FSFE's Comments on the EU Digital Single Market Strategy

Contents

Introduction

The European Commission has set a goal to make the EU's single market fit for the digital age by adopting "A Digital Single Market Strategy" (COM (2015)195, 6 May 2015, hereinafter 'Strategy') which is aimed at bringing down regulatory barriers between 28 different national markets and unlock online opportunities in Europe. According to the Commission, a true Digital Single Market (DSM) can be achieved by taking the following actions:

1. **Digitalising industry** to a smart industrial system so that all industrial sectors should be able to integrate new technologies.
2. Developing **standards and interoperability** with a European push in areas such as the Internet of Things, cybersecurity, big data, and cloud computing.
3. Launching initiatives on the **"free flow of data"** and a **European Cloud** as a catalyst for growth, innovation and digitisation.
4. Unlocking the benefits of **high-quality e-services and advancing digital skills**.

Free Software Foundation Europe (FSFE) is a charity that empowers everyone to control technology. Software is deeply involved in all aspects of our lives; and it is important that this technology empowers rather than restricts. Free Software gives everyone the rights to use, understand, adapt and share software. FSFE helps individuals, businesses and organisations to understand how Free Software contributes to freedom, transparency, and self-determination. We enhance the rights of users and businesses by abolishing barriers to Free Software adoption, encouraging people to use and develop Free Software, and providing resources to enable everyone to further promote Free Software in Europe.

FSFE believes that Free Software is an essential prerequisite for the DSM and can provide the desired innovative potential that Europe needs in order to be successfully competitive in the global ICT market. Free Software is essential for Europe's own infrastructure because it empowers European industries to be in full control of their technology, irrespective of the particular vendor or manufacturer. Therefore Free Software holds a significant economic importance in the EU, where the majority of ICT actors, especially the small and medium-sized enterprises (SMEs), will benefit from innovative, simplified, and cost and time effective solutions provided by Free Software, instead of being dependent on the products and services provided by the biggest IT companies outside of Europe.

Hereby, FSFE reasserts that Free Software will help to achieve the majority of goals set by the Commission in order to achieve a truly digital single market. In particular:

1. Free Software is a catalyst of innovation. By providing means to use, share, study and improve software **Free Software is essential to the digitisation of all**

industry sectors, because it is easily accessible and enables to shape technology and digital services according to the specific needs of all actors across different industries.

2. To achieve the widest interoperability between services that businesses can use and rely on, **Europe needs standards that are open, minimalistic and implementable with Free Software**. In order for emerging areas such as Internet of Things, cloud and big data to be interoperable between industry sectors, Free Software must be implemented as early as possible.

3. **Free Software encourages digital thinking** and promotes research that will provide high-quality e-services and, most importantly, will enhance advanced digital skills through education.

To unleash the innovative potential of digital market, Europe needs an innovative solution that cannot be based on the outdated and harmful software models that stand in the way of innovation and digitisation. Hence, FSFE asks the Commission to take into consideration the following proposals in order to bring Europe into the global ICT market.

Copyright reform

As highlighted in the Strategy, existing differences in copyright law across member states constitute a significant obstacle for the DSM. Therefore, the Commission has set a goal to make legislative proposals before the end of 2015 that will reduce the differences between national copyright regimes and allow wider access to works across the EU, including further harmonisation measures.

Harmonised exceptions

In the Commission's Strategy the **need for harmonising exceptions** to copyright across member states is already highlighted as a measure to boost innovation in research and provide an incentive to create and invest while allowing transmission and consumption of content across borders[1]. FSFE fully supports the Commission in achieving this objective and points out that, to this aim, **full harmonisation of copyright limitations is required**.

The existing framework (under the auspices of Directive 2001/29/EC) is unclear, as it provides an exclusive list of non-mandatory exceptions from which member states can

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[1]Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "A Digital Single Market Strategy for Europe", COM(2015)192 p. 7.

'pick and choose'. This situation is far from being consistent across member states and in the long-term is unsustainable, as it creates an excessive burden on SMEs and start-ups who cannot enter the European-wide market due to the lack of the resources needed to comply with the variety of different rules in national copyright laws. The proposal from the Parliament[2], harmonising only *some* exceptions, will not bring any substantial relief to the existing situation, and will not bring the EU closer to the Digital Single Market, as it will produce only a slightly-less-fragmented framework.

In order to make legislation sustainable in the future, FSFE supports the introduction of an open norm interpretation of exceptions in special cases that do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the author or rightsholder (i.e. a three-step-test according to the Berne Convention). Due to the rapidly changing nature of a digital environment, it is impossible to foresee all the situations in which a copyright limitation could be justified. Hence an open norm interpretation, in addition to the harmonised list of exceptions, will provide a certain flexibility to the interpretation of legitimate use of works, and will ensure the necessary technological neutrality of copyright framework that is needed in order to bring copyright legislation up to date.

Hereby, **FSFE supports the direction taken by the Commission to achieve complete harmonisation of copyright exceptions** in order to adapt copyright to the digital age, and asks the Commission to avoid compromising on that goal when revising copyright legislation.

Text and data mining

Another point highlighted by the Commission in the Strategy is the need for a greater legal certainty in regard to text and data mining (e.g. copying of text and datasets in search of significant correlations or occurrences). FSFE asks the Commission to uphold this goal for copyright reform and to support a legislation that explicitly grants anyone that has legitimately obtained the right to access a protected work **the right to extract data** from it. This is an important element for achieving technological neutrality, because there is no advantage in treating digital documents differently than their analogue counterparts as this creates unnecessary burdens for researchers and educational institutions, and thus can significantly hamper innovation.

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[2]European Parliament resolution of 9 July 2015 on the implementation of Directive 2001/29/EC, 2014/2256(INI).

Strengthened copyright

Software patentability is another area of concern that needs to be addressed on a European level in order to unleash the full innovative potential of Europe. Despite the fact that software is explicitly excluded from patentability according to the European Patent Convention, software in Europe is *de facto* patented under "computer implemented invention". The European Patent Office (EPO) grants more than 5 000 patents yearly in the fields of "computer technology" and "digital communications"[3], that in practice cover software. Software patents in the form of "computer implemented inventions" have the highest growth rate, according to the EPO, and the number of granted software patents has been rising at a rate of 3 000 per year.[4]

Software is treated as "literary work" and is protected by copyright under Software Directive 2009/24/EC, thus making the additional protection through patentability unnecessary. Moreover this burdens innovators with extra costs and legal risks, and hinders market competitiveness. The loss of potential innovators and new actors on the digital market due to the unclear status of software patentability is a high price to pay for the EU.

FSFE wants to highlight the legislative actions taken on national level in order to tackle this issue, in particular the decision of the German Parliament in 2013 to effectively limit the patenting of computer programs, as copyright protection is already available[5] This decision was also welcomed and supported by German SME associations. Furthermore, several studies have shown that companies producing software do not deem patent protection as a useful mechanism spurring future inventive streams. On the contrary, companies find that software patents hinder the rate of innovation and lock-in the market in favor of few monopolistic companies[6].

FSFE asks the Commission to follow this example and propose a clear **requirement that software solutions shall not be patented under any unclear terms** implemented by the practice of the EPO, and to further strengthen copyright protection for software, so that **no rights received under copyright will be devalued by third parties' patents covering software** in "computer implemented inventions".

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[3]European Patent Office, "European patents granted 2005-2015 by field of technology" http://www.epo.org/about-us/annual-reports-statistics/statistics/granted-patents.html.

[4]FFII, "Software patents in Europe" http://swpat.ffii.org/int/intro/index.en.html.

[5]German Bundestag, Motion Proposed by the Parliamentary Groups of the CDU/CSU, SPD, FDP and BÜNDNIS 90/DIE GRÜNEN "Securing Competition and Innovation Dynamics in the Software Sector — Effectively Limiting the Granting of Patents on Computer Programs", Drucksache 17/13086, 16.04.2013, adopted in Bundestag on 7.05.2013, unofficial translation to English http://bikttest.datendunst.it/1713086_en.pdf.

[6]Reinier Bakels et al, "Study of the effects of allowing patent claims for computer-implemented inventions. Final Report and Recommendations", EC-DG Information Society, UNU-MERIT, Study for the European Commission, 2008.

Recommendations

As stated above, unharmonised sets of exceptions and limitations, technological protection measures, legal uncertainty in regard to text and data mining, and software patents are only few examples of how existing copyright law is hampering innovation, creativity, and the development of a digital single market for cultural goods. FSFE asks the Commission to take into account the issues highlighted in the resolution for copyright reform and approved by the European Parliament, but most importantly, to unleash the creative potential of Europe by taking an even bolder stand towards renewal of copyright legislation. In particular, FSFE asks the Commission:

1. To **uphold the principle of technological neutrality**, so that the same rights will be available for everyone regardless of the technology applied. In order to eliminate unjustified differences between digital and analogue usage which causes unnecessary complexity for all involved parties, **harmonised exceptions and limitations to copyright have to be equally applicable in both digital and analogue domains**. This will ensure that all industry sectors can make the most of legitimately accessed works.

2. To further **strengthen copyright protection of software** against arbitrary patents granted by the EPO, so that **software is excluded from patentability** according to the most internationally recognised instruments. Companies should be able to uphold all legitimate rights obtained through copyright and be able to use software in accordance with these rights without the fear to infringe third parties' patents.

Right to tinker

The Commission should take a definitive stance towards **the recognition of the "right to tinker"**; that is, the right of owners of a computing device to replace or supplement the software in this device according to their choice. This right is closely linked to the fundamental right to property enshrined in the Article 17 of the Charter of Fundamental Rights of the EU, i.e. everyone has the right to own, use, and dispose of his or her lawfully acquired possessions. The current trend towards 'locking-in' a device is alarming because it precludes innovators and companies from installing, developing and using the software of their choice on the hardware they own, thus precluding them from being in full control of their property. Some widely used technical protection measures make it technically impossible to install new software not 'authorised' by the hardware manufacturer. In addition, most hardware is sold with little or no information about its specifications, so that the purchaser is unable to inspect the acquired hardware. This situation is a major obstacle towards maximising the innovative potential in Europe

because it fundamentally hinders creation of new goods and services based on existing technology.

The right to tinker constitutes an important incentive to create and innovate, and it **allows businesses to be in full control of their infrastructure**, i.e. the services and facilities necessary to conduct their business that are inevitably reliable on the hardware and software of their choice. It is important to ensure that hardware manufacturers (mostly located outside of Europe) do not place arbitrary restrictions on the owners of devices, i.e. on potential innovators and companies providing goods and services based on this hardware. It is important to ensure that European innovators are not only users of technology, but are able to develop new solutions based on existing technology they own.

In order to adequately safeguard this fundamental right to property, hardware manufacturers have to be required to provide the specifications of their products in order to enable the owner to use and develop software that is interoperable with their computing devices. Moreover, the copyright exceptions covering reverse engineering of software (articles 5(3) and 6 of directive 2009/24/EC) should also be clarified to provide more legal certainty for software developers to make interoperable software.

FSFE reasserts that software is, without any doubt, a major driver for the digital single market, digital innovation and digitisation of all European industries, and therefore it is crucial to attain a legal framework that prevents hardware vendors from placing any arbitrary, unnecessary and disproportionate restrictions on its use.

Recommendations

FSFE asks the Commission to recognise and safeguard the **right to tinker** in the spirit of Article 17 of the Charter of Fundamental Rights of the EU, so that businesses are able to control their infrastructure, and as an important incentive for innovation.

Interoperability and standardisation

The Strategy recognises that, in order to provide support for new technologies, there is a need for a European approach in the standardisation. FSFE wants to stress that in order for Europe to achieve digital single market and be competitive on the global IT market, it is necessary to ensure that standards are not developed and applied nationally or regionally, but reflect the global nature of IT sector. Therefore, the solution that Europe needs is the implementation of standards that are **open, minimalistic and**

implementable with Free Software. These standards will allow companies to harvest the innovative potential of global cooperation and give it back to the market, at the same time allowing the widest competition of goods and services. These standards are necessary for Free Software to operate and provide its benefits to the digital single market.

Hereby FSFE wants to reinstate that Free Software will also provide the necessary tools to unlock the innovative potential of software related services that constitute a larger share of potential revenue than the income generated through collecting software usage licence fees. To have a competitive market for this kind of services, both clients and providers need to be able to freely choose different business partners, and that requires a level of interoperability that only Free Software can provide. Europe needs a solution that encompasses the full potential of technology and community-based collaboration, that is Free Software, which allows service provision without any restrictions.

Consequently, Europe needs realistic and easily implementable solutions that have proved their longevity, but not at the expense of other competitors or through the market abuse.

In previous years, FSFE supported the Commission in the antitrust case about Microsoft, and their dominant position in the desktop operating system, including as a third party in the European Court of Justice (ECJ)[7]. Despite the success achieved by the Commission against Microsoft in that case, it took a considerable amount of time and effort. FSFE cannot provide such assistance every time a vendor abuses its position. In order to avoid such time-lengthy and costly consequences to achieve desirable interoperability ex-post, it is in the interest of the majority of stakeholders that the Commission maximises its efforts to avoid the possibility of vendor lock-in and anti-competitive behaviour on the digital market from the beginning, especially in such emerging areas as Internet of Things and the European Cloud initiative. To achieve that aim, FSFE asks the Commission to implement **standards that are open, minimalistic and implementable with Free Software** in order to avoid unnecessary complications that only the biggest industry players can afford to manage.

- **Open** Standards will empower European industries to compete on the global market. Open Standards have already proven themselves: besides the obvious example of the Internet, it is worth mentioning that several of the biggest and most successful IT players, who have built their software model on either Free Software or proprietary equivalent, are based on Open Standards.

- It is important to implement Open Standards that are **minimalistic**[8] because this will enable the majority of European IT actors, that are SMEs, to adapt them, and

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[7]ECJ, Microsoft Corp. v European Commission, T-167/08, 27.06.2012.

[8]Bernhard Reiter, "The minimal principle: because being an open standard is not enough", 27.02.2014 https://fsfe.org/activities/os/minimalisticstandards.en.html.

most importantly, to understand them. Overcomplicated and lengthy standards developed outside of Europe will take extra time and resources to be efficiently implemented and understandable for European SMEs, the majority of which do not have such capacity to fully follow the complex specification of a standard. Simply trying to import and implement such standards will create extra burdens to the digitisation of European industries and prevents new actors from entering the market because companies are burdened by costly specifications or the need to invest in new infrastructure. Therefore, in order to digitalise industries cost efficiently, while at the same time ensuring the competitiveness and independence of European companies, the implemented standards have to be both open and minimalistic.

- **Implementable with Free Software**: Another worrisome point is the position that the Strategy takes on **standard essential patents** (SEPs), calling them "*an increasingly important feature in standardisation*" and "*an important element of the business model in terms of monetising investment in research and innovation*", while supporting the "*need for a balanced framework for negotiations between right holders and implementers of standard essential patents in order to ensure fair licensing conditions*"[9]. The problems caused by SEPs include a high possibility of vendor lock-in and anti-competitive behaviour, as SEPs can confer significant market power on their holders. Licensing under 'fair, reasonable and non-discriminatory' (FRAND) terms, but including a royalty-payment requirement, is often presented as a way to balance the interests of the market with those of patent owners. However royalty-based FRAND serve only the interests of a handful of the biggest companies - most often based outside of Europe - providing no benefits to the local European actors, the majority of which are SMEs. Furthermore, royalty-based FRAND licensing has been shown to be detrimental and incompatible with Free Software.[10] This is a major obstacle for achieving the widest competition of goods and services on the digital market, as Free Software actors should be able to compete on the same conditions as their proprietary counterparts. Consequently, there are no legitimate reasons to uphold such practices as SEPs and royalty-based FRAND.

Recommendations

FSFE asks the Commission to use the whole potential of **Open Standards that are minimalistic and implementable with Free Software**, and apply them to cloud, big data and the Internet of Things. It is important to avoid a situation of standards fragmentation and vendor lock-in from the beginning. As the idea of interoperability is

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[9]COM(2015)192 p. 15.

[10]Ian Mitchell, Stephen Mason, "Compatibility Of The Licensing Of Embedded Patents With Open Source Licensing Terms", IFOSSLR, 2011.

essential to the concept of Free Software, the situation of vendor lock-in by using Free Software is eliminated.

Free flow of data between systems and services

Portability of data

The Strategy highlights the lack of open and interoperable systems and services, and of data portability. In addition, the Strategy acknowledges the lack of clarity over rights to use data, and that the restrictions to free movement of data on grounds other than privacy are often not addressed. According to the Commission, the portability of data between different services and service providers is important in order to avoid private and commercial users, and their data, from being locked into a particular provider.[11]

In regard to this point, FSFE supports decentralised systems of computing where the data storage is shared between several entities (e.g. 'peer-to-peer' systems or distributed systems), as this solution shares the burden of maintaining the network and distributing data in the most reliable and secure way. In this context, the failure of one entity would not entail the complete disturbance of the whole system or loss of all data. This solution will most efficiently provide relief to the concerns of users and businesses relating to security, highlighted in the Strategy. Also, because such decentralised system with shared maintenance is low-cost, it will not require businesses to invest in costly specifications or new infrastructure. This will result in a more efficient and widespread adoption of computing solutions across different industries.

As highlighted in the Strategy, users and businesses need to be able to extract their data from the service at any time without experiencing lock-in or being stuck in a specific technical solution. Open standards for formats and protocols are necessary to guarantee this. However, without the source code of the programs used to deal with user data, this is impractical. This is why programs available to exploit exported data should be available under a Free Software License so that data can be transferred to a different provider without being lost.

Hereby, FSFE wants to highlight the ongoing legal reform in France derived from the need to safeguard users' right to extract their data from any content provider and import it to another one in an open standard format[12]. FSFE asks the Commission

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[11] A Digital Single Market Strategy for Europe - Analysis and Evidence, SWD(2015)100 final, 6.05.2015, p. 65.

[12] Conseil National du Numérique, Projet de loi pour une République numérique, Article 12 - Portabilité des données, 26.09.2015 https://www.republique-numerique.fr/consultations/projet-de-loi-numerique/consultation/consultation/opinions/section-2-portabilite-des-donnees/article-12-portabilite-des-donnees/versions/consacrer-un-droit-effectif-a-la-portabilite.

to follow this example and safeguard the aforementioned **right to extract data in an Open Standard format**, as this provision will ensure the widest competition between different service providers on the digital market based on the free flow of data.

Open Science

Another point acknowledged by the Commission is access to public data that is said to help drive innovation[13]. It is important to include software developed with public funds into the list of public data that needs to be widely accessible, in order to effectively boost innovation on the digital market. Research that has been paid for with taxpayers' money should be made publicly available in order for innovators to build on it and return better goods and services to the market.

FSFE wants to reinstate the importance of Free Software to innovation and development of online services in the fast-paced IT market, and asks the Commission to include a specific requirement for **all publicly funded software to be released as Free Software**. This requirement will also enhance the exchange of knowledge and European research results, as Free Software is based on the ability to use, study, share and improve software according to the needs of users, businesses and public bodies themselves.

FSFE wants to stress that Free Software is the major component and driver for innovation in digital age. Furthermore, it is noteworthy to highlight that the European Organization for Nuclear Research (CERN), an institution that is at the forefront of scientific and technological advancement, is basing its infrastructure on Free Software and has a long tradition of Open Access. This practice should be encouraged and promoted by public institutions in order to unleash the potential of the planned "European Open Science Cloud" in the EU.

Recommendations

In order to achieve the greatest interoperability between systems and services, FSFE asks the Commission to:

1. **Support decentralised solutions to the data portability based on Free Software** that will provide relief to the data security concerns, and require no extra maintenance costs from SMEs in order to be implemented.
2. Ensure everyone's **right to extract data in an Open Standard format** to ensure data portability and to avoid vendor lock-in.

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[13]COM(2015)192 p. 15.

3. Require that **all publicly funded software to be released as Free Software** and ensure that the **European Cloud initiative, including the European Open Science Cloud, is based on Free Software**.

This will ensure the greatest variety and competition of goods and services on the market as it will induce businesses to develop solutions based on public data for both the public and private sector.

e-Government and inclusive e-Society

European Interoperability Framework

The Strategy highlights the need to do more in order to modernise public administrations, achieve cross-border interoperability, and facilitate easy interaction with citizens[14]. Here, FSFE wants to reinstate the attempt of European Interopreability Framework (EIF) to include more Free Software and Open Standards solutions in the public sector in the EU by encouraging European public administrations to prefer "open specifications" when establishing public services. In addition EIF ISA2 proposal promotes the principle of "openness" and the reuse of software solutions[15]. Member states and the EU are called to step up joint efforts to avoid market fragmentation and ensure cross-border or cross-sector interoperability in the implementation of legislation, and to promote commonly agreed ICT solutions[16].

It is noteworthy that several member states have implemented Free Software solutions for public administrations in their national legislations (e.g. the UK Government ICT Strategy promotes procuring Free Software solutions for governmental infrastructure[17], and the Italian government's "Guidelines on comparative evaluation [of software]" require public administrations to choose Free Software by default[18]. FSFE is in strong favour of such national developments and asks the Commission to support the principle of "openness" in public services by prioritising Free Software in order to ensure that public administrations are interconnected through reusable and distributable solutions.

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[14]COM(2015)192 p. 16.

[15]Proposal for a decision of the European Parliament and of the Council establishing a programme on interoperability solutions for European public administrations, businesses and citizens (ISA2) Interoperability as a means for modernising the public sector, COM(2014)367 final, 26.06.2015, p. 5.

[16]COM(2014)367 final, recital 19.

[17]Cabinet Office, "Government ICT Strategy", 2011 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85968/uk-government-government-ict-strategy_0.pdf.

[18]Italian Digital Agency, "Codice dell'Amministrazione digitale", 193/2013DIG, 6.12.2013 http://www.agid.gov.it/sites/default/files/linee_guida/circolare_agid_63-2013_linee_guida_art_68_del_cad_ver_13_b.pdf.

According to the Commission's plans, the EIF is to be revised and extended, in particular with other instruments to be shared by national administrations such as the European Interoperability Reference Architecture (EIRA)[19], a metamodel for building interoperable e-Government systems that is based on "open standard". FSFE welcomes the further expansion of the 'best practices'; however, we ask the Commission to follow the example of aforementioned member states and to **uphold and strengthen the promotion of Free Software in the public sector** when revising the EIF.

Free Software as the tool for the greatest transparency and interoperability of cross-border public services will prevent unnecessary architectural complexity and fragmentation across public ICT solutions. Free Software should not only be treated as an alternative to the proprietary solutions in the EIF, but instead should be further encouraged and prioritised as a means for boosted innovation and a basis for emerging new services. Achieving the utmost interoperability by solely applying "open standards" is not enough. Only once these standards are **open**, **minimalistic** and **implementable with Free Software**, can they be easily adapted by the majority of stakeholders.

Recommendations

In order to achieve the easiest way to interact with public administrations, citizens and businesses have to be able to choose the software of their choice. Choosing Open Standards for software, data, and document formats in public ICT solutions is the best way to achieve the widest digital participation and an inclusive e-society because it avoids burdensome obstacles and imposed extra-costs to effectively interact with and within the public sector. However, in order to use the potential of Open Standards to the widest extent, these standards need to be minimalistic and implementable with Free Software, as the latter will help to achieve the biggest cross-border interoperability for communication with the public sector in member states. Therefore, FSFE asks the Commission to explicitly include the requirement to **prioritise Free Software in public procurement as the most favourable ICT solution.**

Digital skills

The Strategy highlights the shortage of ICT professionals and the urgent need to address the lack of essential digital skills. Furthermore, the Draft Report "New priorities for European cooperation in education and training" acknowledges the importance of creation

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[19]SWD(2015)100 final, p. 68.

of open digital educational resources and high quality educational software to address the need to boost digital skills[20].

FSFE believes that Free Software is the solution to the pressing need to increase the level of ICT professionalism in Europe and thus asks the Commission to support the use of Free Software in schools and educational institutions. As mentioned above, Free Software is based on principles that everyone can **use** software and run it for any purpose, **study** how it works and adapt it to the needs, **share** it with others, and **improve** it if necessary. These principles promote independent thinking, adaptability to the concrete needs of users, and sharing the knowledge within the community.

Free Software promotes thinking and using a program outside of a concrete application, i.e. the capability to adapt to any software: an essential skill in the fast-paced digital environment. Due to its nature, Free Software is the best solution for promoting the widest digitisation of all sectors in society - from industry to education - as it is easy to administer, redistribute, modify and adapt to specific needs without such obstacles as licencing fees or additional costly software maintenance agreements.

It is important to treat every user of technology as a potential innovator and developer, and the easiest way to empower industries is to promote the use of Free Software across all sectors.

Recommendations

FSFE asks the Commission to **promote the use of Free Software in schools and other public educational institutions** as Free Software will enable the development of important technical and digital skills with the necessary flexibility to adapt to the concrete needs of a particular educational institution at a low cost. European educational system should be aimed at empowering students by teaching them core concepts, and treat them as potential innovators by encouraging tinkering, instead of training them to use specific piece of software and to stay solely as "consumers" of technology.

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[20]Draft 2015 Joint Report of the Council and the Commission on the implementation of the Strategic framework for European cooperation in education and training (ET2020), New priorities for European cooperation in education and training, COM(2015)408 final, SWD(2015)161 final, 28.08.2015.