Possible timeline

- 100 000 BC
- 20 century
- Beginning of the 21 century
- 2030
- 2050
- 3000

### Natural risks caused by human activity
- Accidental start of natural catastrophe
- Nuclear war
- Impairment of intelligence
- Biological weapons
- Genetically modified organisms
- Classical species extinction

### Based on new technologies
- Giant energy release
- Nuclear weapons
- Disjunction of intelligence
- Biological weapons
- Global contamination
- Doomsday machine
- Chain of natural disasters

### Superintelligence as final technology
- War with AI
- ‘Death of crops from superpest,
- Catastrophe on the level of mind and values
- Catastrophe

### Remote and hypothetical risks
- Encounter with alien intelligence
- Extraterrestrial robots
- Whispers
- Catalysts of bad scenarios
- Complexity crisis

### Probability
- Main adverse factor of the catastrophe
- Natural risks
- Natural risks caused by human activity
- Based on known technologies
- Superintelligence as final technology
- Remote and hypothetical risks

### Typeology of human extinction risks

<table>
<thead>
<tr>
<th>Energy</th>
<th>Intellige</th>
<th>Replication</th>
<th>Poisoning</th>
<th>Combined scenarios</th>
<th>Probability</th>
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<tbody>
<tr>
<td>Explosions</td>
<td>Competitors</td>
<td>Organisms</td>
<td>Atmosphere</td>
<td>Classical species extinction</td>
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<tr>
<td>• Big asteroid impact</td>
<td>• Borderline cases for the lifespan of artificial intelligence</td>
<td>• Refugees</td>
<td>• Atmospheric composition change/disappearance of oxygen</td>
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<tr>
<td>• Extreme climate change</td>
<td>• Self-replicating robots</td>
<td>• Biosphere</td>
<td>• Complex species extinction</td>
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<tr>
<td>• Nuclear war</td>
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<td>• The accumulation of technologically enhanced parasites</td>
<td>• War as a trigger</td>
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<tr>
<td>• Impairment of intelligence</td>
<td>• Biological weapons</td>
<td>• The extinction of biodiversity</td>
<td>• Control systems failure</td>
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The roadmap is based on my book "Risks of human extinction in the 21 century" (with Michael Anissimov). Most important risks are in bold. Most hypothetical are italic. This roadmap is accompanied by another one about the ways of prevention of existential risks.

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