THE DIGITAL DECADE POLICY PROGRAMME OF THE EUROPEAN COMMISSION

BDVA Position Paper

June 2023

BDV BIG DATA VALUE ASSOCIATION

1 EXECUTIVE SUMMARY

This paper has been written with the intention to present the position of the Big Data Value Association vis-à-vis the new Digital Decade strategy and Digital Decade Policy Programme of the European Commission.

BDVA welcomes the Digital Decade strategy, its targets, and ambitious objectives, as well as the policy programme scheme, combined with new funding instruments. The European Union (EU) can leverage on its two major internationally distinguishing strengths, i.e., a diversified business landscape and an ethics-driven regulatory framework. Nevertheless, the community represented by the Association has identified concerns and produced suggestions that shall increase the effectiveness of the policy programme.

The joint intervention by European and national policy makers, industry, research and civil society is considered a necessity. However, the regulatory efforts should be well calibrated and supported by targeted investments, in order to boost EU's business landscape and enable competition in a market that is jeopardised by large foreign players. Legislation enforcing European ethical values should be considered as a unique mid-term competitive advantage in the global digital marketplace, provided that it comes in a timely manner and supported with continued investments in the related research and innovation (R&D) domains.

This paper first suggests more convergence in terms of policies, with a chapter on legal interoperability in the legislative approach. The envisaged strategy shall incorporate stakeholders representing multiple levels of governance, from EU Institutions to local authorities, and consider the multitude of existing actors that offer vertical and cross-sectoral services and experimentation opportunities to public sector and industry, in particular to SMEs, thus enabling a diversified business landscape. Hence, the paper suggests BDVA i-Spaces[1], Digital Innovation Hubs, and Testing and Experimentation Facilities as the sandboxes that would support interconnecting all those governance level and open dialogue among all stakeholders.

For a sound implementation of the Digital Decade strategy, convergence is also required in investments for technology and ecosystems. The intent shall be of developing implementable strategies, frameworks and technical solutions that can sustain an ethical, open and democratic European digital economy. The new funding instruments should serve, combined and in coordination with the EU funding programmes, for increased data-sharing practices and a sound development of the European data-value chain. In relation to that, the paper stresses BDVA's position towards the importance of keeping SMEs central in the funding spectrum, while ensuring diversification of the funds available across the EU.

1 1 BDVA i-Spaces (2023): https://www.bdva.eu/I-Spaces

2 INTRODUCTION

The Big Data Value Association (BDVA) is a European industry-driven research and innovation community on Big Data, data value-chains, and Industrial AI. BDVA is also a unique platform for pre-competitive collaboration between industry and research, combining a research-oriented and experimental approach to data-driven innovation and a focus on competitiveness and technology adoption.

The Digital Decade Policy Programme (DDPP) is built on a fundament constructed by key legal instruments such as the Data Governance Act, the Digital Services Act, the Digital Markets Act and equally implementing financial instruments. Those are the Cohesion programmes, the Technical Support Instrument, the Digital Europe Programme, Horizon Europe and InvestEU but also new ones such as multi-country projects, the multi-country projects accelerator and the European Digital Infrastructure Consortia. The 'digital' and the 'financial' pillars are complemented by other policy and legal instruments falling under the domains of digital education, security, and green transition. On the other hand, the Digital Decade strategy is going to further influence legislative instruments, for instance, the proposal for the AI Act, the proposal for the Cyber Resilience Act, and subsequent legislative and financial initiatives on EU, national and international levels.

3 LEGAL INTEROPERABILITY IN LEGISLATIVE APPROACH

3.1 Digital transformation should allow for sufficient bottom-up and tailor-made approaches

The facilitation of digital transformation remains the core part of BDVA mission and the focus point of the DDPP. The transformation concerns all policy areas and therefore it benefits from coordinated policy, regulatory and legislative approaches taking into account the limitations imposed by the subsidiarity principle according to Article 5(3) of the Treaty of the European Union and Protocol (N° 2) on the application of the principles of subsidiarity and proportionality. While a top-down approach is vital for certain policy areas, due to the required scale and the effect of the proposed actions, one of the key competitive advantages of the EU remains its pluralism and multistakeholder environment. This allows for bottom-up inputs and a tailor-made approach to innovation, investment but also regulation, with respect to the regional strengths, challenges and opportunities. Keeping the local ecosystems engaged in the loop of the legislative process should provide legislators with the knowledge necessary for a detailed assessment of the impact of European strategies. Those actors that can leverage on the mobilisation and coordination of local ecosystems shall be identified in researchers, non-governmental bodies, NGOs and Digital Innovation Hubs, such as BDVA i-Spaces[2].

3.2 Interoperability is key for digital transformation

This tailor-made approach is possible only by fully respecting the industry's need for interoperability on various levels, including legal interoperability.[3] This conclusion corresponds with the general

2 More information about BDVA i-Spaces will be provided further in this Position Paper

3 This need was clearly stipulated and researched in the context of research projects such as the TRUSTS Project under Horizon 2020: https://www.trusts-data.eu/

objectives established in Article 3 of the DDPP 2030. BDVA encourages further and consistent efforts in that regard, with special focus on the concrete challenges of legal interoperability with respect to SMEs working on innovative technologies requiring testing.[4]

In general, the new and mature forms of multilateral collaboration, need to be developed and implemented with special attention to ensuring legal interoperability in the sense of guaranteeing horizontal and vertical ontological legal unity. This would require not only better coordination between the responsible authorities on Member States' level but also improved consistency of the various EU policy instruments (soft law) and their reflection in regulations and directives (hard law). This needs to be done based on formal criteria such as unified definitions, scope, derogations, etc. but equally importantly on the basis of thorough comparison and analysis on the combined effects of the instruments. For example, it is necessary to be objectively evaluated whether the combined burden on companies imposed by various due diligence regimes (under GDPR, the Digital Services Act, the AI Act, etc.) do not infringe the innovation principle and furthermore if the combination is truly effective for the pursued goal.

4 A MULTI-LEVEL APPROACH TO BALANCE REGULATION AND INNOVATION

4.1 Upcoming regulation may cause uncertainties and slow down innovation

The impact of EU policies on the European innovation landscape is difficult to predict as there currently are few opportunities for analysing the impact of upcoming regulations. A recurring perception among BDVA members is that the new regulations are creating confusion, disturbances and uncertainty. At the same time the national authorities might be struggling to both keep business running as usual in relationship to citizens and enterprises as well as analysing how upcoming regulations will affect their ongoing digitalisation efforts. This might lead to a situation in which innovation has to slow down to adapt to upcoming regulations. One example reported by BDVA members, is that for the tech companies in the robotics field working in the mobility field it will be critical to understand how the upcoming Machinery Regulation will interact with AI Act, Cyber Resilience Act and Data Act. This may cause difficulties to start adapting and ensure compliance when these Acts once they will enter into force.

4.2 Experimental approach to the multistakeholder collaboration

A possible way forward to address the above-mentioned problems is to empower and resource experimental sandboxes, such as BDVA i-Spaces, TEFs and other types of innovation hubs, as resources for not only developing new technology but also engaging national authorities to facilitate growth along all cardinals of the DDPP. This also opens for elaborating and assessing changing business models and can be done in the timeframe between the final version of a new piece of legislation is agreed upon by the Council and the Commission and taken into force; or even during the act is negotiated to create in-depth understanding of how different alternatives will impact innovation in relation to compliancy. An example of how the latter can be done can be found in Sweden and how four national

4 Some lessons could be learnt from the participation of some Member States' financial authorities in the cross-border regulatory sandbox under the framework of the Global Financial Innovation Network.

authorities conducted a policy lab with a national research institute to clarify the scope of the AI Act and the implications for planned AI services.[5]

4.3 Experiences from TEFs and innovation hubs prepare us for regulatory sandboxes

While such initiatives facilitate learning within the authorities on the acts themselves and the implications for compliancy, they also initiate a transition towards competences needed for organising regulatory sandboxes. Such competences involve, e.g., assessing societal needs and which digital innovations can be prioritised in relation to the needs for organising regulatory sandboxes, understanding, and evaluating source code, collaborating with other national authorities on the usage of data in general and specifically personal data as well as data governance of large, heterogeneous datasets of unknown quality, while balancing market surveillance with innovation facilitation.

The handling of personal data is going to be a key issue for national authorities as the regulatory sandboxes have allowed its usage for new purposes. This will facilitate new opportunities for the national authorities, but it will also be a wanted asset for other actors as they need more data points to comply with the requirements on data quality mandated by the upcoming AI Act. Managing such requests in a responsible way will require new competences as well as new resources.

In addition, BDVA supports the comprehensive development of innovation facilitators as a key milestone on the path to the digital decade, following the global development of new forms of anticipatory regulation such as digital sandboxes[6], regulatory nurseries, etc. It is important for the EU to quickly adopt and take advantage of such tools, environments, and mechanisms in order to become more attractive for investors, inventors and entrepreneurs.

4.4 The international dimension should not be left unconsidered

The Digital Decade targets are ambitious. They require focus on various levels of governance, not only at EU level but also on national, regional, and local level. This, however, does not mean that the EU and its sub-levels should be regarded as a close environment. The DDPP should not be considered as isolated from what is going on in other parts of the world. Hence, international relations and cooperation endeavours, such as the digital partnerships the EU has with third countries, should also be regarded as important for both funding and policy instruments.

Coordination is needed between the intra-EU levels, and this will be much easier when there is sufficient interoperability in approaches, so that it will be easier to share and adopt best practices. This, however, should not exclude the international sphere because, from an industrial perspective, it is not recommended to develop conflicting standards. That means, that not only the DDPP should observe the international dimension, but it should also set specific actions for the promotion and

5 Agency for Digital Government. Slutrapport: Uppdrag att främja offentlig förvaltnings förmåga att använda artificiell intelligens. Swedish only (2023).
https://www.digg.se/download/18.5b30ce7218475cd9ed39384/1674479294670/Slutrapport%20Uppdrag%20att%20främja%20offentlig%20förvaltnings%20förmåga%20att%20använda%20AI%20I2021-01825.pdf

6 A prime example for the capacity of a digital sandbox can be seen in the pilots organized by UK's FCA
https://www.fca.org.uk/firms/innovation/digital-sandbox

adoption of digital policies and the development of a vibrant economic ecosystem that relies on trustworthy, reliable and safe technology, both in the EU and outside its borders.

5 BDVA I-SPACES

5.1 BDVA i-Spaces align well with DDPP

Since the start of BDVA, the i-Spaces concept has been touted as an important vehicle for data-driven innovation. Some 38 i-Spaces have now been labelled, covering almost 20 countries. As previously mentioned, i-Spaces can be considered resources for not only developing new technology but also to engage national authorities to facilitate growth along all cardinals of the DDPP compass. BDVA's i-Spaces labelling process considers various dimensions: skills, legal, technical, application, business, and social aspects. Most of which align with the Digital Decade goals.

The local/national innovation level can be assessed much better by staff from an iSpace that speaks the same language, knows the innovation culture and has ties to companies and local regulations, but also have examples available of comparable earlier experiences. i-Spaces can therefore be the meeting point between regulators and innovators, by offering a proven experience on fostering collaboration and facing real challenges on data-driven experimentation.

On the innovators side, the i-Spaces should also support the market adoption of the emerging data spaces, which could be the turning points in setting rules and creating trustworthy environments in which local actors, including administrations, could move the first steps towards data spaces. Moreover, those and other hubs could be the enablers for a scale-up of data spaces towards internationalisations and cross-border data-sharing with the help, for example, of new funding instruments such as the Multi-Country Projects (MCPs).

Finally, i-Spaces have more and more the capacity to find and collaborate with other i-Spaces through the federation of data-driven innovation hubs implemented by the EUHubs4Data project[7], which can be a great asset in supporting successful MCPs.

5.2 Federated i-Spaces can support Multi-Country Projects

The federation of i-Spaces, which can be considered as an EU-wide ecosystems of data-driven innovation hubs, will be a very useful interface between EU policies, innovators and local administrations in Europe, and will provide the testing and experimentation solutions to the innovation needs as well as act as regulatory sandboxes as explained before.

When looking at this last point, the federation of i-Spaces will ensure the capillarity needed in translating EU policies into innovation and provide feedback to the legislators or national administrators who are co-developing such policies. In other words, the federation of i-Spaces shall be considered as a fundamental network of stakeholders whose actions serve as a measure of the effectiveness of planned policies as well as their implementation.

7 The EUHubs4Data project (2023): https://euhubs4data.eu/

BDVA's suggestion is therefore to explicitly involve i-Spaces and their federation when MCPs consider the involvement of European Digital Innovation Hubs, as this can leverage those projects by adding an additional and fundamental ecosystem that would otherwise potentially be missed.

6 NEW FUNDING INSTRUMENTS - ATTENTION FOR SMES AND FUNDING DIVERSIFICATION

6.1 The role of public and private venture capital and the need for alignment

The Path to the Digital Decade stipulates four actions: i) an expansion of the DESI instrument for monitoring progress, ii) the publication of the Commission annual report, iii) the publication of member states' bi-annual reports, and iv) the set-up of Multi-country projects (MCPs). The first three actions evaluate change (auditing) while the last one is a resource for change. This raises the question: how can MCPs facilitate transition along the four cardinals of the compass?

The Digital Transformation of Businesses goal explicitly includes "innovators" as a target group within all SMEs, which involves support for scale-ups, also stimulating EU Unicorns. When comparing to the US, approximately ten times more venture capital per capita is used oversea, and American companies acquire European companies much more often than the other way around. For the tech industry the relationship is even more striking[8]. Initiatives from the European Innovation Council[9] is one way of creating a vibrant market but needs to be used carefully as compensating the lack of private venture capital with public funding challenges international trade relations[10]. Besides venture capital, the EIC, EIE and related programs like Eurostars should therefore be explicitly aligned with the Digital Decade.

BDVA advocates for the continuity in investments through public and private collaboration and co-investments as a precondition for leveraging on EU's pluralism and multistakeholder environment.

6.2 The investment goals must be carefully coordinated

BDVA welcomes the new funding instruments of the DDPP, such as MCPs and EDIC[11]. MCPs will provide businesses with the opportunity to scale-up and take up new technologies, it will enable investments and development of connectivity and services as well as related products, ranging from chips to super-computers. As such MCPs align with existing initiatives for funding research, innovation and development as well as with two of the cardinals of the digital compass. However, it is not obvious how MCPs will facilitate citizens having adequate digital skills and the digitalisation of public services. Moreover, when combining the two latter cardinals, the following question arises: how will the MCPs be used to facilitate transformation of the competence and skills of authorities, not only on traditional

8 Demertzis, M., M. Domínguez-Jiménez and L. Guetta-Jeanrenaud (2021): Europe should not neglect its Capital Markets Union, Policy Contribution 13/2021, Bruegel

9 European Innovation Council: 2023 Work Programme, https://eic.ec.europa.eu/eic-2023-work-programme_en

10 United States, EU agree to start talks on critical minerals amid trade tensions, (2023), https://www.reuters.com/markets/commodities/amid-trade-dispute-us-eu-seek-minerals-agreement-talks-subsidies-2023-03-10/

11 Policy Programme: a Patch to the Digital Decade – Factsheet (2021): https://digital-strategy.ec.europa.eu/en/library/policy-programme-path-digital-decade-factsheet

ICT-skills (data management, programming, IT governance) but also including skills of policy development and compliancy as well as assessing innovation?

Regarding the European Digital Infrastructure Consortia (EDIC), the main question relates to how this instrument will enable directing public support to target sub-optimal investment situations (market failures). New assignments and rights for public administration might enable more rapid innovation and funding for transitioning towards sustainable markets. Addressing recurring market failures with specific regulation comes with a risk of fragmenting the market for both authorities and companies. Therefore, it is needed to have transparency between Member States to facilitate coordination and avoid sub-optimal investment situations.

6.3 Digital Decade can build upon many existing initiatives and stakeholders

MCPs and EDIC can also play a central role in boosting the creation of data spaces and promote good practices of data access and data utilization, such as ensuring the same data is available across the EU so that services are not locked to specific Member States or regions. BDVA suggests that the actions deriving from the DDPP will consider a strong engagement with the actors and initiatives involved in the creation of data spaces. Those are of different kinds, and a non-exhaustive list of stakeholders that shall be considered is composed as follows: members associations such as BDVA, FIWARE, International Data Spaces and Gaia-X (which together form the Data Spaces Business Alliance[12]); EU projects such as the Data Spaces Support Centre[13] and the vertical Data Spaces projects; the upcoming European Data Innovation Board; and the many SMEs, large companies, DIHs, research centres and public administrations engaged in the Data Spaces value chain.

Besides the implementation of data spaces, there are many other important initiatives that the Digital Decade can leverage on. MCPs and EDIC could focus on cross-border and international initiatives that promote the DDPP's aim of empowering businesses and people with human-centered digital technologies. One example is etami[14] (ethical and trustworthy artificial and machine intelligence), one of BDVA's initiatives, which is committed to translate European and global principles for ethical AI into actionable and measurable guidelines, tools and methods for trustworthy and ethical design development and deployment of AI systems. Through such initiatives, MCPs and EDIC would leverage on strong networks and enable the scaling-up of research efforts that would support the translation of EU policies and values into reliable and trustworthy engineering practices.

6.4 Funding opportunities for SMEs should be clearly communicated

From the interaction with the BDVA members we have also seen that the shifting regulatory landscape is blamed when the underlying frustration regards the lack of investment opportunities for SMEs. The EC demonstrates consistent efforts in promoting the support and scale up of SMEs, nevertheless the consultation conducted between the BDVA's members for the creation of this Position Paper shows that the SMEs feel the need for more clarity on funding opportunities, better communication and taking into consideration their specific challenges often linked to overregulation which hinders

12 Data Spaces Business Alliance (2023): https://data-spaces-business-alliance.eu/
13 Data Spaces Support Centre (2023): https://dssc.eu/
14 https://bdva.eu/Task-Force-etami

innovation. There is also a raising sense of application of double standards when big companies are concerned, especially US-based ones.

6.5 Funding should support more high-risk innovations

Another important issue which needs to be addressed by the DDPP regarding the desired and offered support for SMEs is related to recognizing and solving burdens to innovation stemming from the different culture in Europe. The EU is seen as not promoting enough individuals who take entrepreneurial risks and unfavourable to encourage the adoption of high-risk business plans which often are part of successful 'blue-sky' research initiatives.[15] As previously said, this is also reflected by the respective funding mechanisms at EU level which often hinder genuine innovation due to the strict risk mitigation requirements for the funded projects. In addition, the EU lags behind in creating fertile ground for scaling up SMEs. BDVA believes that further efforts need to be dedicated to this task, for instance by making use of useful tools such as scale-boxes[16].

7 CONCLUSIONS

With this position paper, BDVA suggests a set of recommendations to the European Commission's new Digital Decade strategy and Policy Programme. Those can be summarised as:

- Common efforts by European, national and local policy makers, industry, research and civil society are considered a necessity.
- Convergence and legal interoperability are required between regulatory and R&I policies with the intent of developing implementable strategies, frameworks and technical solutions that can sustain an ethical, open and democratic European data economy.
- Regulatory and innovation examples, such as the creation of data spaces, shall be seen as catalyst for generating economic and social value from data sharing, validating the effectiveness of EU policies on this matter.
- i-Spaces, TEFs, and innovation hubs, shall be considered as important means in achieving the DDPP targets. Those can be instrumental in creating links between the EU, national and local levels in terms of EU and national innovation policies and funding programmes.
- i-Spaces, TEFs, and innovation hubs can help SMEs and start-ups with understating and adapting to DDPP new regulatory and ethical requirements while facilitating innovation.
- The current and new funding instruments shall be diversified, and investments goals coordinated. It is important that the funding bodies will concentrate on initiatives representing large communities of experts that are working toward goals that match the aims of the DDPP.

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15 Hubert B. (2022), "Is Europe Just Not Good at Innovating?" https://berthub.eu/articles/posts/is-europe-just-not-good-at-innovating/

16 Nikhil Rathi's speech during 2021 FinTech Week https://www.fca.org.uk/news/speeches/levelling-playing-field-innovation-service-consumers-and-market

- BDVA advocates for the continuity in investments through public and private collaboration and co-investments as a precondition for leveraging on EU's pluralism and multistakeholder environment. More support in high-risk innovation is also encouraged.
- BDVA recommends investing in existing actions and organisations that work towards the implementation of data spaces, skills and human-centered technologies, such as trustworthy and ethical AI.

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This paper is the result of a cooperative work that gather inputs from BDVA members that participated in the following meetings and workshops with over 50 orgnisations involved:

- Meeting with BDVA i-Spaces and EUHubs4Data project – 07/02/23
- BDVA Activity Group meeting – 16/02/23

9 ABOUT BDVA

The Big Data Value Association – BDVA, (from 2021, DAIRO - Data, AI and Robotics aisbl), is an industry-driven international not–for-profit organisation with more than 240 members all over Europe and a well-balanced composition of large, small, and medium-sized industries as well as research and user organizations. BDVA focuses on enabling the digital transformation of the economy and society through Data and Artificial Intelligence by advancing in areas such as big data and AI technologies and services, data platforms and data spaces, Industrial AI, data-driven value creation, standardisation, and skills. BDVA has been the private side of the H2020 partnership Big Data Value PPP, it is a private member of the EuroHPC JU, itis also one of the founding members of the AI, Data and Robotics Partnership and a partner in the Data Spaces Business Alliance. BDVA is an open and inclusive community and is always eager to accept new members who share these ambitious objectives.

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