



The new Machinery Directive and AI Regulation

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Our Vision

The OnRobot One Stop Shop covers everything that is needed to develop and deploy collaborative applications



All Robots



All Applications



All Accessory Types

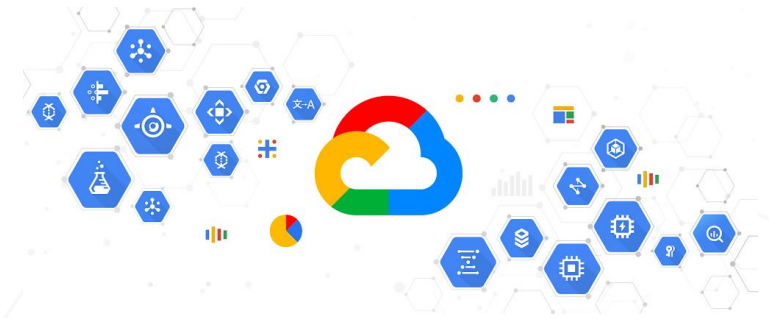


All Industries

OnRobot enables you to build highly versatile automation solutions and is expanding the range of applications in which robots can be used

The world is changing

- **Machine learning**
 - Cloud computing has strengthened machine learning
 - The fear of AI misuse
- **Networking**
 - The world is becoming radically interconnected
 - The threat from cyber criminals



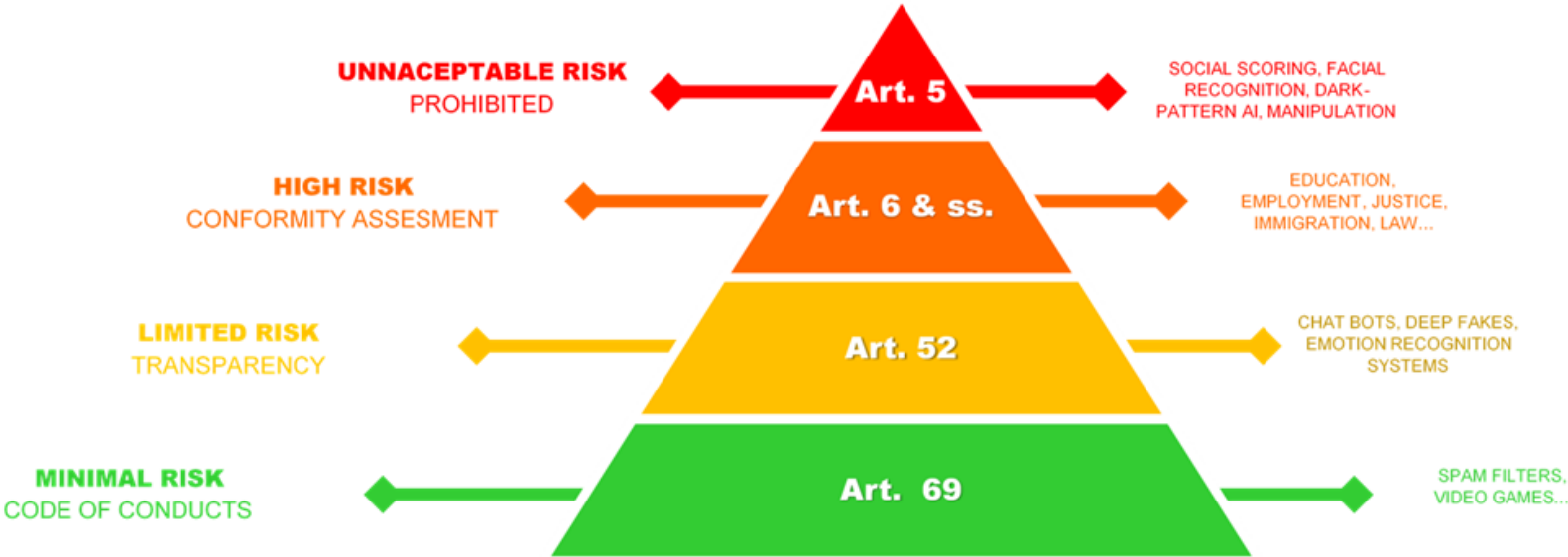
Reponses from the EU

- **A new regulation on AI:** Artificial intelligence – ethical and legal requirements
 - Can be in effect around 2023
- **A revision of the Machinery Directive** (a future Machinery Regulation)
 - Can be in effect around 2024/25
- Part of a larger initiative
 - GDPR (personal data protection), and
 - cyber security
- EU would like to take the lead on the protection of digital fundamental rights

AI Regulative

- CE marking of software
- Division of AI usages into different risk groups (next slide)
- New requirements for logging of data in systems that runs AI
 - Bias
 - Representative data sets
- Up to 4% of annual world-wide turnover in fine
- A novel definition of AI

AI Regulative: Risk based approach



High Risk AI systems

- **Safety components of regulated products**
 - e.g. machinery, medical devices which are subject to third party assessment under the relevant sectorial legislation
- **Certain stand-alone AI systems**
 - Biometric identification and categorization of natural persons
 - Management and operation of critical infrastructure
 - Education and vocational training
 - Employment and workers management, access to self employment
 - Access to and enjoyment of essential private services and public services and benefits
 - Law enforcement
 - Migration, asylum and border control management
 - Administration of justice and democratic processes

The AI regulation and machinery

- The AI regulation defines machines that use AI as part of safety functions as High-Risk
- Third party certification by EU
- We get different sources of legislation for machines

A case study: AI startup company

- A startup company would like to develop laser scanning in their safety functions
- Statistical approaches, e.g. Bayesian estimation, to detect people
- The AI regulation (in it's current form) can classify this as high risk AI
- The new technology cannot be released before a complete certification *according to the AI regulative* have been made



The revision of the machinery directive

- From *directive* to *regulation*
- Sets new requirements regarding cyber threats
- Not possible to self-certify by following type C-standards
- The list of dangerous machines can be extended by the commission

OnRobot in retrospect



RG2
2014



Bilge J. Christiansen
and Ebbe O. Fuglsang



RG2 with enhanced safety
Certified 2019 TÜV Nord

Outlook

- Setting a good example is a noble idea for many areas of AI – machine safety is however already well regulated
- Possible consequences
 - Greater uncertainty for European startups and SMEs in adopting/developing AI safety functions
 - Greater uncertainty for European investors
 - Weaker competitiveness in a global market
- The world is changing...
let's help policy makers to develop the right regulatory framework



Thank you