

Ethical Readiness Quick Scan for drone-innovations | Space53

Questionnaire ethical readiness

Company values	Unethical	Indifferent	Accidentally	In good faith	For good cause
<p>Are ethical assessments performed within the company?</p> <p>Is there experience ethical reviewing in this company – either informally or officially – or is this ethical assessment the first time?</p>	Ethical assessments are avoided; problems and risks are denied or ignored; judicial loopholes are sought out.	Not considered to be important.	Explicit assessment has not been considered as necessary (yet) or has been attempted unsuccessfully.	Laws, regulations and codes of conduct are observed.	Laws, regulations and codes of conduct are observed consciously, intentionally and in conscientiously.
<p>Does the company have a societal mission?</p> <p>Is there a strategic mission in which the company's products are connected to good causes? For instance, the Sustainable Development Goals, climate goals, humanitarian efforts or specific projects formulated by the company. How does the company deal with societal resistance?</p>	Controversial company mission. Ethical considerations are only <i>window dressing</i> .	No thoughts about a possible company mission, or whether the purpose is controversial or not.	Mission is not formulated explicitly, but the company's activities serve a good cause. Observance of laws and regulations leads to desirable policies. Or, attempts to counter or pre-empt ethical objections and issues.	Laws such as GDPR or environmental regulations are observed dutifully and conscientiously. There is an (ethical) code of conduct for the company's activities.	A good cause intrinsically motivates the company's activities. Frameworks such as the Sustainable Development Goals are internalised in policies.
Purpose and application of the drone	Unethical	Indifferent	Accidentally	In good faith	For good cause
<p>Does the innovation serve a good cause?</p> <p>Think about the drone's specific purpose, but also about the larger perspective. Are their good causes at play here, is there a humanitarian framework or even benevolent strategic principle? Or is the goal controversial? Is this the thin end of the wedge?</p>	There is awareness that the purpose is dubious or controversial (only focused on profit maximalisation, harmful to the environment, discriminatory, repressive).	Not considered to be important.	Although the innovation has a good cause it was not selected for that reason. Or, selected for good cause, but effects seem negative.	Conscious choice to serve a benevolent cause.	The innovation is specifically aimed at improving the world.
<p>Are there conflicting interests or values at stake?</p> <p>Perhaps the purpose is not unambiguous; how are conflicting values and interests dealt with?</p>	Optimalisation of the innovation at the cost of everything: even if it is harmful to other interest groups and stakeholders the client's interests are the only consideration.	It is generally accepted – and not questioned – that the innovation is good for some and bad for others.	There do not seem to conflicting values. Or, despite conscious efforts to bridge the differences between the stakeholders there are still some values and interest which are at odds.	The different interest and values of all parties are considered and taken into account.	The different perspectives of all stakeholders are integrated and there is consensus on values and interests.
<p>Are there any ulterior motives?</p> <p>Think of or motives and interests on different levels, or of a 'hidden agenda'.</p>	There are ulterior motives which are kept from the public view; there is a hidden agenda.	There is no ambition to consider any other motives; people prefer to look away.	Although there may be various interests and motives, the innovation serves its proper goal.	There is an unambiguous good cause without ulterior motives.	Singular focus on what is good.
<p>Does the means fit the end well?</p> <p>Does technology seem a well-chosen means for the end? Is the end leading, and not the means?</p>	Despite clear failures as regards the general purpose, the innovation process is pursued unaltered.	This question is not being considered.	Proven effectiveness in a good cause, although this was possibly not the original ambition. Or, Effectiveness is problematic but process is being monitored closely.	Works the way it should.	Works the way it should; effectiveness is finetuned in line with the demands of the purpose.

<p>Is abuse, for unintended purposes, likely?</p> <p>Misuse and abuse are always possible, but is it more or less likely to be expected here? Besides improper use there is also the unwanted scenario of <i>function creep</i>, when function and purpose of an innovation starts shifting in an unwanted direction. A slow, gradual shift can lead to a 'thin end of the wedge' problem.</p>	<p>Improper use is not only possible but very likely and to be expected. No precautions or remedies are taken, despite the possible problems (such as function creep) which will arise.</p>	<p>Questions of improper use or function creep have not been considered.</p>	<p>No real focus on these issues, which fortunately do not occur. Or, still issues despite precautions.</p>	<p>Purpose driven focus.</p>	<p>Purpose driven focus of the design to prevent improper use.</p>
<p>Side effects of the drone</p>	<p>Unethical</p>	<p>Indifferent</p>	<p>Accidentally</p>	<p>In good faith</p>	<p>For good cause</p>
<p>Are there side effects for people?</p> <p>Drones are typically controlled remotely and partly automated. Does this generate a sense of alienation and loss of humanity for operators, clients or bystanders? Is there an experienced loss of autonomy, control, privacy, security? Does that generate indifference or animosity? Are these effects taken into account?</p>	<p>Side effects are known but consciously ignored.</p>	<p>Side effects are not considered, although they could well pose problems.</p>	<p>No issues with side effects. Or they do pose problems, despite thorough consideration and attention.</p>	<p>Thorough attention for the anticipation, prevention and remedying of unwanted side effects.</p>	<p>Strong ambition to keep side effects in check and to multiply values and positive effects.</p>
<p>Are there societal side effects?</p> <p>The remote and partly automated application of drones could produce unintentional societal side effects: loss or relocation of jobs or the possibility that certain groups benefit while others are put at a disadvantage. Are these effects taken into account?</p>	<p>As above: Side effects are known but consciously ignored.</p>	<p>See above</p>	<p>See above</p>	<p>See above</p>	<p>See above</p>
<p>Are there environmental side effects?</p> <p>Does the drone have an environmental impact? Consider the use of material and energy use – during production, general use as well as eventual waste disposal. Is there unintentional environmental impact, such as (landscape) pollution, waste, lack of biodiversity? How are these effects handled?</p>	<p>As above: Side effects are known but consciously ignored.</p>	<p>See above</p>	<p>See above</p>	<p>See above</p>	<p>See above</p>
<p>Professional responsibility</p>	<p>Unethical</p>	<p>Indifferent</p>	<p>Accidentally</p>	<p>In good faith</p>	<p>For good cause</p>
<p>Is there room for professional criticism?</p> <p>Is there room for criticism, dissenting views, conscientious objections? How are whistle-blowers treated?</p>	<p>Critical employees and whistle-blowers are seen as disloyal or even treacherous and are opposed strongly.</p>	<p>The organisation is deaf to all criticism; there is no platform to voice concerns.</p>	<p>Critical opinions are valued and never considered as problematic. Criticism is valued but does not necessarily lead to improvements.</p>	<p>Criticism is appreciated and turned into improvement actions.</p>	<p>Strong ambition to learn from criticism. Critical reflection is encouraged; whistle-blowers are appreciated and valued positively.</p>
<p>Are there activities for ethical professionalisation in the company?</p> <p>Is there an organisational structure and culture to learn from past mistakes?</p>	<p>There is a cover-up culture: abuses, wrongs and evils are swept under the carpet and denied.</p>	<p>No attention for ethical aspects, no room for learning. Only superficial attention for ethics – window dressing – at most.</p>	<p>No policies in this respect, but past experiences are taken aboard in practice. There is a policy, but it is not very effective.</p>	<p>There is an ethical culture and a self-learning aspect to the company's workings.</p>	<p>The idea of a self-learning organisation is part of the company's strategy: its structure successfully facilitates this objective.</p>

Explanation

Ethics is here understood as critical thinking about the question if we think something is good, if it is desirable. There is overlap as well as there are differences between ethics and law and societal acceptance. For new innovations there may not be any legislation yet; then the ethical question what is good is upfront. Only when a political majority agrees about what is good, law (and order) can be put in place. But also when something is compliant with law one may still ask anew if it is morally desirable. Comparable with the last remark, is the distinction between ethics and societal acceptance: even if something is accepted by some, or by many people, that is not the same as deliberating the moral question if it is also desirable.

For ethics and technology it is helpful to start with the simple scheme of means and ends. Technology is often seen as a means to an end. Ethics is firstly about the ends, the goals, and if they are desirable. Technology as means is never neutral. It can serve wrong ends, have unintended consequences, side effects. The ethical readiness scan therefore asks question about the ends of the drone, and about the drone as a means, namely about its effects. Three categories of (side) effects are distinguished: the impact on people, on society, on the environment. (2nd and 3rd sets of questions)

The ethical readiness level of drone innovations does not only reside in the drone itself. Any technology is ambivalent, has good and bad side, can be used for good and bad causes. Therefore the ethical readiness scan aims to assess both the drone innovation, as well as if drone developers are responsive to ethical issues that arise. The emphasis is even on the latter. The ethical readiness of innovations is much about a responsible innovation process. This is reflected in questions about corporate and professional responsibility. (1st and 4th sets of question)

The questionnaire consists of 12 questions, divided in the following 4 categories:

- Company values
- Purpose and application of the drone
- Side effects of the drone
- Professional responsibility

The scoring also takes into consideration that ethical readiness is about the moral issues with the drone as well as responsible coping with the issues. For this the approach took inspiration from the competent/incompetent and conscious/unconscious matrix of [Maslow's learning model](#). The ethical readiness levels are based on the different possible combinations of desirable/undesirable effect of the drone, if these effects are notice/unnoticed, and if the coping is passive/responsive/pro-active.

Eight combinations which make sense and were put in a list, and ordered from less to more ethically desirable. To come to a five point scale, some levels were combined. Lastly, the strings of combined variables were translated into everyday language, recognizable expressions for ethical appraisal. The result is 1) Unethical, 2) Indifferent, 3) accidentally (good or bad), 4) In good faith, 5) For good cause.

Exemplary answers in the five levels will help choosing an answer. The abstract scheme is filled with more concrete explanation and examples with hopefully recognizable every day formulations for ethical appraisal and blame. Obviously the first level is rather extreme on the negative side, and will be chosen rarely.

Undesirable-noticed-proactive	In bad faith malicious, evil, unscrupulous, unethical, window-dressing	Unethical
Undesirable-unnoticed=passive	Dangerous zombie, hazardous ignorance	
Undesirable-noticed-passive	Indifferent	Indifferent
Desirable-noticed-passive	Fortunate, Luck, easy success	accidentally (good or bad)
Desirable-unnoticed=passive	Fortuitous, lucky shot, accidently	
Undesirable- noticed-responsive	Unfortunate but in good faith	
Desirable-noticed-responsive	In good faith	In good faith
Desirable-noticed-proactive	Philanthropic/humanitarian/charitable/for a good cause	For good cause
unnoticed-responsive (impossible)	impossible: desirable unnoticed-responsive	
unnoticed-pro-active	impossible: desirable unnoticed-pro-active	
unnoticed=passive	Occurs with "Indifferent" and with "accidently"	