



**2018/2088(INI)**

7.9.2018

# **AMENDMENTS**

## **1 - 59**

**Draft opinion**  
**Bolesław G. Piecha**  
(PE623.609v01-00)

A comprehensive European industrial policy on artificial intelligence and robotics  
(2018/2088(INI))



**Amendment 1**  
**Urszula Krupa**

**Draft opinion**  
**Recital A**

*Draft opinion*

A. whereas artificial intelligence (AI) is to become a technological, economic, social and obviously ethical revolution not only in Europe but also all over the world;

*Amendment*

A. whereas artificial intelligence (AI) is to become a technological, economic, social and obviously ***psychological and*** ethical revolution not only in Europe but also all over the world;

Or. pl

**Amendment 2**  
**Catherine Bearder**

**Draft opinion**  
**Recital A**

*Draft opinion*

A. whereas artificial intelligence (AI) is to become a technological, economic, social ***and obviously ethical*** revolution not only in Europe but also all over the world;

*Amendment*

A. whereas artificial intelligence (AI) is to become a technological, economic ***and*** social revolution, ***with obvious ethical repercussions***, not only in Europe but also all over the world;

Or. en

**Amendment 3**  
**Luke Ming Flanagan**

**Draft opinion**  
**Recital A**

*Draft opinion*

A. whereas artificial intelligence (AI) ***is to*** become a technological, economic, social ***and obviously ethical*** revolution not only in Europe but also all over the world;

*Amendment*

A. whereas artificial intelligence (AI) ***will*** become a technological, economic ***and*** social revolution not only in Europe but also all over the world, ***it must also be***

*guided by ethics;*

Or. en

**Amendment 4**  
**Mireille D'Ornano**

**Draft opinion**  
**Recital A**

*Draft opinion*

A. whereas artificial intelligence (AI) is *to become* a technological, economic, social and obviously ethical revolution not only in Europe but also all over the world;

*Amendment*

A. whereas artificial intelligence (AI) is *already causing* a technological, economic, social, *societal* and obviously ethical revolution not only in Europe but also all over the world;

Or. fr

**Amendment 5**  
**Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

**Draft opinion**  
**Recital A**

*Draft opinion*

A. whereas artificial intelligence (AI) is *to become* a technological, economic, social and obviously ethical revolution not only in Europe but also all over the world;

*Amendment*

A. whereas artificial intelligence (AI) is *already* a technological, economic, social and obviously ethical revolution not only in Europe but also all over the world;

Or. fr

**Amendment 6**  
**Stefan Eck**

**Draft opinion**  
**Recital A a (new)**

*Draft opinion*

*Amendment*

***Aa. whereas the increasing integration of robotics in human systems requires strong policy guidance on how to maximize the benefits and minimize the risks for society and ensure a safe, equitable development of artificial intelligence;***

Or. en

**Amendment 7**  
**Luke Ming Flanagan**

**Draft opinion**  
**Recital A a (new)**

*Draft opinion*

*Amendment*

***Aa. whereas the development of artificial intelligence (AI) must continue apace, and the conditions created in the European Union to lead that development, cognisance must always be taken also of the potential negative effects of the use of AI;***

Or. en

**Amendment 8**  
**Arne Gericke**

**Draft opinion**  
**Recital A a (new)**

*Draft opinion*

*Amendment*

***Aa. whereas the market maturity of artificial intelligence represents, ethically and morally, the biggest revolution since the steam engine and the computer, one which needs to be discussed in depth at a social level;***

Or. de

**Amendment 9**  
**Stefan Eck**

**Draft opinion**  
**Recital A b (new)**

*Draft opinion*

*Amendment*

***Ab. whereas without adequate risk assessment and mitigation, AI may pose a threat to existing vulnerabilities in our economic systems and social structures;***

Or. en

**Amendment 10**  
**Mireille D'Ornano**

**Draft opinion**  
**Recital B**

*Draft opinion*

*Amendment*

B. whereas AI is key to turning Europe into a 'start-up continent' by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records;

B. whereas AI is key to turning Europe into a 'start-up continent' by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records; ***whereas Europe is currently lagging behind North America and Asia in terms of research and patents in the field of artificial intelligence;***

Or. fr

**Amendment 11**  
**Soledad Cabezón Ruiz**

**Draft opinion**  
**Recital B**

*Draft opinion*

B. whereas AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records;

*Amendment*

B. whereas AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, ***making it possible to anticipate socio-economic changes***, in particular in the areas of health technology, healthcare services and programmes, ***and hence the reorganisation of healthcare and health systems***, drug discovery, robotic and robot-assisted surgery, ***treatment of chronic diseases***, and medical imaging and records;

Or. es

**Amendment 12**

**Miroslav Mikolášik, Peter Liese, Cristian-Silviu Buşoi, Alojz Peterle, Elisabetta Gardini**

**Draft opinion**

**Recital B**

*Draft opinion*

B. whereas AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records;

*Amendment*

B. whereas AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records ***as well as securing sustainable environment and safe food production***;

Or. en

**Amendment 13**

**Urszula Krupa**

**Draft opinion**

**Recital B**

*Draft opinion*

B. whereas AI is key to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records;

*Amendment*

B. whereas AI is key, ***in industry and services associated with high technology***, to turning Europe into a ‘start-up continent’ by exploiting the latest technologies to generate growth in Europe, in particular in the areas of health technology, healthcare services and programmes, drug discovery, robotic and robot-assisted surgery, and medical imaging and records;

Or. pl

**Amendment 14**  
**Mireille D'Ornano**

**Draft opinion**  
**Recital C**

*Draft opinion*

C. whereas the development of AI technologies ***may*** help to improve the lives of people with disabilities and address social challenges such as our ageing population by making health technology more precise and effective in providing healthcare;

*Amendment*

C. whereas the development of AI technologies ***might, among the benefits they would be likely to bring***, help to improve the lives of people with disabilities and address social challenges such as our ageing population by making health technology more precise and effective in providing healthcare;

Or. fr

**Amendment 15**  
**Urszula Krupa**

**Draft opinion**  
**Recital C**

*Draft opinion*

C. whereas the development of AI technologies may help to improve the lives of people with disabilities and address

*Amendment*

C. whereas the development of AI technologies may help to improve the lives of people with ***chronic illnesses and***

social challenges such as our ageing population by making health technology more precise and effective in providing healthcare;

disabilities and address social challenges such as our ageing population by making health technology more precise and effective in providing healthcare;

Or. pl

**Amendment 16**  
**Boleslaw G. Piecha**

**Draft opinion**  
**Recital C a (new)**

*Draft opinion*

*Amendment*

***Ca. whereas there is a broad catalogue of possible applications of the artificial intelligence and robotics in medical care, such as: managing medical records and data, performing repetitive jobs (analysing tests, X-Rays, CT scans, data entry), treatment design, digital consultation (such as medical consultation based on personal medical history and common medical knowledge), virtual nurses, medication management, drug creation, precision medicine (as genetics and genomics look for mutations and links to disease from the information in DNA), health monitoring, healthcare system analysis, etc.;***

Or. en

**Amendment 17**  
**Sirpa Pietikäinen**

**Draft opinion**  
**Recital C a (new)**

*Draft opinion*

*Amendment*

***Ca. whereas accessibility does not mean same services and appliances for all; whereas the accessibility of AI and***

*robotics is based on inclusive planning and design; whereas the user's needs, wishes and experiences need to be the starting point of the design;*

Or. en

**Amendment 18**  
**Soledad Cabezón Ruiz**

**Draft opinion**  
**Recital D**

*Draft opinion*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

*Amendment*

D. whereas there are strong ethical **and legal** concerns about the autonomy of robots and their impact on the doctor-patient relationship ***which have not yet been properly addressed at EU level, in particular as regards the protection of patients' personal data, liability, and the new economic and employment relationships that will be brought about;***

Or. es

**Amendment 19**  
**Stefan Eck**

**Draft opinion**  
**Recital D**

*Draft opinion*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

*Amendment*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship ***and on health in the workplace as AI tools can create isolation of the workers and a deterioration of working conditions notably due to a loss of autonomy or due to an increased intensification of the work;***

**Amendment 20**  
**Mireille D'Ornano**

**Draft opinion**  
**Recital D**

*Draft opinion*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

*Amendment*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship; ***whereas, more generally, there is a need to construct a legal and ethical framework for artificial intelligence;***

Or. fr

**Amendment 21**  
**Urszula Krupa**

**Draft opinion**  
**Recital D**

*Draft opinion*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

*Amendment*

D. whereas there are strong ethical ***and psychological*** concerns about the autonomy of robots, ***with their obvious lack of human empathy***, and their impact on the doctor-patient relationship;

Or. pl

**Amendment 22**  
**Miroslav Mikolášik, Peter Liese, Alojz Peterle, Elisabetta Gardini**

**Draft opinion**  
**Recital D**

*Draft opinion*

*Amendment*

D. whereas there are strong ethical concerns about the autonomy *of robots and their impact on the doctor-patient relationship*;

D. whereas there are strong ethical concerns about the *use of word 'autonomous' for complex AI systems since the autonomy as such can only be attributed to human beings*;

Or. en

### **Amendment 23**

**Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

#### **Draft opinion**

##### **Recital D**

###### *Draft opinion*

D. whereas there are strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

###### *Amendment*

D. whereas there are **very** strong ethical concerns about the autonomy of robots and their impact on the doctor-patient relationship;

Or. fr

### **Amendment 24**

**Arne Gericke**

#### **Draft opinion**

##### **Recital D a (new)**

###### *Draft opinion*

###### *Amendment*

***Aa. whereas the introduction of artificial intelligence in the area of health in particular must always be based on the 'man operates machine' principle of responsibility;***

Or. de

### **Amendment 25**

**Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

#### **Draft opinion**

**Recital D a (new)**

*Draft opinion*

*Amendment*

***Da. whereas Europe and some Member States are already lagging far behind in the field of AI;***

Or. fr

**Amendment 26  
Sirpa Pietikäinen**

**Draft opinion  
Recital D a (new)**

*Draft opinion*

*Amendment*

***Da. whereas the risks of AI have not been studied enough;***

Or. en

**Amendment 27  
Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

**Draft opinion  
Recital D b (new)**

*Draft opinion*

*Amendment*

***Db. whereas the example of other countries forging ahead in the field of AI is proof of a very serious disregard for ethical issues;***

Or. fr

**Amendment 28  
Miroslav Mikolášik, Peter Liese, Cristian-Silviu Buşoi, Alojz Peterle, Elisabetta Gardini**

**Draft opinion  
Paragraph –1 (new)**

*Draft opinion*

*Amendment*

**-1. *Underlines that any revolutionary technological progress, particularly in the field of AI and robotics, shall serve human wellbeing;***

Or. en

**Amendment 29**

**Miroslav Mikolášik, Peter Liese, Cristian-Silviu Buşoi, Alojz Peterle, Elisabetta Gardini**

**Draft opinion**

**Paragraph –1 a (new)**

*Draft opinion*

*Amendment*

**-1a. *Stresses that AI systems and robots are innovative technological means to improve people's lives, grow the economy, and address challenges in health, environment, climate change, food safety among many others with human agent being always responsible for their use;***

Or. en

**Amendment 30**

**Miroslav Mikolášik, Peter Liese, Cristian-Silviu Buşoi, Alojz Peterle, Elisabetta Gardini**

**Draft opinion**

**Paragraph 1**

*Draft opinion*

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European 'artificial intelligence ecosystem';

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European 'artificial intelligence ecosystem' ***in line with the Statement on Artificial Intelligence, Robotics and 'Autonomous' Systems published by European Group on Ethics in Science and New Technologies in March 2018 and thoroughly address issues of safety,***

*security, prevention of harm and mitigation of risks, human moral responsibility, governance and regulation of AI and robots;*

Or. en

**Amendment 31**  
**Nicola Caputo**

**Draft opinion**  
**Paragraph 1**

*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’; ***believes that such an action plan will also need to cover matters related to the environmental sustainability of the production and disposal of AI devices and their use in healthcare contexts;***

Or. it

**Amendment 32**  
**Mireille D’Ornano**

**Draft opinion**  
**Paragraph 1**

*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’; ***calls for public and private enterprises in the Member States to occupy a significantly more prominent place in international research into AI;***

**Amendment 33**  
**Soledad Cabezón Ruiz**

**Draft opinion**  
**Paragraph 1**

*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’ ***to encourage coordination and hence exploit the socio-economic development opportunities being opened up for the EU by this new field;***

Or. es

**Amendment 34**  
**Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

**Draft opinion**  
**Paragraph 1**

*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States ***urgently*** to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’ ***and an environment which does not inhibit innovative VSEs and SMEs;***

Or. fr

**Amendment 35**  
**Stefan Eck**

**Draft opinion**  
**Paragraph 1**

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*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’ ***in association with all relevant stakeholders including patient advocacy groups***;

Or. en

**Amendment 36**  
**Luke Ming Flanagan**

**Draft opinion**  
**Paragraph 1**

*Draft opinion*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem’;

*Amendment*

1. Calls on the Commission and the Member States to draw up a fully comprehensive EU Action Plan aimed at creating a European ‘artificial intelligence ecosystem, ***a plan that also addresses all those ethical concerns***;

Or. en

**Amendment 37**  
**Stefan Eck**

**Draft opinion**  
**Paragraph 1 – point 1 (new)**

*Draft opinion*

*Amendment*

***(1) Special attention should be paid to the use of "big data" in health with the aim to maximise the opportunities it can bring - such as improving the health of individual patients as well as the performance of Member States' public health systems - without lowering ethical standards and without attempting against***

*the privacy or safety of citizens;*

Or. en

**Amendment 38**  
**Arne Gericke**

**Draft opinion**  
**Paragraph 1 a (new)**

*Draft opinion*

*Amendment*

***1a. Warns strongly against any attempt to equip machines employing artificial intelligence with some kind of 'personality', thereby exonerating producers such as the people who operate them from responsibility;***

Or. de

**Amendment 39**  
**Arne Gericke**

**Draft opinion**  
**Paragraph 1 b (new)**

*Draft opinion*

*Amendment*

***1b. Calls on the Council and the Commission to restrict the amount of time that 'artificial intelligence' and robotics are used on people in the health sector and in care and to guarantee that personal care continues to be provided by human carers;***

Or. de

**Amendment 40**  
**Elena Gentile**

**Draft opinion**

## Paragraph 2

### *Draft opinion*

2. Stresses, however, that the existing system for the approval of medical devices **not be** adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary;

### *Amendment*

2. Stresses, however, that the existing system for the approval of medical devices **is not** adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary **in order to establish the framework for determining the respective liability of the user (doctor/professional), the producer of the technological solution, and the healthcare facility offering the treatment, in relation to the patient, the object being to ease the position for the patient, should he or she be harmed, by making it possible to gather the necessary evidence, where appropriate by guaranteeing access to, and the possibility of interpreting, data generated by the technological application used, and by laying down a single party clearly liable in relation to the patient for the overall outcome of the treatment; accordingly believes that one option to consider might be to apply risk management rules as opposed to mere liability for fault;**

Or. it

## Amendment 41

Nicola Caputo

### Draft opinion

#### Paragraph 2

### *Draft opinion*

2. Stresses, however, that the existing system for the approval of medical devices **not be** adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory

### *Amendment*

2. Stresses, however, that the existing system for the approval of medical devices **is not** adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory

framework if necessary;

framework if necessary; ***points out in addition that legal liability for damage is a central issue in the health sector where the use of AI is concerned;***

Or. it

#### **Amendment 42**

**Joëlle Mélin, Jean-François Jalkh, Sylvie Goddyn**

#### **Draft opinion**

##### **Paragraph 2**

###### *Draft opinion*

2. Stresses, however, that the existing system for the approval of medical devices not be adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary;

###### *Amendment*

2. Stresses, however, that the existing system for the approval of medical devices not be adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary, ***with the aim of reducing and simplifying the administrative burden;***

Or. fr

#### **Amendment 43**

**Boleslaw G. Piecha**

#### **Draft opinion**

##### **Paragraph 2**

###### *Draft opinion*

2. Stresses, however, that the existing system for the approval of medical devices not be adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary;

###### *Amendment*

2. Stresses, however, that the existing system for the approval of medical devices ***may*** not be adequate for AI technologies; calls on the Commission to closely monitor progress on these technologies and to propose changes to the regulatory framework if necessary;

Or. en

**Amendment 44**  
**Elena Gentile**

**Draft opinion**  
**Paragraph 2 a (new)**

*Draft opinion*

*Amendment*

**2a. Calls on the Commission to lay down clear rules for determining the respective liability of the user (doctor/professional), the producer of the technological solution, and the healthcare facility offering the treatment in order to avert continuing reliance on defensive medicine and preserve professional discretion, the object being to ensure that users will not be led invariably to back the diagnostic solution or treatment suggested by a technological instrument for fear of being sued for damages if, on the basis of their informed professional judgement, they were to reach conclusions that diverged even in part; maintains that defensive medicine not only produces damaging results for the economic sustainability of public health systems, but can also serve to dehumanise the doctor-patient relationship by turning it into a professional-client relationship;**

Or. it

**Amendment 45**  
**Elena Gentile**

**Draft opinion**  
**Paragraph 2 b (new)**

*Draft opinion*

*Amendment*

**2b. Calls on the Commission to encourage the development of forms of insurance whereby patients could be compensated for damage without delay**

*and stakeholders could manage risks in a manner enabling the most advanced technological solutions to be employed with a view to offering the best service to patients;*

Or. it

**Amendment 46**  
**Nicola Caputo**

**Draft opinion**  
**Paragraph 3**

*Draft opinion*

3. Calls on the Commission and the Member States to encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues;

*Amendment*

3. Calls on the Commission and the Member States to encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues; ***maintains, however, that an overall employment strategy needs to go hand in hand with the advance of AI in the professional healthcare context;***

Or. it

**Amendment 47**  
**Mireille D'Ornano**

**Draft opinion**  
**Paragraph 3**

*Draft opinion*

3. Calls on the Commission and the Member States to encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues;

*Amendment*

3. Calls on the Commission and the Member States to encourage AI experts and European and non-European companies to create innovative jobs enhancing research on ***all areas where AI features, in particular on*** public health issues;

Or. fr

**Amendment 48**  
**Elena Gentile**

**Draft opinion**  
**Paragraph 3**

*Draft opinion*

3. Calls on the Commission and the Member States to encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues;

*Amendment*

3. Calls on the Commission and the Member States to ***allocate greater funding to AI and robotic research and*** encourage AI experts and European and non-European companies to create innovative jobs enhancing research on public health issues;

Or. it

**Amendment 49**  
**Soledad Cabezón Ruiz**

**Draft opinion**  
**Paragraph 3 a (new)**

*Draft opinion*

*Amendment*

***3a. Calls on the Commission and the Member States to foster talent in the fields of artificial intelligence and robotics by taking practical measures (for example, setting up incubators and supporting start-ups) to increase the number of trained personnel, giving particular attention to the presence of women and to attracting students from other disciplines;***

Or. es

**Amendment 50**  
**Arne Gericke**

**Draft opinion**  
**Paragraph 3 a (new)**

*Draft opinion*

*Amendment*

**3a. Calls on the Council and the Commission to take all legal measures necessary to prohibit methods of euthanasia and selection by means of the increasing use of optimising human-machine-interfaces in the human body;**

Or. de

**Amendment 51**  
**Sirpa Pietikäinen**

**Draft opinion**  
**Paragraph 3 a (new)**

*Draft opinion*

*Amendment*

**3a. Calls on the Commission and the Member States to take the risks of AI seriously; and to create and fund a unit to research the risks and ethical concerns related to AI; as well as develop backup systems;**

Or. en

**Amendment 52**  
**Urszula Krupa**

**Draft opinion**  
**Paragraph 3 a (new)**

*Draft opinion*

*Amendment*

**3a. Calls on the Commission to allow access to grants under EU framework programmes and other forms of funding for research into AI, such as Norwegian Funds;**

Or. pl

## Amendment 53

Elena Gentile

### Draft opinion

#### Paragraph 4

#### *Draft opinion*

4. Calls on the Commission and the Member States to draw up far-reaching plans aimed at attracting key stakeholders and main players from the fields of IT, mathematics, bioengineering and pharmaceuticals to open AI biomedical and bionic research centres all across Europe;

#### *Amendment*

4. Calls on the Commission and the Member States to draw up far-reaching plans aimed at attracting key stakeholders and main players from the fields of IT, mathematics, bioengineering and pharmaceuticals to open AI biomedical and bionic research centres all across Europe; ***calls on the Commission to consider setting up bioethics committees to determine whether and under what conditions the use of a given technological solution, with particular reference to biomedical robotics for human enhancement, might be considered appropriate and in accordance with the fundamental principles of human dignity and equality and hence could be authorised;***

Or. it

## Amendment 54

Urszula Krupa

### Draft opinion

#### Paragraph 4

#### *Draft opinion*

4. Calls on the Commission and the Member States to draw up far-reaching plans aimed at attracting key stakeholders and main players from the fields of IT, mathematics, bioengineering and pharmaceuticals to open AI biomedical and bionic research centres all across Europe;

#### *Amendment*

4. Calls on the Commission and the Member States to draw up far-reaching plans aimed at attracting key stakeholders and main players from the fields of IT, mathematics, ***physics, medical information technology, clinical psychology,*** bioengineering and pharmaceuticals to open AI biomedical and bionic research centres all across Europe;

**Amendment 55**

**Arne Gericke**

**Draft opinion**

**Paragraph 4 a (new)**

*Draft opinion*

*Amendment*

**4a. Invites churches, welfare associations, faculties of philosophy and others to take part in an in-depth ethical and moral discussion of 'artificial intelligence' in the field of medicine and care;**

Or. de

**Amendment 56**

**Elena Gentile**

**Draft opinion**

**Paragraph 5**

*Draft opinion*

*Amendment*

5. Calls on the Member States and the Commission to increase funding in health-related AI technologies; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level.

5. Calls on the Member States and the Commission to increase funding in health-related AI technologies; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level; ***calls on the Member States and the Commission to consider whether training programmes for medical and healthcare personnel should be updated and standardised on a Europe-wide basis so as to ensure high levels of expertise and a level playing field in the Member States as regards knowledge and use of the most advanced technological instruments in robotic surgery, biomedicine, and artificial intelligence-based biomedical***

*imaging;*

Or. it

**Amendment 57**  
**Soledad Cabezón Ruiz**

**Draft opinion**  
**Paragraph 5**

*Draft opinion*

5. Calls on the Member States and the Commission to increase funding in health-related AI technologies; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level.

*Amendment*

5. Calls on the Member States and the Commission to increase funding in health-related AI technologies ***in the public and private sectors***; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level;

Or. es

**Amendment 58**  
**Mireille D'Ornano**

**Draft opinion**  
**Paragraph 5**

*Draft opinion*

5. Calls on the Member States and the Commission to increase funding in ***health-related*** AI technologies; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level.

*Amendment*

5. Calls on the Member States and the Commission to increase funding in AI technologies, ***particularly those related to health***; welcomes, in this context, the declaration of cooperation signed by 24 EU Member States and Norway with a view to boosting the impact of investments in AI at European level;

Or. fr

**Amendment 59**

**Boleslaw G. Piecha**

**Draft opinion**  
**Paragraph 5 a (new)**

*Draft opinion*

*Amendment*

***5a. Calls on the Commission and the Member States to take into account serious ethical concerns with regard to the impact of artificial intelligence on the doctor-patient relationship and a risk of dehumanization of the medical care;***

Or. en