attractive and competitive on global markets in the long term<sup>iii</sup>. This concern is

enshrined in the 2019 policy statement (Parlement wallon, 2019: 43), which targets digital technology in its broadest sense and links it to companies’ productivity and competitiveness. Likewise, the regional digital strategy, Digital Wallonia 2019-2024, underlines that the Region’s international competitiveness should be improved by means of digital technology (Parlement wallon, 2019: 10). Interviewees also assert that the high level of wages in Belgium compels companies to make productivity gains to remain competitive. In this context, they frame AI as an essential technology that has to be adopted in Walloon companies (interviews 1, 5, 11, 14).

AI promotion is strongly associated with competitiveness gains, as illustrated by the content of parliamentary questions<sup>iv</sup>. Other types of discourses on AI adoption and competitiveness can be broken down into two main ideas: AI as a competitiveness-increasing technology for Wallonia’s overall industrial competitiveness and AI as a competitiveness enhancer in strategic sectors. First, AI is considered to suit most sectors’ needs in terms of process optimisation, product personalisation and market openings (interviews 5, 7, 10, 13, 14; Digital Wallonia, 2019a; Digital Wallonia, 2020a; Regional IT, 2021). It seems effective in process industrialisation (interviews 2, 5, 13) because it allows companies to automate repetitive, costly, and sensitive industrial operations. Walloon AI actors tend to go further, asserting that manufacturing industries will not survive without the adoption of digital technology, in the context of the so-called “industry 4.0” (interview 10). It seems that this question is of special importance for the Walloon government as it implemented an *ad hoc* programme called “Industry of the future” as part of the 2021 intelligent specialisation strategy. This programme intends to enhance the competitiveness of manufacturing and even bring back to Wallonia industries that were relocated during the past decades. It further crystallises the competitiveness goal inscribed in the 2019 policy statement (Parlement wallon, 2019), as well as in the “Stratégie de spécialisation intelligente” (intelligent specialisation initiative), the Digital Wallonia strategy and in previous policy documents.

AI is also promoted as part of a different vision of Wallonia’s future economic development, which

focuses on the strength of specific sectors that have been bolstered by the so-called clustering policy. This policy was inspired by the French Pôles de compétitivité (Competitiveness clusters) programme and initiated in the beginning of the century with the creation of Wallonia's own Pôles de compétitivité. Walloon industries created the Grappes technologiques' (Technological clusters), which are groups of companies dedicated to the acceleration of industrial innovation, and the so-called Clusters, that is, networks of companies, which could also involve educational institutions and sector-specific research centres, aimed at supporting the development of small and medium companies (Infopôle Cluster TIC, 2022). The Grappes were abandoned in 2004, whereas the "cluster" approach was enshrined in the Region's legislation in 2007<sup>vi</sup> (Dujardin et al., 2017: 14-15). This specialisation strategy was further implemented by creating Wallonia's own Pôles de compétitivité (Competitiveness clusters) in the 2006 "plan Marshall" ("Marshall plan"<sup>vii</sup>). This first "Marshall plan" succeeded the "Contrat d'avenir pour la Wallonie" (Deal for the Future of Wallonia) which aimed at reaching the European average employment rate. Nowadays six Pôles exist, each responsible for the development of their specific sector: Biowin, GreenWin, Wagrallim, Logistics in Wallonia, Mecatech, and Skywin. The strategy "Digital Wallonia 2019-2024" plans to make the Pôles de compétitivité "digital by design" (Parlement wallon, 2019: 10), since the Pôles need to ensure there is a strong digital component in their projects in order to "guarantee the international competitiveness" (Parlement wallon, 2019: 10) of companies that are supported and to match with advances in applied research.

The Region's industrial strategy, centred around the Pôles de compétitivité, was thus amended to include the adoption of digital technology. The creation of the project "Applications et Recherche pour une Intelligence Artificielle de Confiance" (ARIAC, Applications and research for a trustworthy artificial intelligence) in the context of TRAIL further solidified the link between competitiveness goals and AI adoption. ARIAC is indeed an applied research programme meant to supply Walloon-based companies with AI tools in order to grant them a competitive advantage<sup>viii</sup> (Service

public de Wallonie, 2021). Competitiveness clearly constitutes a crucial facet of the sociotechnical imaginary of AI in Wallonia.

A few other tropes structure discourses on AI promotion in Wallonia. The 'ecosystem' trope is also linked to another trope that helps to rebuild the sociotechnical imaginaries of AI in the Walloon Region, the "critical mass". As many Walloon AI stakeholders consider that they are too small to compete in the global market, they call for the emergence of Walloon 'big players' that would strive to first position themselves at the European level and then reach international markets. Building a "critical mass" is seen as the key to generating Walloon champions that are able to compete at the European level (interview 13), that is, companies that grow drastically while continuing to create value in Wallonia. The "critical mass" is also considered an obligatory stage in establishing a virtuous cycle of business initiatives. Finally, the combination of a thriving "ecosystem" and of a "critical mass" of entrepreneurial AI users is seen as a necessity to "put Wallonia on the map", which constitutes a widely shared trope as well. These tropes also convey the general idea that AI adoption is a crucial competitiveness tool for Wallonia's "recovery".

### ***The evolution of the Walloon AI sociotechnical imaginary***

To become a sociotechnical imaginary, the desirable futures must spread outside of their 'native' collective, outside the technological vanguard they arose from. Then, the imaginary needs to be entrenched in the socioeconomic and material infrastructure of a community to conquer the imagination of its inhabitants (Jasanoff, 2015b: 326). This embedding (Jasanoff, 2015b) is often achieved through the building of artefacts such as genetically modified crops, a rocket, or a power plant, but can also rest on legal instruments or on the "relative hardness of long-entrenched cultural expectations and interpersonal relations" (Jasanoff, 2015b: 326). The next sections examine the threefold embedding of the Walloon AI sociotechnical imaginary in the Region's post-industrial culture, AI software and widely promoted use cases.



### *Interconnectedness with the Walloon master narrative*

The sociotechnical imaginary of AI in Wallonia is embedded in the socioeconomic identity of the Region: AI promoters connect their discourse on the necessity to adopt AI in Walloon companies to the possibility of reindustrialisation after decades of company offshoring. This subsection shows how the AI sociotechnical imaginary is being embedded in the Region's culture, especially through its connection to the Walloon master narrative of "recovery". Van Oudheusden et al. (2017) brought attention to the "catching-up" narrative that goes along with the promotion of a knowledge-based economy for Wallonia. They underlined that Walloon stakeholders use a discursive repertoire that revolves around the idea of economic recovery when pleading for the advent of a Walloon knowledge-based economy, as illustrated by the name of the "Marshall Plans" themselves (Van Oudheusden et al., 2017: 186). This prominent repertoire is based on the belief that the Walloon Region could recover from the economic hardship it has been facing since its massive deindustrialisation in the 1960s, and even "catch up" with Flanders. Macq (2021) showed that this "recovery" narrative, which he considers to be the Region's sociotechnical imaginary, is reflected in its collaborative innovation oriented towards specific economic sectors considered to be strategic for Wallonia's development. The goal of the participatory events he analysed with Delvenne is indeed to spur the introduction of new products to the market and to stimulate entrepreneurial projects (Delvenne and Macq, 2020).

This "recovery" narrative, which draws on Wallonia's industrial past and is central to AI promotion, is framed here using the concept of 'master narrative'. Originating from Lyotard's (1979) work on what he called metanarratives, the concept of 'master narrative' refers to the collective cultural framework that provides guidance for individuals' daily lives based on the group's perception of itself. A master narrative provides answers to the questions, "Of what story or stories do I find myself a part?" (sic) and "What am I to do?" (MacIntyre, 2007: 231 cited by Halverson et al., 2011). The Walloon Region rests on its socio-economic history. Wallonia was one of the world's

most prosperous Regions in the nineteenth and early twentieth centuries. At the end of the Second World War, its coal and metal industries collapsed, and it experienced an economic downturn. A "recovery" narrative emerged, transforming the reconstruction of the Region's economy into a political priority. This master narrative has been pushed since the 1960s in the context of the Walloon Movement (Mouvement Wallon), a political movement that had arisen decades earlier in reaction to the Flemish claims for more political autonomy based on their cultural difference. Nevertheless, Wallonia's economic decline redirected the Walloon movement to socioeconomic matters. The Fédération Générale du Travail de Belgique (General Federation of Labour in Belgium), a leftist labour union, played a key role in the rise of the movement, and particularly its iconic leader, André Renard. The latter demanded increased political decentralisation to enhance Wallonia's ability to deal with its economic difficulties and to adopt its own social policies. From this point, the original ambition of the movement to promote the Walloon culture had been sidelined for the benefit of socioeconomic demands (Joris, 1999). The first reform of the state (1970) created the Regions and their economic framework. The following reforms broadened and deepened the regions' jurisdiction over economic and territorial matters. To deal with the economic bleeding, the Walloon government announced a "Contrat d'avenir pour la Wallonie" (Deal for the Future of Wallonia) in 2000, followed in 2006 by the first of the four versions of the "pla, Marshall plan"<sup>ix</sup> (Marshall plan), whose denomination marks the continuous attention that has been given to the Region's "economic recovery". The first "Marshall plan" created the Pôles de compétitivité (Competitiveness clusters) and paved the way to a long-term strategy of economic specialisation aimed at increasing Wallonia's competitiveness and ultimately its industrial performance.

While Wallonia's master narrative of "recovery" played a crucial role in the regionalisation of Belgium, the situation has since evolved. Although the 2014 Walloon policy statement asserts that "[with the sixth reform of the state] Wallonia finally has the full range of levers required for its full economic, social and human develop-



ment" (Parlement wallon, 2014: 6), Wallonia's economic performance does not look to be in line with its ambitions. Walloon leaders, as far as they are concerned, have stopped pursuing more autonomy for their region. In his 2022 speech on the state of Wallonia (Parlement wallon, 2022), Minister-President Elio Di Rupo encouraged members of parliament "(...) to intensify the current momentum and to become more ambitious for Wallonia", claiming that "this is how [they] will restore hope to the women and men of Wallonia". He concluded his speech asserting that "Wallonia will make it" (Parlement wallon, 2022). It seems that the political elite no longer respond to the frustrating feeling of a declining Wallonia with regionalist demands. Instead, they focus on promoting of technology adoption as a way rebuild a strong economy in the Region. The recovery narrative remains prominent in discourses on the Region's economy, and perceptible in the Government's communication (Parlement wallon 2014; Parlement wallon, 2016; Parlement wallon, 2019; Parlement wallon, 2022 among others), but it takes flesh in the promotion of a 'knowledge-based economy' (Van Oudheusden et al., 2017) and of a 'creative economy' (Macq, 2018: 10) which are supposed to restore the Region's prosperity. This transition is still underway, but can clearly be seen in the words of former Walloon MP and current federal Deputy Prime Minister Pierre-Yves Dermagne:

Our regionalism is not romantic, we do not wake up humming Li Bia Bouquet [Namur's official song] or the Song of the Walloons. Our regionalism is realistic and pragmatic: Wallonia has run out of black gold or coal, so it must rely on grey matter (Radio télévision belge francophone, 2015).

No later than 18 June 2022, socialist party leader Paul Magnette asserted for his part that "(...) for us [socialists], things are clear: a seventh state reform in 2024 is neither necessary nor desirable. Because Wallonia has the necessary powers to work on its recovery, unlike in the past" (Coppi, 2022).

It appears that the sociotechnical imaginary of AI has been incorporated into the technological facet of the Walloon master narrative. The tropes of reindustrialisation and competitiveness are

omnipresent in AI promotion, which shows that technology is framed as an opportunity to restore the Region's economic position and prosperity. AI is part of this potential 'technological turn' in the discursive construction of the Region's identity. Moreover, the embedding of the AI sociotechnical imaginary into Wallonia's culture reinforces, and is reinforced by, AI adoption in Walloon industries, research centres and public service. Nevertheless, the AI sociotechnical imaginary does not rest only on deep historical and cultural foundations. It is also embedded more tangibly in software and AI use cases.

#### *Digital Wallonia4.ai's "artefacts": Start, Tremplin, Cap IA and TRAIL's "software bricks"*

The main outputs of DigitalWallonia.4ai include proposals stemming from Start IA projects, the Tremplin IA proofs of concept and AI products commercialised thanks to Cap IA (DigitalWallonia.4ai, 2022). These programmes are indeed the core of DigitalWallonia.4ai (interviews 2, 3). The Start IA and Tremplin IA programmes are available to all Walloon-based companies regardless of their size, digital maturity, and sector (Digital Wallonia, 2021b). What is more, they have now been made available to associations and public institutions. As soon as those organisations benefit from one of these programmes, the AI imaginary they convey will become embedded in their organisation and processes. The vision of the Walloon Region promoted by the Digital Agency, its partners and Digital Champions is realized through the software produced. Likewise, the AI products that are generated by Cap IA programmes materialise the imaginary. These products travel on the Belgian, European, and global markets thus symbolising the Region's ambition to "put [itself] on the [AI] map". This ambition is in fact shown to field actors and commodified.

TRAIL also contributes to the materialisation of the AI imaginary, steering it towards a more research-oriented focus. TRAIL produces, through its "Factory", a set of "software bricks" intended to be directly exploited by Walloon companies and to trigger an increase in industrial competitiveness. These bricks, meant to be used all around the Region, may be similar to the artefacts in which other sociotechnical imaginaries are embedded,

yet they travel more easily, thereby reinforcing the AI imaginary.

Interestingly, the software produced by Walloon AI public programmes is used as a banner that the Digital Agency, its partners and TRAIL fly to promote their programmes and perspective on AI development. The next subsection focuses on this trend by using the case of a specific company, Fernand Georges.

### *AI use cases as translators*

The Digital Agency and its partners never fail to mention the Start IA, Tremplin IA and Cap IA programmes when promoting the Walloon AI strategy (Borsus, 2022; interview 5). In addition to the promotion of the programmes themselves, use cases are proudly brought up during public events, in the media and in workshops aimed at professionals. Agoria presents “inspiring” and “spectacular” use cases during events such as the “AI Inspiration Sessions” (Agoria, 2022) and “Carrefours de l’IA” (AI Crossroads), organised under DigitalWallonia.4ai. These monthly webinars include the presentation of AI use cases in the Walloon Region, as well as research results (Digital Wallonia, 2022). When it comes to the companies that have already benefited from Start IA, Tremplin IA and Cap IA, Julie de Bergeyck and Antoine Hublet asserted in an interview that “[they] are grateful to these pioneers who will hopefully inspire many other stakeholders to participate. Today, the ambition is to continue and accelerate together the process of digital transformation of Walloon-based companies through the integration of AI technologies” (De Bergeyck, 2021). Lisa Lombardi, digital expert for the Union Wallonne des Entreprises (Walloon Business Union - UWE), affirmed similarly that “We need ambassadors, digital success stories” (Connect, 2021). This focus on the exhibition of cases in which companies are considered to have used AI in an innovative and successful way led to the creation of Digital Wallonia Champions, whose first mission is to “promote digital technology and its uses” (Digital Wallonia, 2019b: 33). Those “Champions”, selected for their experience in AI projects, are in a sense living embodiments of the Walloon AI imaginary.

Fernand Georges, a Walloon-based hardware store, is a striking example of the role of use

cases in the Walloon sociotechnical imaginary of AI. The company developed an AI model with B12 Consulting in the context of a Tremplin IA project called “UnlockAI”. A picture is all the AI model needs in order to automatically design a lock that fits with the one to be replaced (Agoria, 2021). When discussing the Region’s AI strategy, a surprisingly high number of AI promoters mention this company to support their claims (interviews 2, 5, 6, 8). Those AI promoters insist on how novel this AI application is, as evidenced by the title of a press article on Walloon AI startups: “AI at the service of a hardware store!” (Lovens, 2021a). Their emphasis on surprise could be meant to encourage other small and medium-size companies to adopt AI, and more importantly to stress that Walloon-based companies can enhance their processes regardless of their economic sector, as the following extracts show:

Or almost everywhere, it’s... so just in all these societal challenges, it already brings a lot. And then, at the level of companies too, whatever the sector, I suppose you’ve seen the often-mentioned use case of this Walloon SME, hardware, right? It can really be found at all levels of the company (...)  
(interview 5).

Some AI promoters also underline the age of Fernand Georges, titling “Fernand Georges, a *century-old* hardware store, embraces AI with B12 Consulting” (our emphasis) (Agoria, 2021) or asserting that “[AI is adopted] in a field like hardware, which means that it can be used in any field, since ironmongery is a very old trade” (interview 6). They mention competitiveness as well, stating that Fernand Georges would not be able to survive without digital transformation given the harshness of the market (interview 2).

The example of Fernand Georges symbolises the way the Walloon AI sociotechnical imaginary is embedded in use cases and their dissemination. Fernand Georges and the ones mentioned on DigitalWallonia.4ai and its partners’ websites, in the media, and during webinars translate (Callon, 1984) the ambitions of the Region’s AI policy into an entrepreneurial discourse that is spread easily across the world of small- and medium-size Walloon companies. Novel AI use cases are then reported straightforwardly in the media.

## Conclusion

This paper examined the components of the Walloon AI sociotechnical imaginary, along with its evolutions, in a bid to answer the main research question: how does the promotion of AI adoption coproduce (Jasanoff, 2004) the identity of the Walloon Region?. It established that this imaginary stems from the combination of an entrepreneurial vanguard vision, the Walloon Digital Agency's ambition to fill a gap in its missions, and multilevel political pressure exerted by the EU and the Federal State. The AI Network played a decisive role in the implementation of Wallonia's AI strategy. It gathered small and medium-size companies willing to contribute to the promotion of AI in the Region and convinced the Digital Minister to adopt a Walloon AI policy. In parallel, the digital agency's managers struggled to start an AI programme, as its inexistence was considered a weak spot in their institutional projects. Moreover, having adopted the "Coordinated Plan on Artificial Intelligence" (European Commission, 2018), the EU required member states to adopt their own AI policies. The entrepreneurial origin of the AI Network was reflected in the composition of DigitalWallonia.4ai's steering committee. DigitalWallonia.4ai is structured around four axes, among which the second one, which focuses on support for businesses, clearly stands out. This support consists of three programmes: Start IA, Tremplin IA and Cap IA. The Walloon AI imaginary is publicly performed through the brand DigitalWallonia4.ai, which corresponds to the name of the programme. The brand gives visibility to the strategy and aims at enrolling new companies in its three programmes and drawing international visibility to the Walloon strategy. Besides, the network of Digital Champions sustains the branding effort through an 'evangelising' effort and the promotion of use cases.

The identification of several tropes during the analysis of interviews and document data enabled the reconstruction of the desirable futures at the heart of the sociotechnical imaginary. In this envisioned future, Walloon-based companies massively adopt AI and trigger a virtuous economic circle that may foster the

Region's "recovery". These results corroborate Bareis and Katzenbach's (2021), Kim (2023) and Köstler and Ossewaarde's (2020) findings in so far as the desirable future sustained by the Walloon AI sociotechnical imaginary combines ubiquitous characteristics of AI imaginaries and idiosyncratic features, i.e. features dependent on the Region's history and culture. The tropes of AI as a "train we can't miss" and of competitiveness align with the usual framing of AI narratives in national strategies (Bareis and Katzenbach, 2021; Ciuriak et al., 2022; Köstler and Ossewaarde, 2020). In Wallonia, AI adoption is seen by the political and economic elite as an inevitable technological development which needs to be harnessed in an effective way for the Region's development. The competitiveness trope, associated with the perceived necessity of AI adoption, stems from the supposedly inescapable development of AI. However, the competitiveness trope is also inseparably connected to Wallonia's history and the idiosyncratic reindustrialisation trope. AI is seen as an asset to rebuild the Region's prosperity through an increase in productivity which will be beneficial to its industries, particularly in strategic economic sectors Wallonia has been invested in since the beginning of the twenty-first century. AI is envisioned as a powerful tool to deepen this specialisation in strategic sectors, as the trope of the 'critical mass' proves as well. This trope embodies the imagined position that Wallonia could take in global markets by using cutting-edge technology such as AI. The 'critical mass' is associated with the last two tropes of the AI imaginary. The 'ecosystem' is framed as a prerequisite to the emergence of actors able to reach a 'critical mass'. It involves the gathering of heterogeneous actors from both the private and public actors. Finally, AI should "put Wallonia on the map" by taking advantage of the Region's strong research base and the emergence "big players" in AI, supported by proactive public funding.

The interpretive character of this study permitted to highlight the embedding of the AI imaginary in the Region's master narrative of economic "recovery", that has been pushed by the rise of the Walloon Movement since the 1960s. AI is deemed necessary to straighten out the economy and seems to embody the technological turn of

the Walloon master narrative, with a political elite now more enthusiastic to promote cutting-edge technology adoption than further regionalisation. These results reinforce Van Oudheusden et al.'s (2017) and Macq's (2018) findings on the discursive salience of technology in the Region's "recovery" narrative. Further research should explore how this "turn" is manifested through the promotion of other technologies in the Region. It should also pay close attention to the way citizens contribute to building sociotechnical imaginaries in relation to this narrative or not. However, research on regional identity always bears the risk of essentialising it (Paasi, 2011: 14) due to its performativity. It is important, therefore, to stress that the Walloon identity, which is coproduced with the promotion of technology, is neither disembodied nor stable. On the contrary it is constructed on a daily basis, and even the Walloon "recovery" master narrative may fade eventually if Walloons were to change the perception of their history and culture. In addition to this cultural embedding, use cases, as well as software developed within DigitalWallonia.4ai's programmes, proved to be crucial in this process. They are embodiments of the imaginary and disseminate it in the Region through business events and the programme's marketing campaigns. The case of Fernand Georges illustrated this process and the ability of use cases to gather a wide range of stakeholders by translating the imaginary into examples that travel straightforwardly. These uses cases reinforce the strength of the Walloon network of AI promoters and the imaginary it sustains.

As concerns methodology, using semi-structured interviews alongside the traditional analysis of policy documents proved valuable. It was especially relevant to rebuild the imaginary's desirable futures through the identification of tropes used by the interviewees and by stakeholders of the Walloon AI sector. This approach also enhanced the accuracy of the analysis since the interviews provided additional information from stakeholders themselves. Moreover, the wide range of data sources and types permitted a strong triangulation of the results. Nonetheless, this paper focused on Walloon AI 'big players' during the data collection period and did not explore the way 'average' Walloon citizens envision AI. Further research addressing the coproduction of regional identities and AI imaginaries from citizen perspectives would be complementary to the approach adopted here.

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## Notes

- ii Identities are one of the “four main sites of coproduction” investigated by the contributors of the “States of Knowledge” (Jasanoff, 2004: 6).
- iii Question of M-M. Schyns of 5 November 2021, C.R.I.C., Walloon Parliament, 2021-2022, n°116.
- iii Question of M-M. Schyns of 5 November 2021, C.R.I.C., Walloon Parliament, 2021-2022, n°116.
- iv See also Question of E. Lomba of 5 November 2021, C.R.I.C., Walloon Parliament, 2021-2022, n°117; Question of M. Hardy of 12 March 2021, C.R.I.C., Walloon Parliament, 2021-2022, n°310; Question of M-M. Schyns of 17 November 2021, C.R.I.C., Walloon Parliament, 2021-2022, n°64; Question of J. Kampopole, C.R.I.C., Walloon Parliament, 2019-2020, 11 October 2020, n°17, p. 20; Question of E. Fontaine, C.R.I.C., Walloon Parliament, 2016-2017, 2 May 2017, n°163, p. 41.
- v The Grappes technologies were set up after the release of the Prométhée project (1998-2000), which consisted in an assessment of innovation fields in Wallonia, supported by the European fund of regional development.
- vi Décret wallon du 18 janvier 2007 relatif au soutien et au développement des réseaux d’entreprises ou clusters, *Moniteur belge*, 9 février 2007 ; Arrêté d’application du gouvernement wallon du 16 mai 2007, *Moniteur belge*, 13 juin 2007.
- vii Décret-programme du 23 février 2006 relatif aux actions prioritaires pour l’avenir wallon, *Moniteur Belge*, 7 mars 2006.
- viii ARIAC is also part of Wallonia’s economic specialisation strategy as it is aimed at strengthening the position of Walloon companies in specific sectors.
- ix Décret-programme du 23 février 2006 relatif aux actions prioritaires pour l’avenir wallon, *Moniteur Belge*, 7 mars 2006.

## Appendix 1. Websites part of the corpus

| Institution         | year | Page title  | url   | Accessed      |
|---------------------|------|---|---|---------------|
| Agence du numérique | 2021 | Industrie du Futur : bilan et actions   | <a href="https://www.digitalwallonia.be/fr/publications/industrie-du-futur-home/">https://www.digitalwallonia.be/fr/publications/industrie-du-futur-home/</a>   | 10 April 2022 |
| Agence du numérique | 2022 | Missions  | <a href="https://www.adn.be/fr/missions">https://www.adn.be/fr/missions</a>   | 2 May 2022    |
| Agoria              | 2020 | La Wallonie retrouvera son ADN historique en mariant numérique et industrie                                       | <a href="https://www.mynewsdesk.com/fr_be/agoria/pressreleases/la-wallonie-retrouvera-son-adn-historique-en-mariant-numerique-et-industrie-3099754">https://www.mynewsdesk.com/fr_be/agoria/pressreleases/la-wallonie-retrouvera-son-adn-historique-en-mariant-numerique-et-industrie-3099754</a>   | 28 April 2022 |
| Agoria              | 2021 | Fernand Georges, quincaillerie centenaire, se lance dans l'IA grâce à B12 Consulting                              | <a href="https://www.agoria.be/fr/digitalisation/intelligence-artificielle/fernand-georges-quincaillerie-centenaire-se-lance-dans-lia-grace-a-b12-consulting">https://www.agoria.be/fr/digitalisation/intelligence-artificielle/fernand-georges-quincaillerie-centenaire-se-lance-dans-lia-grace-a-b12-consulting</a>   | 24 April 2022 |
| Agoria              | 2021 | DigitalWallonia4.AI fête ses 2 ans : toute entreprise doit se poser la question d'intégrer l'IA dans son business | <a href="https://www.agoria.be/fr/digitalisation/intelligence-artificielle/digitalwallonia4ai-fete-ses-2-ans-toute-entreprise-doit-se-poser-la-question-dintegrer-lia-dans-son-business">https://www.agoria.be/fr/digitalisation/intelligence-artificielle/digitalwallonia4ai-fete-ses-2-ans-toute-entreprise-doit-se-poser-la-question-dintegrer-lia-dans-son-business</a> | 5 April 2022  |
| Agoria              | 2022 | L'intelligence artificielle? Une évidence!  | <a href="https://www.agoria.be/fr/services/expertise/digitisation/intelligence-artificielle/lintelligence-artificielle-une-evidence">https://www.agoria.be/fr/services/expertise/digitisation/intelligence-artificielle/lintelligence-artificielle-une-evidence</a>   | 14 May 2022   |
| Connect             | 2021 | Compte-rendu de l'intervention, " Il nous faut des ambassadeurs, des success stories du numérique"                | <a href="https://ready-to-connect.be/lisa-lombardi/">https://ready-to-connect.be/lisa-lombardi/</a>   | 12 May 2022   |
| Digital Wallonia    | 2018 | Digital Wallonia. Marque de la Wallonie Numérique   | <a href="https://www.digitalwallonia.be/fr/publications/marque-digital-wallonia/">https://www.digitalwallonia.be/fr/publications/marque-digital-wallonia/</a>   | 15 April 2022 |
| Digital Wallonia    | 2019 | DigitalWallonia4.ai : l'intelligence artificielle au service des citoyens et des entreprises en Wallonie          | <a href="https://www.digitalwallonia.be/fr/publications/digitalwallonia4ai-service-citoyens-entreprises/">https://www.digitalwallonia.be/fr/publications/digitalwallonia4ai-service-citoyens-entreprises/</a>   | 17 April 2022 |
| Digital Wallonia    | 2019 | Digital Wallonia bilan 2015-2018, vision et actions 2019-2024   | <a href="https://content.digitalwallonia.be/post/20190626100319/Bilan-strategique.pdf">https://content.digitalwallonia.be/post/20190626100319/Bilan-strategique.pdf</a>   | 4 April 2022  |
| Digital Wallonia    | 2019 | Devenir Digital Wallonia Champion   | <a href="https://www.digitalwallonia.be/fr/publications/devenir-digital-wallonia-champion/">https://www.digitalwallonia.be/fr/publications/devenir-digital-wallonia-champion/</a>   | 17 April 2022 |
| Digital Wallonia    | 2019 | Thibaut Claes   | <a href="https://www.digitalwallonia.be/fr/personnes/thibaut-claes/">https://www.digitalwallonia.be/fr/personnes/thibaut-claes/</a>   | 18 April 2022 |
| Digital Wallonia    | 2019 | Thierry Geerts  | <a href="https://www.digitalwallonia.be/fr/personnes/thierry-geerts/">https://www.digitalwallonia.be/fr/personnes/thierry-geerts/</a>   | 5 April 2022  |
| Digital Wallonia    | 2020 | Découverte des lauréats de la seconde édition Tremplin IA POC's individuels                                       | <a href="https://www.digitalwallonia.be/fr/publications/dw4ai-tremplin-ia-2/">https://www.digitalwallonia.be/fr/publications/dw4ai-tremplin-ia-2/</a>   | 5 April 2022  |

| Institution                    | year    | Page title   | url   | Accessed      |
|--------------------------------|---------|--|---|---------------|
| Digital Wallonia               | 2020    | 10 projets d'intelligence artificielle retenus pour le premier appel Tremplin IA   | <a href="https://www.digitalwallonia.be/fr/publications/10-projets-tremplin-ia/">https://www.digitalwallonia.be/fr/publications/10-projets-tremplin-ia/</a>   | 23 April 2022 |
| Digital Wallonia               | 2021    | DigitalWallonia4.ai : bilan et actions   | <a href="https://www.digitalwallonia.be/fr/publications/digitalwallonia4-ai-home">https://www.digitalwallonia.be/fr/publications/digitalwallonia4-ai-home</a>   | 26 April 2022 |
| Digital Wallonia               | 2021    | DigitalWallonia4.ai : le 3ème appel à candidatures Tremplin IA   | <a href="https://www.digitalwallonia.be/fr/publications/dw4ai-tremplin-ia-3/">https://www.digitalwallonia.be/fr/publications/dw4ai-tremplin-ia-3/</a>   | 19 April 2022 |
| Digital Wallonia               | 2021    | Intelligence artificielle et industrie 4.0 , un écosystème riche en Wallonie,  | <a href="https://www.digitalwallonia.be/fr/publications/intelligence-artificielle-industrie-40/">https://www.digitalwallonia.be/fr/publications/intelligence-artificielle-industrie-40/</a>   | 6 March 2024  |
| Digital Wallonia               | 2022    | Les Carrefours de l'IA - l'IA, l'économie circulaire et durable  | <a href="https://www.digitalwallonia.be/fr/agenda/carrefours-ia-economie-circulaire/">https://www.digitalwallonia.be/fr/agenda/carrefours-ia-economie-circulaire/</a>   | 18 March 2022 |
| digitalwallonia4.ai            | 2022    | Indicateurs  | <a href="https://digitalwallonia4.ai/#entreprises-resultats">https://digitalwallonia4.ai/#entreprises-resultats</a>   | 22 June 2022  |
| Infopôle Cluster TIC           | 2022    | Infopôle   | <a href="https://clusters.wallonie.be/infopole/fr">https://clusters.wallonie.be/infopole/fr</a>   | 18 April 2022 |
| Kiwix                          | 2018    | Thelis SA Et Plusieurs Entreprises Wallonnes Lancent Le "Réseau IA", Collectif Entrepreneurial Wallon Consacré À L'intelligence Artificielle | <a href="https://www.kiwix.be/news/23/55/Thelis-SA-et-plusieurs-entreprises-wallonnes-lancent-le-reseau-ia-collectif-entrepreneurial-wallon-consacré-à-l'intelligence-artificielle">https://www.kiwix.be/news/23/55/Thelis-SA-et-plusieurs-entreprises-wallonnes-lancent-le-reseau-ia-collectif-entrepreneurial-wallon-consacré-à-l'intelligence-artificielle</a> | 19 March 2022 |
| Regional IT                    | 2021    | Jean-Philippe Parmentier prend les commandes de l'Infopole Cluster TIC   | <a href="https://www.regional-it.be/2021/03/11/jean-philippe-parmentier-prend-les-commandes-de-infopole-cluster-tic/">https://www.regional-it.be/2021/03/11/jean-philippe-parmentier-prend-les-commandes-de-infopole-cluster-tic/</a>   | 21 March 2022 |
| Service public de Wallonie     | 2021    | Le gouvernement valide le projet ARIAC pour une intelligence artificielle de confiance   | <a href="https://economie.wallonie.be/content/le-gouvernement-de-wallonie-valide-le-projet-«-ariac-digitalwallonia4ai-»-pour-une">https://economie.wallonie.be/content/le-gouvernement-de-wallonie-valide-le-projet-«-ariac-digitalwallonia4ai-»-pour-une</a>   | 29 March 2022 |
| Service public de Wallonie     | No date | Favoriser le déploiement des technologies de l'industrie 4.0   | <a href="https://www.wallonie.be/fr/plans-wallons/plan-de-relance-de-la-wallonie/projets/favoriser-le-dploiement-des-technologies-de-lindustrie-40">https://www.wallonie.be/fr/plans-wallons/plan-de-relance-de-la-wallonie/projets/favoriser-le-dploiement-des-technologies-de-lindustrie-40</a>   | 6 March 2024  |
| Union Wallonne des entreprises | 2021    | Coup d'accélérateur pour l'IA en Wallonie  | <a href="https://www.uwe.be/wp-content/uploads/2019/11/Article-IA.pdf">https://www.uwe.be/wp-content/uploads/2019/11/Article-IA.pdf</a>   | 16 April 2022 |



## Appendix 2. List of interviews

| Interviewee # | Professional profile   |
|---------------|--|
| 1             | Walloon Digital Affairs Minister   |
| 2             | AI expert, DigitalWallonia.4ai   |
| 3             | AI expert, DigitalWallonia.4ai   |
| 4             | Infopôle Cluster TIC   |
| 5             | Representative in the steer committee of DigitalWallonia.4ai; Digital Wallonia champion          |
| 6             | Agoria Wallonia  |
| 7             | Walloon public service (SPW), department of research; Digital Wallonia champion                  |
| 8             | Digital Expert, Walloon Business Union   |
| 9             | TRAIL; Digital Wallonia champion   |
| 10            | Director of the Belgian branch of an AI multinational company (GAFAM); Digital Wallonia champion |
| 11            | Manager of an AI consulting company  |
| 12            | Manager of an AI consulting company  |
| 13            | Digital expert, W.I.N.G. fund - SRIW   |
| 14            | Pôle Mecatech; AI Network; Digital Wallonia champion   |