*Interactivity Foundation*

# Policy Possibilities for Public Discussions about Creativity & Innovation

**January, 2016**

## Prepared for IDC and Fellows' Review

# List of Policy Possibilities

**#1.** ***Foster a Creative & Innovative World.*** This possibility would nurture a healthy psychological, political, economic, and social climate for creativity and innovation. It would remove restraints that impede creativity and innovation, uphold our right to be creative and innovative, and provide resources and infrastructure to share our creations and innovations locally, nationally, and globally through scientific research, the arts, education, funding, and market testing.

**#2.** ***Do No Harm.*** This possibility would allow innovations that pose no potential physical, psychological, or ethical risks to our society and the individuals in it. It would also promote incremental processes of creation and adoption that would enable us to more easily reverse our actions when they begin to do harm.

**#3.** ***Deal with the Consequences.*** This possibility would not regulate creativity, but it would focus upon dealing with the consequences of innovation, including systemic failures, instead.

**#4.** ***Support Highly Creative Individuals.*** This policy would support creative and innovative individuals who have demonstrated success in creating new things and in communicating about them. It would give them and their teams time and space to create, innovate, and take risks. And it would continue to subsidize them if and when they fail.

**#5.** ***Good Enough.*** This policy would generally support the development of innovations that enhance human activity, without actually replacing it. But it would not support innovations that are designed to replace products and tools that are already good enough for what we want or need to do with them. It would also promote a discourse about what is and is not good enough for what purpose and for whom.

**#6.** ***Create AI that is Superior to Humans.*** This policy would aim at creating machines that are at least as intelligent, creative, and innovative as humans—and preferably more so. It would also defer our tasks and our decisions to artificial intelligence (AI) whenever and wherever possible.

**#7.** ***Seize for Public Use.*** This possibility would allow the government to expropriate certain innovations for public use with appropriate compensation.

**#8.** ***Encourage the Private Sector to Create and Innovate.*** This policy would encourage the private sector to take the lead in funding creative and innovative ideas, including social innovations, so that public money can be used elsewhere.

**#9.** ***Your Possibility's Title _____.*** This policy would…

*Possibility #1*

# Foster a Creative & Innovative World

***This possibility would nurture a healthy psychological, political, economic, and social climate for creativity and innovation. It would remove restraints that impede creativity and innovation, uphold our right to be creative and innovative, and provide resources and infrastructure to share our creations and innovations locally, nationally, and globally through scientific research, the arts, education, funding, and market testing.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

What does creativity and innovation mean to you?

What might a creative and innovative world be like for individuals, different groups, and society at large?

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. Do you think that all people are creative or at least have the potential to be creative? If so, why so? If not, why not?
2. What are some of the downsides, pitfalls, and dangers of creativity and innovation? Please explain.
3. Do you think creativity and innovation mean different things in different countries? If so, then how would it affect this policy?
4. Do you think that it is possible to foster, or nurture creativity and innovation, or that creativity and innovation are innate capacities that some people just have and others do not?
5. Do you think that we can teach people how to be creative and innovative—or that the very idea of teaching creativity and innovation somehow conflicts with being creative innovative itself?

## What IF…

### Scenario A

Imagine a future in which each individual is educated by apprenticeships with mentors who nurture their creativity and innovation—not only at school, but also at work and in society at large. Imagine that we encourage people to mingle and inspire each other, to build creative spaces, to allow for the cross-fertilization of ideas, and above all to educate our population—the more, the better—in order to foster more creative and innovative individuals, groups, institutions, and societies. Imagine that we focus on creative approaches for solving problems from elementary school on. And imagine that we use technology as best we can to help us become more creative, to personalize our experiences, to give us more time to be creative, and more options to enrich our lives.

### Scenario B

Imagine that we all believe that the social contract between corporations and individuals is broken and that we are shifting toward a sharing economy in which people are becoming more flexible about how, where, and when they work. Imagine that a sharing economy will lead to a more creative society and a more prosperous economy as well.

### *Scenario C*

Imagine that we encourage the development of new governance structures, more frequent and transparent communications among different nations and cultures, and more international work collaborations.

### *Scenario D*

Imagine that we designate 'islands of innovation' where people are able to push the boundaries of science, technology, and knowledge by conducting all the creative and innovative experiments they want without restriction. Imagine that such islands of innovation are places in the real world, or in some virtual world, where we can experiment simply to see what happens.

*Possibility #1*

# Foster a Creative & Innovative World

***This possibility would nurture a healthy psychological, political, economic, and social climate for creativity and innovation. It would remove restraints that impede creativity and innovation, uphold our right to be creative and innovative, and provide resources and infrastructure to share our creations and innovations locally, nationally, and globally through scientific research, the arts, education, funding, and market testing.***

## *Thinking Behind the Possibility*

This possibility flows from the belief that **creativity and innovation are things we can teach** and things that we should encourage everybody to learn. But it also flows from a concern that our schools do not teach us how to be creative, but all too often 'teach' the creativity out of us instead. Today, too many people find it difficult, if not impossible, to break out of their routines. This possibility would incentivize, indeed almost force, people to be more creative and to accept and adapt to new innovations. **It would celebrate and promote tolerance for risk, tolerance for new ideas, and tolerance for challenging our own beliefs and the beliefs of others. And it would aim at fostering a society that is more open—and less antagonistic towards new ideas and ways of doing things.**

This possibility is based on the **value of equal access and the belief that creativity comes from confidence and free-play. Its goal is to enable people to enjoy creative lives of life-long learning**. This possibility maintains that individuals, schools, companies, foundations, governments, and society as a whole are jointly responsible for allowing people to create and innovate—and that **we should foster creativity and innovation regardless of whether everyone or only a few can be creative and innovative.**

This possibility recognizes that we live in increasingly innovative and interconnected societies. But it also recognizes that we need to foster more open societies if we want to boost global innovation and interaction. **It maintains that fostering creativity and innovation can improve our world and advance humanity on artistic, social, political, technical, and economic levels**—and that human creativity and innovation are or should be recognized as fundamental human rights that ultimately enable societies and humanity as a whole to grow and develop. It would thus use all available information to increase our knowledge and exchange of ideas, which in turn would lead to many more global innovations. And it would try to lower fears, improve interpersonal and international exchange for greater creativity and inventiveness.

*Other Perspectives*

But even if you agree that we should foster a more creative and innovative world, you may think that it is simply false that all people are or have the potential to be creative. You may think that we already have a lot of information and sources of inspiration to be creative that people do not use. Or you may think that we simply do not really know what creativity is—let alone that, or how, we can teach it. But if you think any of these things, then you may also think that what we should really do when it comes to creativity and innovation is to make sure that we do no harm.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Implement a universal basic income*** | Allow people to be creative, free from financial pressures |
| 2. ***Maintain and expand a library system that keeps up with the times*** | Provide access to new technologies; lead people to spend even more time on social media |
| 3. ***Create a Universal Declaration of Innovation*** | Set high standards for action; leave poor countries out due to lack of resources |
| 4. ***Require courses on creativity and innovation, including ethical issues, in K-12 and college*** | Foster creative minds and give more freedom to students; make us deal with negative effects of creativity |
| 5. ***Give tax incentives to local companies for innovative investments and creative projects*** | Develop local hubs of creativity; provide uneven support for creative ideas since some areas have more resources than others |
| 6. ***Give start-up incentives, e.g., lower the personal tax for 5 years*** | Result in booms and global crises |
| 7. ***Institute competitions for creativity*** | Lead to ideas being widely available; lead people to adopt new ideas or be inspired by them |
| 8. ***Create a central body of information and disseminate*** | Lead to more creativity, innovation, and the cross-fertilization of ideas |

*Possibility #2*

# Do No Harm

***This possibility would allow innovations that pose no potential physical, psychological, or ethical risks to our society and the individuals in it. It would also promote incremental processes of creation and adoption that would enable us to more easily reverse our actions when they begin to do harm.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

What does doing harm mean to you when it comes to creativity and innovation?

How could creativity and innovation cause harm to individuals, different groups, and society at large?

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about this policy in on the page after that.

## *Questions for further discussion…*

1. What are some of the risks and harms associated with creativity and innovation that we want to prevent?
2. How should harm be determined and by whom? Whom would you put on an ethics commissions? And why?
3. If we were to institute a World Court to oversee innovations, how could we control it?
4. Since we inevitably have to prioritize, how should we prioritize who should and should not be harmed by an innovation?
5. Should we ban an innovation simply because a few people misuse it? Why?
6. What kinds of harms to society might we want to prevent? What kinds of risks might we be willing to accept? What levels of tolerance might we have when it comes to airborne diseases, weapons of mass destruction, and radiation?


## What IF…

### Scenario A

Imagine that we decide to not pursue any innovation before considering what harm it might bring. Imagine that we push for oversight agencies and citizens to play a more active role in protecting human health and safety and our society's well being as a whole. Imagine that we decide in advance what kind of lines we want to draw and what kind of thresholds we do not want to cross—whether in medicine or weapons or films or music—with every innovation we make.

### Scenario B

Imagine that it is impossible for us to foresee some if not most of the unintended and undesirable consequences of our creations and innovations. Imagine what kind of unintended and undesirable consequences innovations in genetic engineering, for example, might bright. Consider the example of CRISPER.

### *Scenario C*

Imagine that this policy eases a lot of our geo-political tensions and our never-ending pursuit of better weapons and military technology. Imagine that it also avoids the 'costs' of their remediation and harmful outcomes. Imagine that our research and creative communities focus upon beneficial technologies and creative outcomes that result in a boom of innovations that help billions of people and/or the earth. And imagine that it doesn't do any of these things.

### *Scenario D*

Imagine that we build risk-mapping systems to define areas that we will promote and others that we will discourage, and create business 'check-points' that prevent businesses from growing too quickly without oversight.

*Possibility #2*

# Do No Harm

***This possibility would allow innovations that pose no potential physical, psychological, or ethical risks to our society and the individuals in it. It would also promote incremental processes of creation and adoption that would enable us to more easily reverse our actions when they begin to do harm.***

## *Thinking Behind the Possibility*

This possibility is motivated by our common human desire for safety: to contain risks, enhance social control, and avoid physical, psychological, and ethical harms to society. It maintains that creativity, innovation, and our pursuit of happiness should not come at a cost to our society as a whole. But it recognizes that the world is more creative and innovative today than ever before, and that our innovations come and go at a greater speed than the rules and regulations that we design to guard against the harm they can cause. It thus rises from a concern that we too often fail to strike the right balance between security and innovation. And it would thus call for a precautionary approach to creativity and innovation—especially when they can cause physical, psychological, or ethical harms to society.

This possibility recognizes that innovations affect people's daily lives in small and big ways, that they can spread widely and quickly, and that it is virtually impossible to stop them. It also recognizes that we spend a lot of time and resources that are wasted on dealing with their easily predictable negative consequences. It thus asserts that we should: 1) install monitoring and feedback systems to assess our innovations; 2) try to anticipate most of their consequences; and 3) try to prevent the harmful ones. It would thus empower oversight agencies to create and enforce regulations to do these things. It would also develop 'brake' systems to stop the creative process when an innovation begins to cause harm. And it would try to create a better understanding of the risks in the modern world and the need to create standards and baselines for acceptable innovation.

This possibility would ultimately aim at shifting our attitudes and our ways of thinking about creativity and innovation toward more risk evaluation and analysis. It recognizes that innovations are tools, that whether they are beneficial or harmful largely depends upon how we use them, and that it is sometimes difficult to foresee how people are going to use an innovation, and the possible negative consequences they may have. **It would thus encourage innovations that are well intended and socially rewarding,** and allow them to develop so long as their positive impacts seem stronger than the harm they may cause. **It would also try to develop more creative applications for ideas that are deemed to be safe, and provide subsidies to implement them.** It would try to build trust in our society. But it would, at the same time, try to avoid "tribal thinking" based upon simplistic understandings of what is good or safe.

*Other Perspectives*

You may agree with the general principle of 'Do No Harm', but still think that this possibility could all too easily lead to regulatory overreach. You may think that some businesses would be buried in paper work, while others would fail before they even take off. **You may think that, try as we might, we simply cannot foresee the unintended and undesirable consequences of our innovations.** You may think that we would waste a lot of time trying to make predictions while we do not even know what innovations will take off. And you may think that we simply will be unable to do no harm if we want to create new things. But if you think any or all of these things, then you may also think that we should forget about trying to do not harm, and focus upon alleviating the harm that we do.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Institute and require scientists to adhere to a Code of Ethics agreed upon by industry experts, world leaders, and humanitarians*** | Result in a central clearinghouse for ideas; prevent many harms; miss many harms due to changing perceptions of right and wrong |
| 2. ***Institute ethics commissions and conduct ethics reviews while technology is being developed*** | Shift human mindset toward safety first; limit creativity and innovations to those who pass the review |
| 3. ***Require companies to prove that a product would do no harm*** | Eliminate harmful innovations; diffuse resources with long range projections that may never come true |
| *4.* ***Institutionalize and rotate federal 'innovation officers' on science and ethics panels*** | Stop innovation projects if they cannot be shown to be safe; make innovation obsolete due to the bureaucracy that would be required |
| 5. ***Appoint an oversight group to provide ongoing potential harm review of proposed innovations*** | Result in preventing harm; inhibit creativity |
| 6. ***Train and give people new skills when they become unemployed because of innovation*** | Mitigate the effects of large scale unemployment in various industries; be very expensive |

*Possibility #3*

# Deal With the Consequences

***This possibility would not regulate creativity, but it would focus upon dealing with the consequences of innovation, including systemic failures, instead.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

What are some of the desired consequences of creativity and innovation?

What are some of the undesired consequences of creativity and innovation, and why?

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about this policy in on the page after that.

***Questions for further discussion…***

1. How can the public deal with the consequences of innovations?
2. What do you want to regulate? And why?
3. How much regulation is too much regulation? And why?

## What IF…

### Scenario A

Imagine some of the negative consequences that one of our greatest inventions—the Internet—might have in the future. Imagine, for example, cyber viruses that can spread very quickly and very easily. Imagine that they could cause whole economies to crash and even kill people. Imagine what might happen if certain systems, such as the electric grid, should fail. And imagine the new revelations that WikiLeaks, Julian Assange, and Edward Snowden might bring.

### Scenario B

Imagine that private companies refuse to unlock the cell phones of suspected terrorists so as not to violate their individual privacy. Imagine that they ask you what part of your privacy you want to protect.

### Scenario C

Imagine a case in which micro activities push the boundaries of creativity and innovation in a high-risk field. Imagine that too much innovation in finance leads to the whole global economy crashing down.

*Possibility #3*

# Deal With the Consequences

***This possibility would not regulate creativity, but it would focus upon dealing with the consequences of innovation, including systemic failures, instead.***

*Thinking Behind the Possibility*

This possibility flows from con secerns that our innovations can have unintended and undesirable consequences that undermine our privacy, contribute to environmental degradation, harm people around the globe, and isolate us from our neighbors—while simultaneously making government too cumbersome to deal with these problems. Many innovations have **resulted in fundamental societal changes**. Some of them—such as pollution, underemployment, social isolation, and climate change—are detrimental and in serious need of regulation. Others—**such as electricity, antibiotics, and the invention of the computer and the Internet are very positive, but often need regulation as well**. But even when we are able to foresee their possible detrimental consequences, the **regulatory policies that we have adopted toward creativity and innovation do not always work as intended**.

This possibility recognizes that it is difficult, if not impossible, to predict the future consequences of our innovations, which may, of course, be **intended or unintended, and desirable or undesirable**. It also recognizes that the past is past, that we cannot change it, and that we have no choice but to deal with the consequences of previous innovations. It would thus address the effects of our previous innovations, while allowing creativity and innovation to flourish in order to reap their benefits.

This possibility asserts that the speed of innovation is increasing, that it is important to recognize and react to detrimental consequences in a timely manner, and that we can best do so by instituting **new and more nimble policies** that enable us to quickly and efficiently manage change. It thus maintains that we need to adopt a long-term perspective with regard to innovations that may result in systemic failures, that we need to fix perverse incentives that may give rise to them, and that we need to regulate and sometimes **forbid innovations that have a strong potential for systemic failures**.

*Other Perspectives*

You may agree that we should deal with the detrimental consequences of our innovations, but think that there are always winners and losers, regardless of the outcome. You may wonder exactly what is detrimental, to whom it is detrimental, and how we can decide. You may agree that we should guard against systemic failure, but think that more government is not the best way to do it. Or you may think that regulators might be self-interested and subject to corruption, or that they may have no incentives to regulate well, or that there may often be failures in regulation that are even more costly to fix. But if you think any or all of these things, you may want to find a better way to deal with the consequences.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Encourage international cooperation especially to address public health problems*** | Help prevent the spread of dangerous diseases and solve other cross border problems |
| 2. ***Use only clean energy sources, such as solar, wind, and geo-engineering, to reduce environmental harm from our innovations*** | Help us deal with environmental problems; increase unemployment in traditional energy sectors like coal |
| 3. ***Guard our personal privacy*** | Give people back their privacy |
| 4. ***Subsidize activities that bring people together*** | Deal with isolation, depersonalization, and alienation that technology brings |
| 5. ***Institute oversight boards that conduct ongoing reviews of proposed projects to identify their possible consequences*** | Give us better ideas about what might come from our innovations; lead to the termination of beneficial projects; miss the detrimental consequences of our innovations by focusing only on what we want to happen |
| 6. ***Break up all large companies that are 'too big to fail'*** | Discourage arms races that lead to systemic failures |
| 7. ***Enforce antitrust and competition laws*** | Reduce high levels of economic concentration |

*Possibility #4*

# Support Highly Creative Individuals

***This possibility would support creative and innovative individuals who have demonstrated success in creating new things and in communicating about them. It would give them and their teams time and space to create, innovate, and take risks. And it would continue to subsidize them if and when they fail.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

Do you agree that some artists—painters or musicians—are simply more creative than others?

What criteria would you use to identify creative and innovative leaders? And what might you do to support them? Please explain.

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. Do you think creativity happens in teams or is it more of an individual endeavor?
2. Do you agree that we should continue to subsidize creative individuals and their teams after they have failed? If so, why so? If not, why not? And if so, should we continue to subsidize them if they continue to fail?
3. Is there a philosophy of creativity and innovation?


## What IF…

### Scenario A

Imagine that we begin to support only individual scientists, artists, and entrepreneurs who innovate and create new things—but not institutions, groups, or teams of scientists.

### Scenario B

Imagine that we decide to support some composers, dancers, sculptors, and poets who have proven track records of success for life in order to give them the time, resources, freedom and trust they need to experiment with new ideas. Imagine that we also decide to support some 'wild cards' in order to mitigate the entrenchment of an elite class of creators.

### Scenario C

Imagine that we require people to work across disciplines. Imagine that we also decide to encourage interaction among creative and innovative thought leaders in **different realms** and with different kinds of creative intelligence, because we think that innovations often lead to new inventions, which in turn often lead to new and different kinds of social goods.

*Possibility #4*

# Support Highly Creative Individuals

***This possibility would support creative and innovative individuals who have demonstrated success in creating new things and in communicating about them. It would give them and their teams time and space to create, innovate, and take risks. And it would continue to subsidize them if and when they fail.***

## *Thinking Behind the Possibility*

This possibility flows from the beliefs that **creativity is not a social phenomenon,** and that even though innovations may be refined by teams of people working together, they are **most often generated by creative individuals working alone in solitude.** It recognizes that creativity and innovation always involves an original idea and an ability to see new connections or new ways of doing things, and that some people are simply more creative than others and able to create and innovate where others cannot. This possibility would thus try to identify creative individuals who have a proven track record of success. It would create a supportive infrastructure in which they can thrive. And it would continue to provide financial support for their work if and when their innovations fail. This possibility is thus interested in supporting a few exceptionally creative individuals—**regardless of whether those individuals work alone or in teams, and regardless of whether the innovations are in popular entertainment, the fine arts, technology, medicine, the sciences, or the advancement of knowledge.**

This possibility also maintains that **innovative individuals have a responsibility to communicate their ideas to the public and** to explain what their innovations are, to help the public understand why they are important, and to encourage the public to embrace and adapt to them. It would thus support not only the innovative innovators who bring new ideas to fruition—but also the bold and talented communicators who are instrumental in disseminating their ideas.

This possibility would also foster physical and mental creative spaces—or 'incubators for creativity'—that would enable exceptionally creative and innovative individuals to live and work outside institutional settings that can all too easily impede their work. It would fund incubators for creativity. And it would subsidize the cost of failure to help creative people deal with its consequences. Finally, this possibility recognizes that there are many kinds of social goods in addition to technology. Listening to music or reading a poem is a social good can that bring happiness to individuals and advance society as a whole. But many creators—especially composers and poets—are not well remunerated today. This possibility would consider them as thought leaders and would promote, support, and compensate them as well. Creative people are already icons in our culture, and people follow creative leaders more than they do politicians.

*Other Perspectives*

You may agree that we should support highly creative individuals, but think that some worthy creative people would still fail to get the public funding and support that they need in order to be creative. You may be concerned that it **might be a waste of money, because there are some very creative and talented individuals who simply are not motivated to use** their talents or put the effort into applying them. You may think that many people who get great recognition and awards often cease to be creative after they get them. Or you may think that it is necessity, and not physical comfort, that is the mother of invention.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Support 'genius grants' for very creative and innovative people, including artists*** | Give time and resources for geniuses; divide people into 'insiders' who get support and 'outsiders' who don't |
| 2. ***Offer tax incentives and tax free income to artists and other innovators*** | Incentivize creativity and innovation; encourage people to cheat on their taxes |
| 3. ***Create a new Department for Creativity and Innovation, and a new cabinet member to manage it*** | Inspire people to see value in creative leaders; create a new dependency on government largesse |
| 4. ***Create competitions that reward and publicize innovative ideas*** | Increase creative approaches and solutions |
| 5. ***Give grants and special training to those who show talent*** | Train kids who have natural talent; Lead to one-sided education |
| 6. ***Increase public support for the arts and allow government institutions to fund individual artists*** | Result in greater controversy about what artists should be funded; lead to funding only 'safe' artists with less artistic merit |
| 7. ***Designate some public spaces as incubators for creativity and create incubator programs to direct young people toward certain activities*** | Provide more resources for creative people; increase networking among creative people; develop their talents; limit their options later in life. |

*Possibility #5*

# Good Enough

***This possibility would generally support the development of innovations that enhance human activity, without actually replacing it. But it would not support innovations that are designed to replace products and tools that are already good enough for what we want or need to do with them. It would also promote a discourse about what is and is not good enough for what purpose and for whom.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

Do you sometimes feel overwhelmed by innovations?

What are some possible reasons for slowing down innovation?

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. What standards should we use to decide whether or not something is 'good enough' already?
2. Do we really know what we need and what we want? Isn't what we need and want relative to who we are? And don't our needs and desires change overtime?
3. Do you think that we should immediately eradicate diseases if we had the knowledge and power to do so? If so, why so? And if not, why not? Do you ever think that suffering is a part of being human, or something that brings people together?


## What IF…

### Scenario A

Imagine that we are having a national discussion about whether, when, and by what standards we should regard a product or a work of art as 'good enough'. Imagine that you are called upon to decide what criteria we should consider in making the judgment.

### Scenario B

Imagine that we periodically have to learn entirely new software despite the fact that our old software can do what we need it to do just as well.

### Scenario C

Imagine that we have the knowledge and power to eradicate all physical suffering and diseases. Imagine that you are called upon to develop a set of criteria for deciding whether and when we should use that knowledge and power, and whether and when we should not.

*Possibility #5*

# Good Enough

***This possibility would generally support the development of innovations that enhance human activity, without actually replacing it. But it would not support innovations that are designed to replace products and tools that are already good enough for what we want or need to do with them. It would also promote a discourse about what is and is not good enough for what purpose and for whom.***

*Thinking Behind the Possibility*

This possibility flows from a concern that many **innovations tend to replace human jobs instead of helping us** to do them better—and from a concern that the constant improvement of different **devices leads to shorter lifespans for each of them, and simultaneously makes them more expensive and more difficult to use**. These concerns, together with a sense that we are being overwhelmed by an **ever-increasing number of over-engineered innovations**, call for supporting innovations that are 'good enough' for whatever we want them for—and a national discussion about what 'good enough' means for individuals, groups, institutions, and society at large.

This possibility is motivated not so much by a fear of change, as by an understanding of the difficulties involved in constantly having to adjust to unnecessary and unwanted change. It thus recognizes that it is important to know when to stop: that the fact that we *can* do something does not mean that we *should* do it, let alone that we should do it up to and beyond the limits of our patience to adapt. It would thus aim to support the major improvements that an innovation might make, but not all of its possible bells and whistles. And it would also aim to limit the production of things that we do not need, or do not want.

People want to have a sense of control over their lives, and their sense of control is increasingly being challenged by new inventions. The invention and development of intelligent machines is currently challenging our very idea of humanity, and especially the idea that our humanity is tied to our physical limitations. This possibility would initiate a national discussion about the differences between **what we need vs. what we want,** the intersection of social responsibility and the impacts of innovation, and the changing social and personal relationships that it may bring. These discussions would test the logic, scope, and risks that an innovation involves before committing to support it. And this, in turn, should channel funds for innovation to the most 'important' projects, while leaving open the possibility of private support for other creative ideas, approaches, and innovations.

*Other Perspectives*

Even if you agree that good enough should be good enough, you may still think that most prohibitions against new technologies are mere delays, and that there will eventually be a market for them. You may also think that this possibility might deprive us of great opportunities by not allowing certain innovations, and that we will only miss out on the fastest delivery options if we do not allow commercial drones to fly overhead.

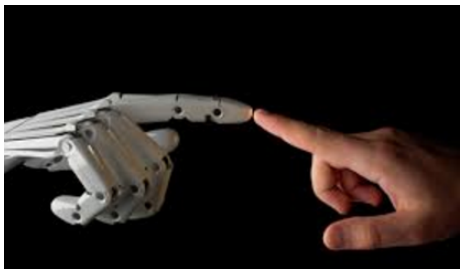
| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Promote discussion about which innovations are and are not good enough via online newsletters and emails, which are good enough for the purpose*** | Encourage people to think more about what is and is not good enough to satisfy their needs and desires; result in the decision not to develop certain products |
| 2. ***Require justification for public support and allow public voting for creative approaches for societal problems*** | Stimulate thoughtful discussion about innovative ideas; divert resources from innovators if manipulated by special interests |
| 3. ***Create a governing agency of industry experts to evaluate an innovation for its possible disruption of the labor market*** | Prevent job displacement and its detrimental effects on the global economy; severely hamper the speed of innovations |
| 4. ***Set national goals and provide resources and rewards for solutions to problems that preserve societal resources while advancing them*** | Channels resources to the most important societal problems; could result in resources and rewards being captured by powerful interests that may not really advance the goals |
| 5. ***Incorporate creativity into the educational system by teaching kids not only music, dancing, and different art forms, but also how to tinker with ideas and build things*** | Create a new mindset of practical creativity and creation with a purpose; build and create things from a young age; could limit creativity and innovation, like anything that is structured |

*Possibility #6*

# Create AI that is Superior to Humans

***This possibility would aim at creating machines that are at least as intelligent, creative, and innovative as humans—and preferably more so. It would also defer our tasks and our decisions to artificial intelligence (AI) whenever and wherever possible.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**



Do you believe that creativity is nothing but a reformulation of old ideas in new ways? And why?

Do you believe that computer programs can create new ideas? If so, why so? If not, why not?

NOW LET'S

- Explore some of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. Are we starting to trust AI too much?
2. Who should be responsible and liable for actions of AI?
3. Would you listen to music or read poetry written by AI? If so, why so? If not, why not?
4. Do you think that machines can be conscious?
5. Do you think we are humanizing AI? If so, why so? If not, why not? And just how human do you want our machines to be?
6. If you know how a creative process works, is it still creative?


## What IF…

### Scenario A

Imagine that we live in a world in which most of our innovations and creative works—including our literature, graphic artwork, and music—were created by artificial intelligence machines that were also teaching other artificial intelligence machines how to do it.

### Scenario B

Imagine that we decided to insist that computer programmers go through rigorous ethical training before we allow them to program machines.

### Scenario C

Imagine that we can download feelings, sensations, memories, and other conscious states from the Internet in the same way that we can now download knowledge.

*Possibility #6*

# Create AI that is Superior to Humans

***This possibility would aim at creating machines that are at least as intelligent, creative, and innovative as humans—and preferably more so. It would also defer our tasks and our decisions to artificial intelligence (AI) whenever and wherever possible.***

*Thinking Behind the Possibility*

This possibility flows from the belief that AI is one of the greatest creative innovations of our time. But it also flows from concerns about its rapid development and integration into our daily lives, about where it might take us in the future, and about whether and to what extent it will be able to create and innovate by itself.

**Artificial intelligence generally consists of computer systems that can approximate what human minds can do.** This possibility maintains **that creativity is nothing more than a remix of old ideas**, combined with an extension or rejection of current practices; that it can, in most cases, be achieved by manipulating data sets; and that the current computing power of AI machines already surpasses that of any human. It also maintains that the numerous and obvious benefits of the intelligent machines that we have created call for their further integration into our education, health, and security systems; that AI will continue to develop in ways that improve our lives and living standards; and that it could enhance our lives and our living standards even more than it currently does if we create machines that are more intelligent than we are. It would thus defer our tasks and decisions to AI whenever and wherever possible. And it would also promote an accelerated development of AI machines, to the point of actually merging them with human bodies. If we can create AI that is more intelligent, competent, creative, and innovative than human beings, and if it can help us to do things that are difficult for us to do, then we should create it—the sooner, the better. This possibility maintains that we have already created AI that can think faster, more comprehensively, and, in a word, better than we can—and that it will always eclipse what we are capable of doing. It thus recommends that we simply get over our fears of AI, build trust in it, and embrace it.

This possibility recognizes the danger of AI extending the foibles of human thought and reasoning in logically efficient and progressive ways. But it maintains that once we mechanize thinking, we will be able to make discoveries faster. AI, if programmed properly, can focus on problems that are beyond our human capacity. It can also be used in environments that are dangerous for humans. It can overcome human moral prejudices. And it can be used to develop creative and innovative solutions to societal or political issues.

*Other Perspectives*

You may agree that we should try to create AI that is at least as capable and competent as human beings in whatever they do, but nonetheless think that we should not blur the line between human beings and AI machines or forget that they are programmed by us, and that all creative ideas are generated, and can only be generated, by human minds. You may think that AI can already perform many tasks as well or better than humans, but that it simply cannot create because machines always follow rules while creativity and innovation depends upon breaking them. And you may think that computers do not have any moral rules to 'act' upon except the ones that we give them, so that the real question is whose morality we should use in their programs. But regardless of what you think, you may also feel that we should also include a 'kill-switch' in their programs just in case we are wrong.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Create AI personal assistants that can represent human beings in whatever dealings they need to*** | Relieve humans from difficult and boring chores; result in AI representing humans to the world |
| 2. ***Replace human workers with AI workers*** | Make labor cheaper and easier to manage |
| 3. ***Apply AI to solving world crises and problems that humans have not been able to solve*** | Solve epic world problems we have failed to solve; fail to solve such problems |
| 4. ***Give incentives to create AI that is better than we are and integrate it into our governing process*** | Advance AI; erode our sovereignty and our confidence in our ability to govern ourselves |
| 5. ***Develop AI cyborgs that are part machine and part human*** | Lead to incremental transition to a world dominated by AI; change our definition of life |
| 6. ***Require humans to fix problems that result form data error or faulty programming*** | Create employment opportunities that are less automatized, more creative, and help most people |
| 7. ***Fund diverse AI projects to solve specific problems*** | Make work more efficient; humans might be bored |
| 8. ***Program AI to learn and reflect on what it is learning*** | Enable computers to do revolutionary research |

*Possibility #7*

# Seize for Public Use

***This possibility would allow the government to expropriate certain innovations for public use with appropriate compensation.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

Do you think some ideas are so important that the society should seize them? If so, why so? If not, why not?

If so, would you compensate the author of the idea, and if so how?

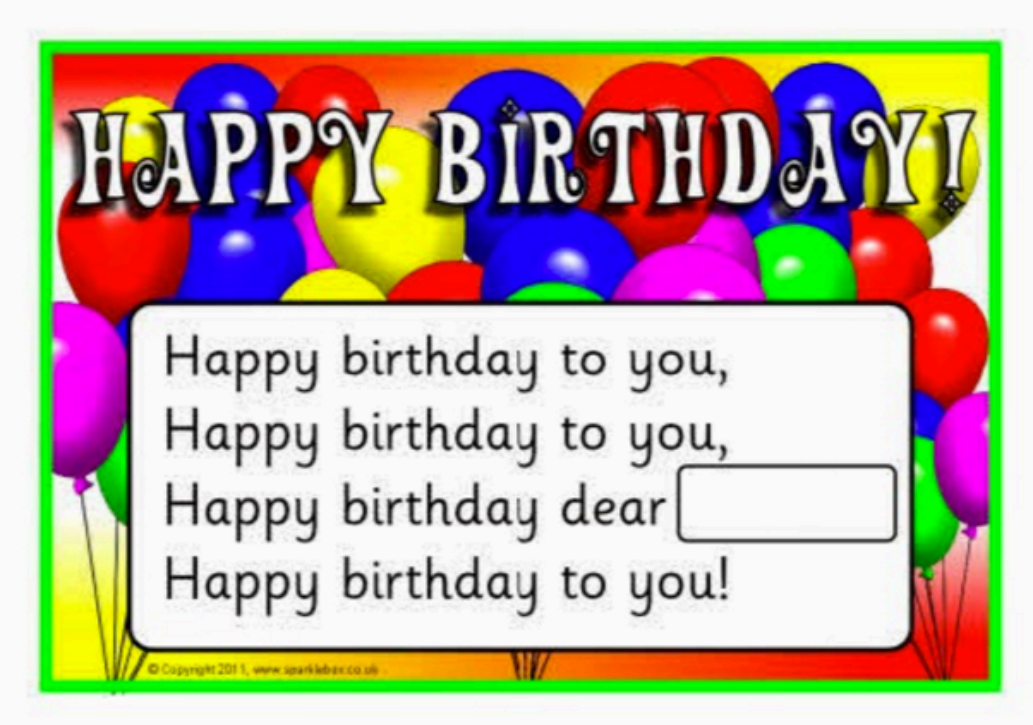
NOW LET'S

- Explore one of the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. If the government were to seize your idea, should you be able to appeal the seizure? And if so, to whom?

2. Who should decide what compensation is appropriate?




## What IF…

### Scenario A

Imagine that a life saving drug is invented and that the government seizes it in order to allow everybody to produce generic versions of it. Alternatively, imagine that we encourage scientists not to patent their inventions so that anyone can copy them. Imagine the attitude of Jonas E. Salk who developed successful polio vaccine explored in this video Could You Patent the Sun?

### Scenario B

Imagine that we seize certain songs, movies, and paintings from their creators or current owners because they have become so popular that we decide that they should be freely available for anyone to use them.

### Scenario C

Imagine that we adopted this policy. Imagine that the government seizes innovations for public use in cases in which only a few people actually benefit from them. And imagine you are now called upon to devise a set of criteria to determine what kinds of innovations can and cannot be seized for public use.

*Possibility #7*

# Seize for Public Use

***This possibility would allow the government to expropriate certain innovations for public use with appropriate compensation.***

*Thinking Behind the Possibility*

This possibility flows from the belief that creators and innovators have a moral obligation to share any ideas and products they may have that can substantially improve the world. But it also flows from a concern that our intellectual property laws may discourage them from doing so, and that they may also stifle the adoption and further development of certain innovations. It would thus allow governments to exercise eminent domain over certain innovations, thereby forcing some creators to give up their inventions and a large share of the profits that they might otherwise have earned from them.

Today, many people believe that there is nothing new under the sun; that what we call a 'creative new idea' is simply a remix of old ideas; and that allowing everyone to use *all* ideas, and especially groundbreaking ideas, enables society to grow and prosper by remixing more and more ideas. This possibility would thus remove the legal barriers that impede people from using ideas. It would also put a stop to the unjustifiably high pricing of certain life-saving drugs.

Seizing innovations for public use would not lead to a socialist free-for-all where everyone is obligated to share everything good with everyone else. **Only the most beneficial innovations would be expropriated, and their expropriation would be balanced by just compensation.** But this would ensure that the whole society would have access to beneficial innovations without the bottleneck effect of pricing. That, in turn, would lead to universal access to things that can improve or possibly save lives. This possibility would thus benefit everyone in society by ensuring that our most beneficial innovations are shared without having to worry about price gouging.

*Other Perspectives*

But even if you agree that we should expropriate certain innovations for public use, you may think that any compensation we might offer could never really be appropriate or just. You may think that the fact that we are unable to offer truly just compensation is a large part of the reason why government would have to expropriate them in the first place. And you may wonder what our country has come to if creative innovators can no longer profit from the fruits of their own labor, but can instead be coerced to give them away against their will.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Create a new agency whose sole purpose is to find new innovations, decide if they merit expropriation, and determine fair compensation for all parties involved*** | Ensure public access to ideas and technologies that can significantly improve and save lives; raise serious legal and constitutional issues that may take decades to resolve |
| 2. ***Require innovators to reveal their 'secrets' to government before getting approval to bring an invention to market*** | Strengthen government control over the market; destroy the patent system and intellectual property as we know it |
| 3. ***Institute 'public good' panels to evaluate the potential usefulness or harm of a product and to honor and publicize the innovation and its innovator*** | Give the public a better idea of which innovations will be useful and harmful; result in poor choices if selection criteria is biased; create 1st and 2nd class innovations and innovators |
| 4. ***Decide what counts as fair appropriate compensation for taking innovations*** | Create greater transparency; lead to endless debates about the fairness of the decision |

*Possibility #8*

# Encourage the Private Sector to Create and Innovate

***This possibility would encourage the private sector to take the lead in funding creative and innovative ideas, including social innovations, so that public money can be used elsewhere.***

**WHY WOULD ANYONE WANT TO PROMOTE THIS POSSBILITY?**
**WHAT ARE THEIR VALUES?**
**INTERESTS?**
**GOALS?**

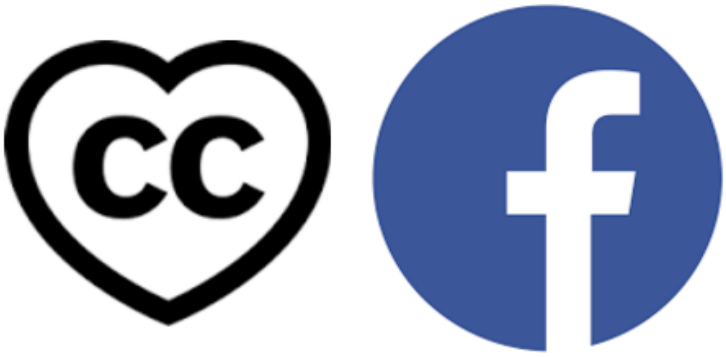
Do you believe that the private sector should lead in creativity and innovation? If so, why so? If not, why not? And if so, what can we do to encourage it?

NOW LET'S

- Explore the questions below; OR
- Explore one of the scenarios on the next page; OR
- Read what your fellow citizens thought about it in on the page after that.

***Questions for further discussion…***

1. What does 'social innovation' mean? And should we encourage the private sector to take the lead in supporting it? If so, why so? If not, why not?
2. Think about the most successful innovations. Who took the lead in funding and promoting them?
3. What innovations is government supporting now? What would happen to them if funding were cut?



## What IF…

### Scenario A

Imagine that we consider the establishment of public schools as a good example of a 19th century social innovation. Imagine that someone now claims that charter schools are as a comparable 20th century social innovation.

### Scenario B

Imagine that the U.S. government were to go around the world and try to convince all the counties to enforce our intellectual property laws.

### Scenario C

Imagine that the government pulls all its support for the culture and the arts. The ticket prices triple. Certain art forms not only seize to be creative, but disappear altogether, because there are too few people in a certain location who appreciate it and can help to sustain it.

*Possibility #8*

# Encourage the Private Sector to Create and Innovate

***This possibility would encourage the private sector to take the lead in funding creative and innovative ideas, including social innovations, so that public money can be used elsewhere.***

*Thinking Behind the Possibility*

**This possibility is based on the values of individualism, high risk taking, and agility**. It flows from the concerns that public allocations are typically politicized, that government spending is typically inefficient, and that the arts are typically not funded as well as other innovative ventures. It recognizes that innovation is a risky business, that the public may have neither the resources nor the will to support it, and that public investment in innovation might not be a priority given our other pressing social needs and the high financial costs that come with them. And it maintains that venture capitalists are good at evaluating innovation and that they would, given their past experiences, make better decisions than the public at large about what may work in the future. This possibility would thus represent the interest of the majority and reduce public risk by encouraging the private sector to take the lead in funding innovation. It maintains that the best judges about which innovations to push forward are neither the government nor the taxpayers who fund it, but people who put their own money on the line to support them. It assumes that letting venture capitalists take the lead in funding creativity and innovation would increase the speed of innovation, lower its costs, and result in constant improvements. It also assumes that venture capitalism is not always profit driven, but is instead compatible with venture philanthropy, in which wealthy people give away huge sums of money to fund creative and innovative projects that will contribute to human wellbeing. And it thus maintains that the market is the best way to fund creative and innovative ideas, and that we should let it drive and regulate itself when it comes to creativity and innovation.

*Other Perspectives*

But even if you agree with this possibility, you may worry that it might all too easily lead to a kind of 'oligarchy' (or rule by a few rich elites), because too few people would determine the course and the future of innovation, and what kind of innovations are being funded and hence disseminated among the public. You may think that many important social projects might go unfunded since most venture capital is motivated by the incentive of future monetary profit. Or you may think that if we encourage the private sector to drive innovation, then it is very likely that it will benefit most from it.

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Publicly acknowledge the private sector's projects, contributions, accomplishments, failures*** | Make innovation and creativity a competitive process among private individuals; open doors for creativity |
| 2. ***Give presidential medals to innovators*** | Raise the profile and prestige of innovators |
| 3. ***Give grants and sabbaticals*** | Encourage greater creativity |
| 4. ***Enforce intellectual property laws*** | Make innovators feel that they will be protected; lead to patent trolling |
| 5. ***Have government develop criteria for the kinds of projects we want to encourage*** | Result in very bad projects, since people in the government might not be able to make the best calls |
| 6. ***Offer greater tax incentives to innovators*** | Lead to more investment in creativity and innovation; lead to corruption if just a few people in the government decide which incentives to encourage; use tax incentives for one narrow purpose (e.g. oil); nepotism |
| 7. ***Encourage privatization*** | Result in innovation in the private sector that benefit consumers; weaken social security; lead to unemployment |

*Possibility #9*

# Your Possibility's Title:

***This possibility would…***

*Thinking Behind the Possibility*

This possibility is flows from the beliefs that….and the concerns that….

*Other Perspectives*

But even if you agree with the…

| ***Possible Implementations*** *We could—* | ***Possible Effects of These Actions*** *These actions could—* |
|---|---|
| 1. ***Encourage…*** | Lead to… |
| 2. ***Require…*** | Result in… |