AI FROM PHILOSOPHY TO SCIENCE TO TECHNOLOGY TO ETHICS TO LAW AND BACK

PART 4

AI ETHICS INITIATIVES & LAWS

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GOTHENBURG, SWEDEN

Ethical Considerations in AI
Gothenburg, 2020

http://gordana.se/Presentations

https://www.quantamagazine.org/artificial-intelligence-will-do-what-we-ask-thats-a-problem-20200130/Ai genie in a bottle

CONTENT

Previous parts of the lecture covered the following:

Part 1 philosophical and transdisciplinary scientific view of AI

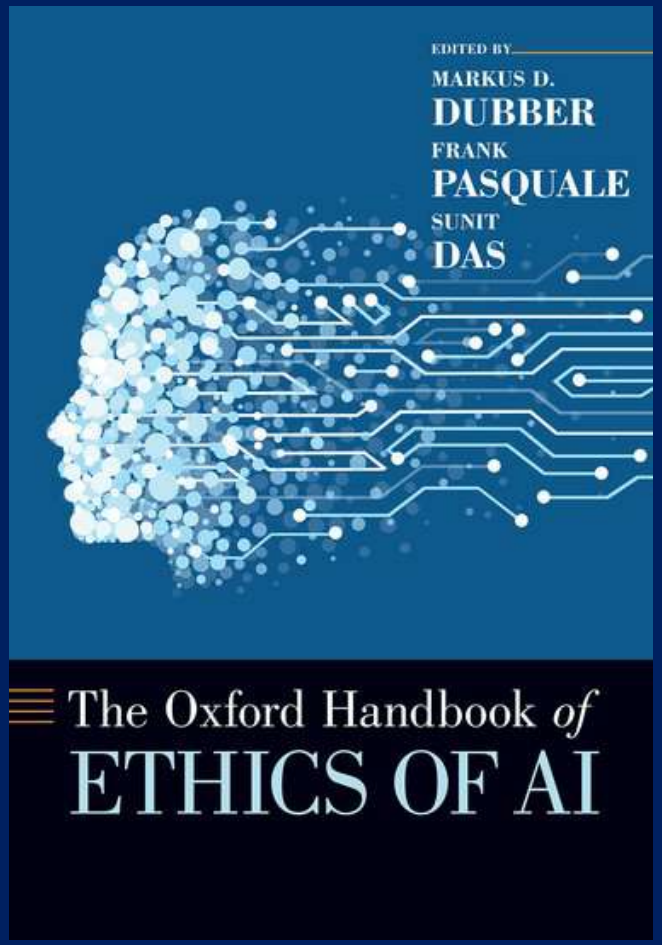
Part 2 technological overview and value-based foundations of AI

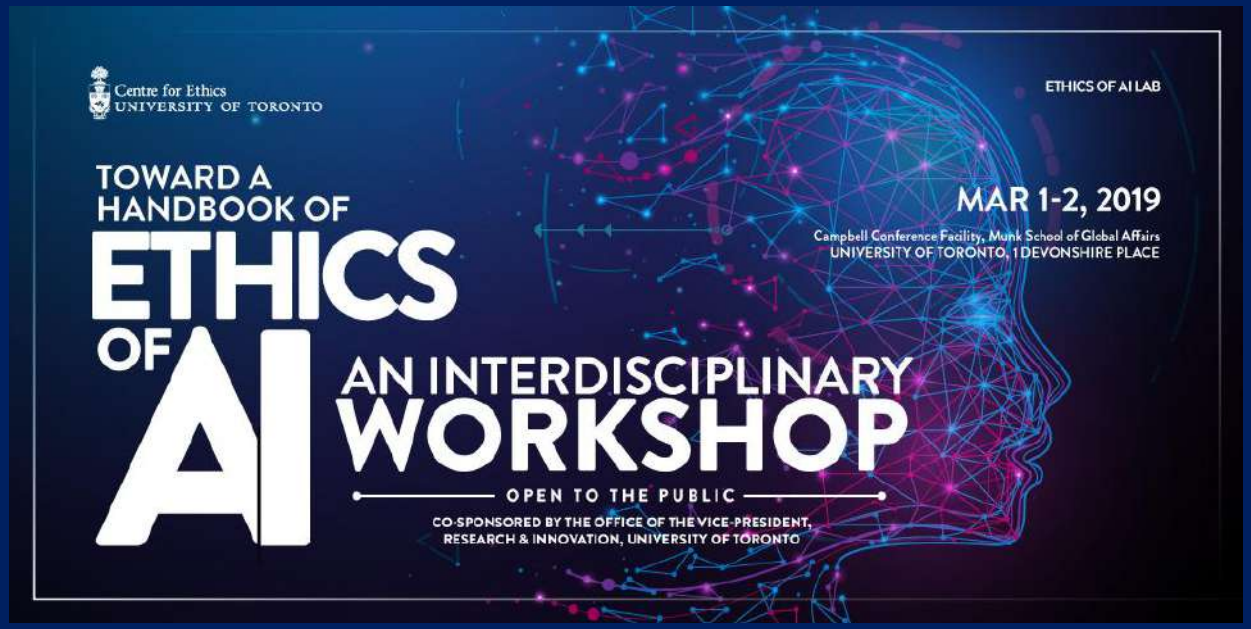
Part 3 ethics of AI represented by guidelines and policies

Now we proceed to the topic of the state of the art of the ethics of AI as represented by various initiatives and laws. We finish with conclusions from the Part1-Part4.

ONGOING INITIATIVES

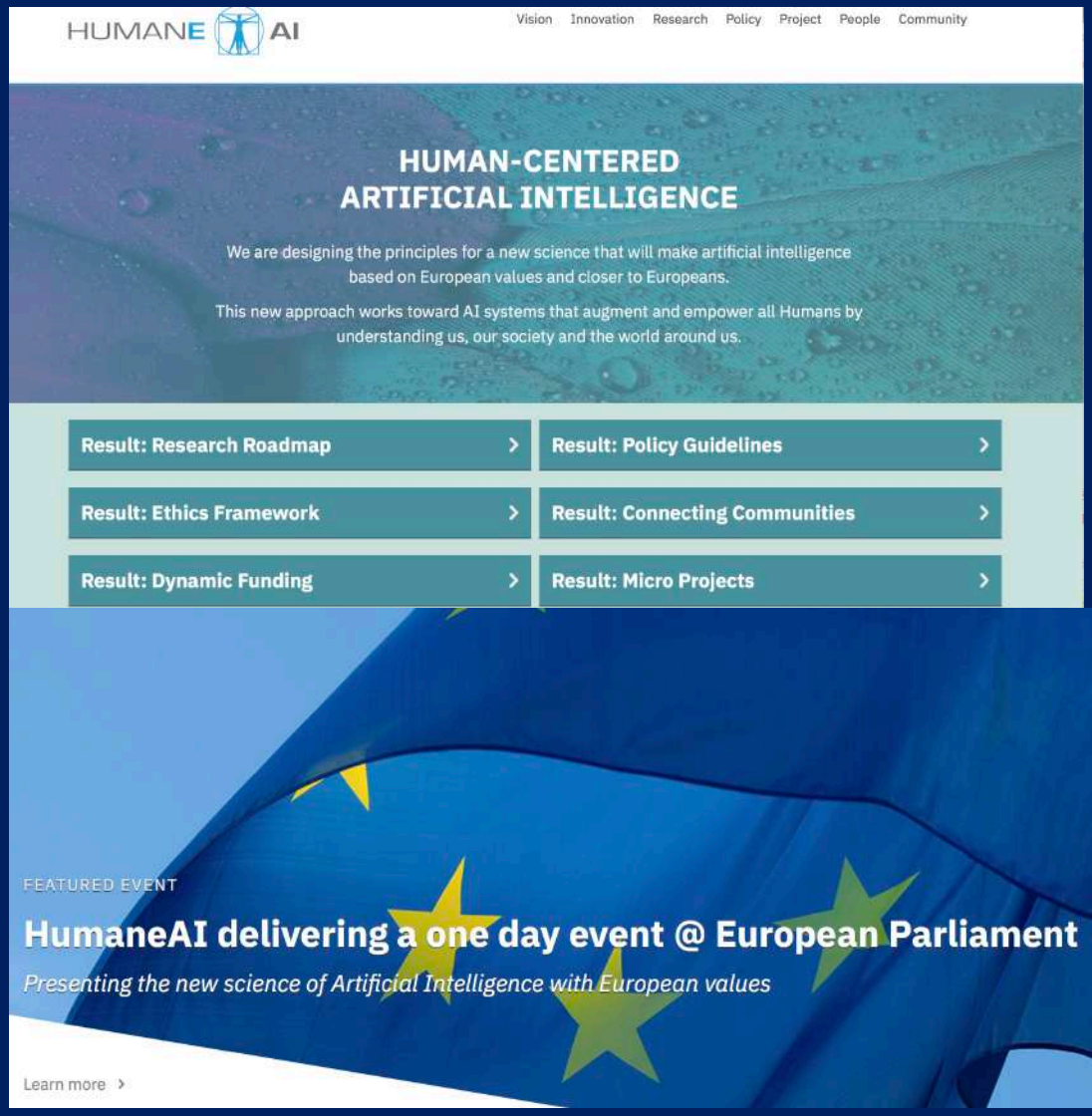
The Oxford Handbook of Ethics of AI





https://global.oup.com/academic/product/the-oxford-handbook-of-ethics-of-ai-9780190067397?cc=ca&lang=en&#

The Oxford Handbook of Ethics of AI



HUMAN-CENTRIC HUMANE AI

"The goal of Humane AI is to harness the emergence of enabling technologies for human-level interaction to empower individuals and society, by providing new abilities to perceive and understand complex phenomena, to individually and collectively solve problems, and to empower individuals with new abilities for creativity and experience."

https://www.humane-ai.eu

European Strategy on AI

https://ec.europa.eu/digital-single-market/en/high-level-expert-group-artificial-intelligence

52 experts of a High-Level Expert Group on Artificial Intelligence, are comprising representatives from academia, civil society, as well as industry, supporting the implementation of the European Strategy on Artificial Intelligence.
Ethics Guidelines on Artificial Intelligence: The Guidelines put forward a human-centric approach on AI and list 7 key requirements that AI systems should meet in order to be trustworthy.

1. Human agency and oversight
2. Technical robustness and safety
3. Privacy and Data governance
4. Transparency
5. Diversity, non-discrimination and fairness
6. Societal and environmental well-being
7. Accountability

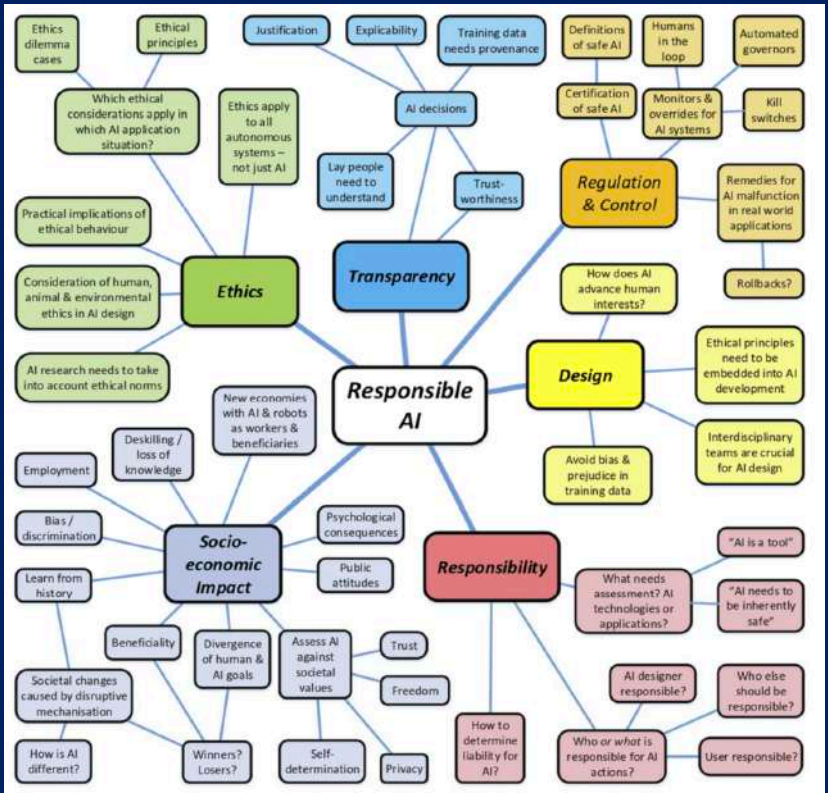
https://ec.europa.eu/digital-single-market/en/artificial-intelligence

RESPONSIBLE AI (NOT CAUSING HARM) & AI FOR GOOD (ACTIVELY CONTRIBUTING TO HUMANITY)

"Responsible AI – Key Themes, Concerns & Recommendations for European Research and Innovation" Report by cross-disciplinary experts.

"Responsible AI" is an umbrella term for investigations into legal, ethical and moral standpoints of autonomous algorithms or applications of AI whose actions may be safety-critical or impact the lives of citizens in significant and disruptive ways. It reports a summary of results from a consultation with cross-disciplinary experts in and around the subject ."

Steve Taylor, Brian Pickering, Michael Boniface, University of Southampton, UK
Michael Anderson, Uni. of Hartford, USA
David Danks, L.L., Carnegie Mellon USA
Dr Asbjørn Følstad, SINTEF, Norway
Dr. Matthias Leese, ETH Zurich, CH
Vincent C. Müller, University of Leeds, UK
Tom Sorell, University of Warwick, UK
Alan Winfield, Uni. of the West of England
Dr Fiona Woollard, Uni. Southampton, UK



https://www.ngi.eu/news/2018/07/23/responsible-ai/

https://ai4good.org/
https://en.wikipedia.org/wiki/AI_for_Good
https://www.microsoft.com/en-us/ai/ai-for-good

WHITE PAPER ON AI ECOSYSTEM

Comments invited until 19 May 2020

- AI definition
- AI context (socio-technological system)
- "AI Race" versus "AI Exploration"
- Trustworthy AI (cannot be a choice between an accurate black box AI-system or an explainable, but less accurate AI-system)
- Explainability
- Bias and transparency
- Traceability on the decisions made by the human actors related to the design, development, and deployment of a system
- Liability (requires adjustments to the existing safety and liability regimes)
- Assessment for high-risk AI based on Ethics Guidelines for Trustworthy AI, developed by the High-Level Expert Group on AI.

Comments invited until 19 May 2020

http://allai.nl/first-analysis-of-the-eu-whitepaper-on-ai/

First analysis of the EU Whitepaper on AI

EUROPEAN
COMMISSION

Brussels, 19.2.2020
COM(2020) 65 final

WHITE PAPER

On Artificial Intelligence - A European approach to excellence and trust

https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

LEGAL VIEW OF AI

- AI develops faster than laws
- Liability in case AI causes damage or loss of lives, like autonomous weapons
- When artificial intelligence is not enough but common sense is needed. Biases and errors.
- Privacy loss because of data-hungry AI
- Patents based on or produced by AI, intellectual Property
- Job loss and wealth inequality
- Robot rights. How should we treat AIs (when they get more intelligent)

LEGAL ASPECTS OF AI

Mireille Hilderbrandt

- Law as architecture
- The choice architecture of the Rule of law
- The GDPR and the Charter of Fundamental Rights
- The methodological integrity of computer science and the GDPR
- Legal protection by design

29/10/19 ECSS 2019 ROME Keynote Hildebrandt

Mireille Hildebrandt is a Dutch lawyer and philosopher who works at the intersection between law and computer science, the Research Professor on 'Interfacing Law and Technology' at the Vrije Universiteit Brussel. Principal investigator of the 'Counting as a Human Being in the Era of Computational Law' project. [Wiki]

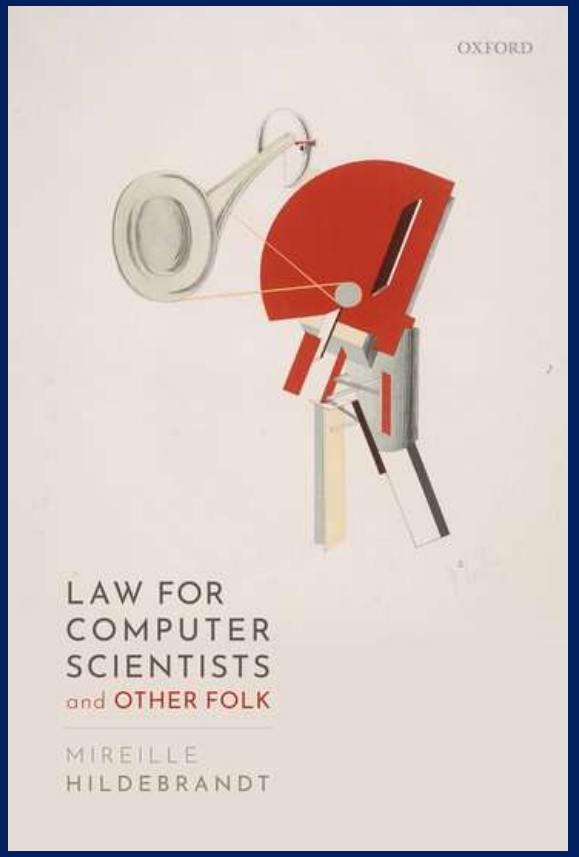
LAW FOR COMPUTER SCIENTISTS

Mireille Hilderbrandt

Forthcoming 2020 by Oxford University Press
Available online, also for comments
E-book open access

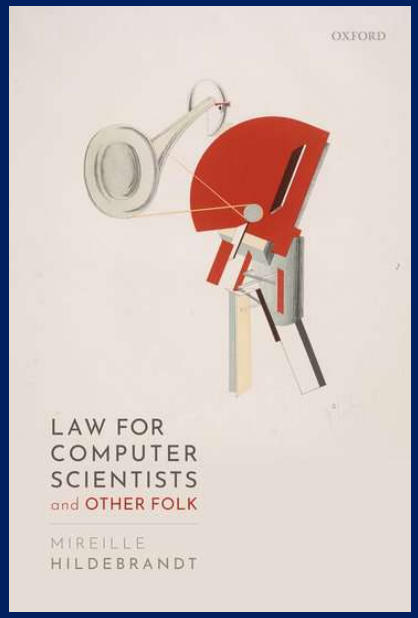
https://lawforcomputerscientists.pubpub.org/

This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme on 'Counting as a Human Being in the Era of Computational Law'



LAW FOR Computer SCIENTISTS

Mireille Hilderbrandt



https://lawforcomputerscientists.pubpub.org/

GDPR - General Data Protection Regulation

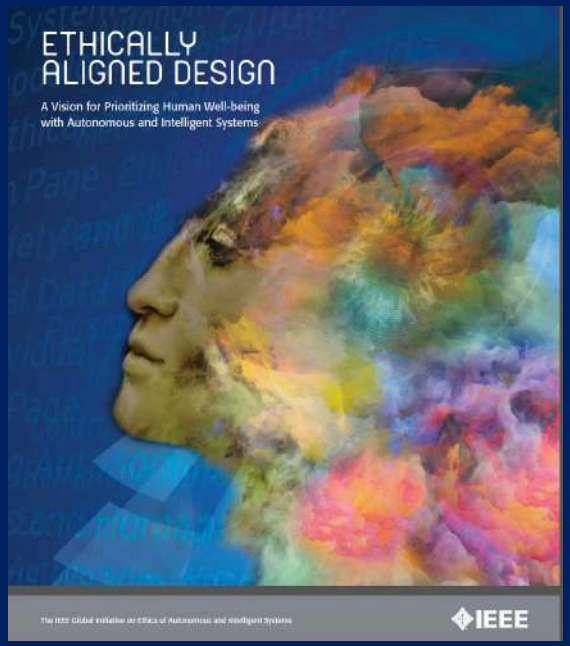
for citizens of the European Union

1. **Data consent:** A company that collects data on individuals must have "unambiguous" consent from those individuals — silence, pre-ticked boxes, or inactivity do not count as consent.
2. **Data portability:** Companies must be willing to move personal data to another location or company, even a direct competitor, if requested by the consumer.
3. **Data deletion:** Companies must delete personal data when requested by an individual.
4. **Consumer profiling:** Individuals can contest, object to, and request explanation for automated decisions or decisions made by algorithms.
5. **Data protection:** The GDPR has strict, specific data security requirements, and stronger enforcement. Data encryption is especially important.
6. **Data breach notification:** The GDPR has a specific definition for what constitutes a breach of "personal" data, along with strict requirements for notifying affected individuals if a breach occurs.
7. **Data Protection Officer (DPO):** All companies that store or process large amounts of personal data must appoint or hire a data protection officer (DPO), who will drive data security and oversee GDPR compliance.

There are two tiers of fines under the GDPR.
First tier: 2% of a company's annual revenue or €10 million, whichever is **larger**.
Second tier: 4% of a company's annual revenue or €20 million, whichever is **larger**.

https://gdpr-info.eu/

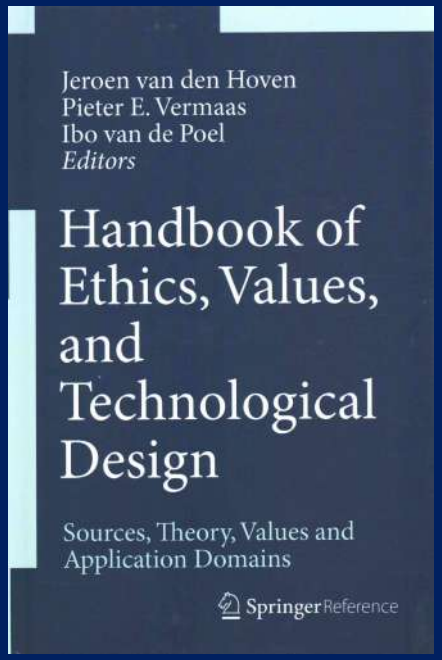
GUIDELINES, RECOMMENDATIONS, POLICY

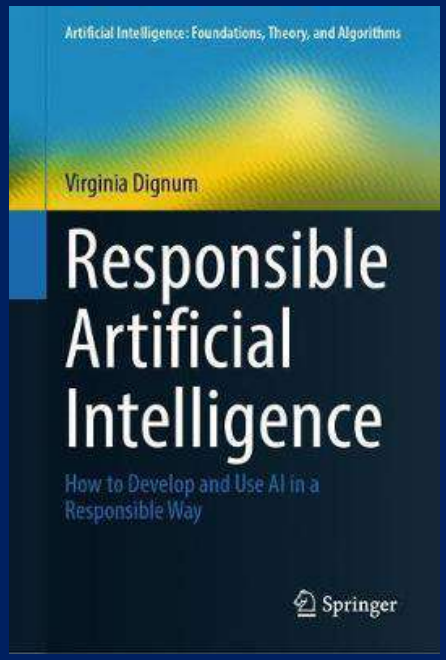


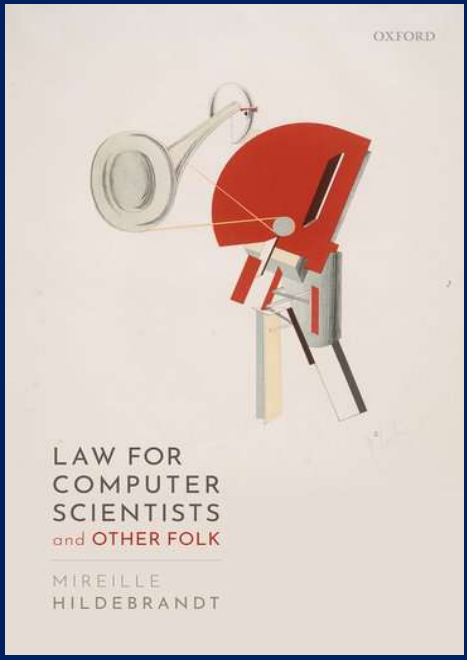
https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai

https://ethicsinaction.ieee.org/

RECENT BOOKS







CONCLUSION

Currently AI is in the flow - very rapid development

Learning AI

From Philosophy to Science to Technology to Law to Ethics and Back

AI can be understood from philosophical foundations - with ontological question about what AI is today and what it could be (and should be) developed into, its epistemological basis – how does AI affect our possibility to know, and axiological/ethical analysis of what is good AI.

The next step is the development of various scientific domains relevant for AI, followed tightly of its technological applications..

Legal regulations follow as soon as reasonably possible when technological applications become widespread and need legal regulation.

After practical experiences with current technology, the next step in the development is made and the cycle (spiral) starts again.

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