

<https://ec.europa.eu/eusurvey/runner/5a3e6cf1-e345-49a7-bbc4-81d39a3edd48>

This is an excellent document, and you provided an excellent questionnaire. Thank you for your competence for this important task.

Overarching Concern

The world has changed since this document was commissioned. AI is a pervasive technology, and it is not always clear what artefacts contain it and what do not. We should not waste time arguing about this. What is clear is that the digital revolution / ICT have changed the nature of governance, of property, and the role of nations, particularly the extent of their interdependence. My belief is the EU is presently leading the world in terms of coordinated effort over 100 Millions of people. However, I very much hope this will change and newer, better models will be discovered by us and by the other peoples of the world. We need to be thinking always of the future.

There's no question that the new age we are entering is typified by AI, but there is considerable question about exactly what is changing and how. A lot of what we characterise as problems of AI are really problems of the digital domain, underregulation of transnational commercial entities, and finance. We cannot solve these problems independently.

The massive investment here is welcome, but the best software is always written by those who are actually using that software. We should be very open to using the largess governments are willing to spend on something already identified as critical to the economy and to security on the immediate problems at hand -- recovering the economy from the shock of lockdown, and repurposing it towards a sustainable future in light of the climate crisis and related crises such as migration and health.

The EU is often a beacon leading the world, and should be looking to cooperate with everyone while keeping our own house strongly functional. But I think we should be particularly focussed on cooperation with Africa. Africa is in our timezones, has enormous talent and resource, and is particularly well poised for sustainable technology such as the low-energy computing algorithms mentioned a few times in your document. More generally, we need to facilitate agile coalitioning to allow us to consolidate the support of the global majorities benefited by the rule of law, and work around obstructions like temporary or localised corruption. AI and the digital should facilitate all this.

As I mentioned several times in the questionnaire, the biggest problem you have not properly addressed (besides transnational regulation and revenue dispersal) is liability for the manufacture of products that provide a service. This is a new category. More generally, EU law and processes does not deal well with recognising contemporary market domination. Market

domination does not only create inelastic demand relative to changes in price. It can also create inelastic supply by vendors unable to seek better prices elsewhere, or indeed by EU citizens unable to find similar services elsewhere so coerced to give their time and data to a limited range of companies.

The document as it stands unfortunately still propagates a few myths, notably that AI is something other than software (why no mention of code in the list of documentation required?), and that AI is necessarily opaque. Systems containing AI are no more complex or incomprehensible than hospitals or indeed governments, but we still manage to regulate and inspect these institutions. In contrast to traditional human institutions, every aspect of the development of a digital artefact is particularly easily recorded digitally, and therefore can be designed for transparency with accountability in mind. This needs to be understood and enforced.

Detailed corrections to the document:

P1

AI entails risks -- no, it affords them. Unless you are talking about cybersecurity, that is entailed for digital artefacts.

“This is a chance for Europe...” I agree with this paragraph, but would go further. This is an excellent opportunity to coordinate strategy facilitating economic success and the security of member nations.

P2

Data are not as important to AI as this says. Computing power is though.

AI is pervasively and widely used. “Big tech” has consolidated massive computational resources which need replication / “airbussing”, and are as much about cybersecurity as AI. The amount of AI is NOT directly proportional to the amount of data, much data is redundant except for surveillance purposes (or even for those).

Given the major impact... This and the paragraph following are superb.

P3 “European data pools enabling trustworthy AI”... AI does not necessarily “inherit” values directly from data. If we want moral application of AI, we must ensure that it transparently does the will of a moral human or moral human organisation.

Trust is a human relationship, only humans can be held to account and therefore afforded liberty. To trust the people behind institutions requires transparency for accountability, and social equity and mobility so that any individual can know what they would need to do to know enough to take further advantage of that transparency.

P4

I'm skeptical about some of the claims about neuromorphic and quantum computing. Quantum computing looks to be exceeding energy consuming to make up for the amount of time and space it saves. Computation is a physical process, it cannot be cheated. Unless we really do achieve energy independence, quantum is likely to only be wielded by very large rich organisations like states.

P5

€20B requires that we not only facilitate AI but solve major social problems on the way, specifically reinvention of the economy around agile and sustainable industries.

"The coordinated plan could also address...", No, it **MUST** also address...

P6

"Europe cannot afford to maintain..." Diversity is power! Diversity is strength and innovation! It is costly in terms of coordination, but AI helps with coordination. **Do not trust pressures to consolidate. Rather we need to continue leading and innovating on heterogeneous cooperation.** It is extremely important incidentally that we do not allo

"Where Europe has the potential to become a global champion..." Due to ICT and improved communication, education, and nutrition, the world is increasingly agile and dynamic and fair (global inequality has been declining for two decades up until the pandemic). Do not assume sector advantages or disadvantages are permanent.

"Initiative could also include the support..." again, should not could.

P7

It's true that programming, like sport, has superstars. But also like sport the combined impact of what happens in local communities and schools probably matters far more to overall well being than the few superstars with familiar names.

"It will be important to ensure that SMEs can access and use **EU AI and computational resources.**" They can and already do use AI from other countries.

Besides my earlier recommendation about airbussing local tech sector equivalents, another possibility would be encouraging the existing transnational corporations operating in Europe to disaggregate and open local corporations based on their expertise in establishing full AI infrastructure. This requires reducing the market dominance / power advantages presently enjoyed by a few elite institutions such that they are refusing disaggregation that would substantially benefit them financially e.g. youtube outside google.

One of the biggest problems is transnational finance, which dwarfs the tech sector. We need to put something together that allows us to bypass NYC and London for finance. I strongly recommend Katharina Pistor's "The Code of Capital" which is largely about law.

P8

"Without data, the development of AI is **limited in some ways.**" Certainly not impossible!!
"The enormous volume of new data **generated daily** constitutes an opportunity for Europe(...), **and guarantees that our policies restricting data use cannot cause lasting damage.**

Again, I very much like section H, though in the first paragraph you might say a bit more about the role of the EU / nations in enforcement.

P9

I also love the HLEG list :-)

P10

I don't like the proposed categorisation of risk. This is a smooth continuum that can change quickly. I propose that corporations are held strictly liable for the damage they cause, and that the EU provides instruments by which a corporation can demonstrate due diligence etc. and limit its liability. Then corporations can decide for themselves the level of investment they need to make and monitor this for changes. Of course the EU regulators should also seek to look proactively for misjudgements, but the onus should be on the corporations.

P11

"which may sometimes be difficult to understand and to effectively challenge..." no, AI properly applied makes us specify the processes of government, making them more clear, not less. Again, we must insist on transparency and accountability.

P12

"Black box effect" again, all this is fixable with adequate documentation of the procedures by which AI was developed, and adequate regulatory motivation for producing clear, transparent systems. This also makes the systems easier to maintain and extend, so would be a boon for any industry doing business in the EU.

"Risks for safety"... nothing about AI makes these paragraphs different than if there was a problem with brakes. No sympathy here. There are plenty of similar risks and they can be priced.

P 13 box at the top see just above.

P14

First paragraph is great.

First bullet is terrible. A lack of transparency is negligent. AI is not necessarily opaque, not all AI is opaque. This is laziness asking for government handouts.

“Limitations” I am not an expert on legal liability, but not having liability for services particularly when the services are produced by a manufactured artefact seems like a real problem to me, a major loophole.

“Uncertainty”... “including all components e.g. AI systems” You should be talking about software in general here, not just AI.

“Changes”... again, this is true of software in general. Now is the time to fix this, AI is just drawing your attention to an underregulated sector.

P15

“Collaboration with humanoid robots” ??? why would we present tools as collaborators? But this problem applies not just to robots. Some people are suggesting that all natural language systems are changing the families that use them and the way they communicate.

P16

C “Scope of the Future EU...”

This is all terrible. Do not allow these limits on AI regulation. Just regulate software in general!

Google has been trying to claim all their products improved a couple of years ago “when they started using AI”. They were founded by PhD students in an AI lab, they are using a core AI technology (search). Just walk away from these arguments. Regulate software and transnational business. (By the way, web search is based not only on our personal interactions with the search engine, but also our web pages, both of which are our data.)

“AI is composed of data and algorithms” **wrong!!!** As you said on page 2, it is composed of **computation**, in fact some AI doesn’t use data but none doesn’t use computation. The tech giants are computation and cybersecurity giants even moreso than AI giants.

“Humans determine and program [no extra e for this kind of programming, programme is a noun] which an AI system **may** optimise for, **but humans also determine what means the system has to achieve these goals, what information it has access to, and any other resources it can control.**”

Footnote 47 is way too much detail, see above.

P17 love the second paragraph “As a matter of principle...”

P 19

Delete the first sentence.

We also need regulatory bodies to detect and prosecute the misuse of personal data.

Other documents you need: software program code; architectural diagrams for the system; specifications for the system.

P20

Separately, citizens should be clearly informed... do they need to be informed when they are talking to a person but being processed by AI? But by all means, it should be readily apparent if they are interacting with AI, there is no reason or justification to anthropomorphise it.

“Requirements to ensure that outcomes are reproducible” -- this is a within-AI culture war you should probably steer clear of. Just make sure individual outcomes are easily contestable, and well documented so that varied outcomes can be retroactively debugged.

“AI systems can adequately deal” -- not the systems themselves, those using them. Don’t make AI out to be the actor.

P21

More generally, all new rules/laws should be written in the context of existing laws concerning manufactured products, and bringing software in general (with or without AI) into that scope.

The first paragraph of e “human oversight” is problematic. Be careful of “moral crumple zones” (Elish, 2019).

“Human review must be possible afterwards” and **available!**

“Monitoring of the AI system...” and external agencies detecting if things are going wrong, e.g. misuse of personal data, perversions of the market or of citizens’ personal time.

P22

It is the Commission’s view --- this is excellent and very important! **Products that obscure this should be the liability of the developers, as they are the ones who could have ensured transparency.**

P23

“Verify and ensure” -- this may be too strong. **Don’t allow oversights to become the regulator’s fault. Developers must assure transparency.**

P24

The governance section is excellent, especially the first paragraph. But **regulators should also actively regulate -- monitor for indications that things are going wrong**, investigate reports of wrong doing.

P25

Engagement is needed, but leadership and enforcement should be by the state(s).