



the
little
book of
**Speculative
Design**
for
Policy-makers

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ProtoPolicyAsia



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The Little Book of SPECULATIVE DESIGN for policy-makers

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¹See <https://protopolicyasia.org/>

Contents

What this little book tells you	4
What is Speculative Design?	5
Why use Speculative Design in policy-making?.....	7
Speculative Design and policy-making case studies.....	10
How to use Speculative Design in policy-making.....	18
What do I actually do to use Speculative Design in policy-making	21
Summary	26
References.....	27

What this little book tells you

This Little Book tells you what *Speculative Design* is, what the benefits for policy-making are, and how it can be used by policy-makers in Malaysia.

Policy teams in several parts of the world are experimenting with a range of design methods and have touched upon a new method known as speculative design (Government Office for Science, 2015a). Speculative design is used to provoke, inspire and provide a critical commentary of alternative possible futures (Dunne & Raby, 2013).

In 2017, the Policy Lab in the Cabinet Office in the UK identified speculative design as the number one policy prediction stating that more and more policy-makers will adopt speculative design to develop creative policy options and explore alternative futures.

What is Speculative Design?

Speculative design is an approach that enables thinking about the future prospectively and critically (Sterling, 2009, Dunne & Raby, 2013).

Speculative design raises various “*what if?*” questions about the future. What if change is needed? What if things were different? What if we changed in these particular ways? Then it imagines what happens.

It creates scenarios around these “*what if?*” questions with tangible and realistic objects, designers can fabricate an experience of that possible future. These typically take the form of short sci-fi films, interactive prototypes, user manuals of future technologies, newspaper articles, consumer product/service catalogues and many others.

Speculative design:

- does not aim to predict the future, instead it places new technological developments within imaginary but believable everyday situations that allow people to debate the implications of different technoscientific futures before they happen (Linehan et al., 2014; Lee, 2019).
- tends to be provocative, which means it has a strong political flare and engages people in debate and raise questions about direction of society.
- can develop dystopian future scenes to shake things up; utopian (ideal) future scenes to inspire public agencies to aim bigger; and alternative future scenes to explore the futures that ordinary people would prefer.

Speculative design can be employed to explore citizens' views, focus concerns and generate debate on policy issues advocated by governments and to genuinely reimagine the relationship between government, community groups, and the public.

Why use Speculative Design in policy-making?

Governments need new tools to become more future facing in their decisions to look beyond the next 10 years and address the challenges that societies are facing today.

Extrapolation helps us contemplate what is likely to happen, the probable. Speculation draws possibilities to the surface and allows us to imagine more radical changes, to prepare for what could happen, and plan for what we want to happen.

Speculative design has been proposed as a potential tool for including citizens in imagining the future implications of policy initiatives in creative ways (Government Office for Science, 2015).

Developing future scenarios in the form of speculative designs, where citizens engage with public services and emergent technologies, is not without challenges, yet very beneficial.

The challenge lies in engaging citizens in unknown fields that are typically reserved for, and explored by, either experts and understanding of current and emerging technology.

The key benefits include the development of a more enhanced understanding of complex services and using speculative design as a tool for reflection, as well as interrogation, of future possibilities within these groups (Tseklevs et al., 2017a).

Moreover, speculative design encourages and enables citizens to raise ethics-related questions that may not have been possible through a typical debate. It can also help negotiate peoples' understanding, and question entrenched positions that may lead to positional shift.

In the case studies presented below, speculative designs were seen as innovative prompts that build empathy and provoke creative thinking among citizens much more than traditional communication mediums from government such as written reports.

Nevertheless, a number of challenges were also identified, such as, timescales, costs and pressures of public opinion and party lines facilitating a constructive dialogue between stakeholders using speculative design to collect meaningful data and draw robust conclusions.

For civil servants who have experienced speculative design an advantage of it is being able to interact with a physical artefact beyond a traditional written report. Very often in public engagement, there are no prompts that enable creative thinking, usually a written report is provided to citizens.

Public consultation is a common approach for civil servants and politicians to seek public opinion on legislation, investment or other political issues

that have an impact on the everyday live and work of citizens. However, very often public consultations involve lengthy reports making the process inaccessible to many segments of society. As such, people can feel excluded from the political decision process.

By breaking down the barriers between research participants, speculative design can create empathy and therefore deep insight into highly specialised data. They can create a symbiotic relationship between citizens as participants in the policy process and government departments as researchers.

Using speculative design as a means of political engagement could change attitudes of the general public towards the policy process. Whereas previously citizens have been the object of policy, in a user active paradigm, they could jointly make political decisions with politicians and jointly create policy with civil servants.

Lastly, speculative design methods would be a good way to involve citizens at a constituent level. They could be good for planning, education, health, transport, etc. In terms of the public services they can help to understand what society will need in coming years. Especially the concept of co-design, where community groups, the public and politicians can jointly develop understanding of political issues is valuable.

Speculative Design and policy-making case studies

Various forms of speculative design have been tested by researchers in the UK (Case Study 1), Malaysia (Case Study 2) and the UK Government (Case Study 3) to assess their potential to contribute to real-world policy development (Kimbell, 2015). These are presented in the following pages.

Case Study 1

ProtoPolicy explored how speculative design methods could help politicians and civil servants to engage with citizens, imagine the future implications of policy initiatives and negotiate political questions in the UK.

ProtoPolicy included several co-design sessions with a group of senior citizens living independently and a group of senior citizens, living in sheltered accommodation. The workshop insights and co-designed speculations were translated into a series of Speculative designs. This was achieved by analysing and coding the captured data and then crafting the artefacts, by thematically sorting the participants' insights and giving consideration to the areas of contention that might be exposed in debate on an imagined future (Darby et al, 2016).



Figure 1. Co-designing speculative design concepts with senior citizens in the UK.

² See <http://imagination.lancs.ac.uk/activities/ProtoPolicy>

The two speculative designs included a self-administered euthanasia wearable device, and the Smart Object Therapist, which combines occupational health with experience in pervasive and assisted home technology to ensure that future smart home appliances correspond to user needs (Tseklevs et al, 2017b). The former speculative design was designed as a response to the workshop co-designers expressed needs for self-control and living with dignity and was aimed at opening further the debate around the ethical and legal aspects of technology-enabled assisted dying (see Figure 2).



Figure 2. The self-administered euthanasia speculative design.

The second one was developed as a response to government policies on integrated care, ageing in place and assisted living in smart homes and was aimed at extending the debate around the ethical and social aspects of personal health and pervasive technology at home and social inclusion.

The ProtoPolicy project findings revealed that speculative designs were seen as innovative prompts that build empathy and provoke creative thinking among citizens much more than traditional government practices. Furthermore, it has shown that with additional research advocacy, design methods could be adopted as a tool for greater citizen engagement in decision-making processes (Tseklevs et al, 2017a).

Case Study 2

The ImaginAging project explored how might speculative design enable citizens and governments in Malaysia engage in policy agenda setting on ageing well in an urban city environment. The ImaginAging project work has been carried forward and expanded in the ProtoPolicyAsia project.

ImaginAging followed a co-design research methodology similar to ProtoPolicy. It included workshops with senior citizens living independently in the community and a workshop with experts. Speculative designs were developed by workshop participants, which were then refined by the research team into higher quality prototypes.



Figure 3. Co-designing speculative design concepts with senior citizens in Malaysia.

During the workshops, health was highlighted as the primary area of interest/concern for senior citizens, followed by independent living. The characteristics of health was evident in a theme about food and nutrition. A group from among the workshop participants chose to focus on reducing sugar consumption in all foods.

The group developed a 'Sugar-free Malaysia 2050' speculative design concept, which comprised of two speculative design prototypes. A future newspaper with two different front headline covers set in 2050 (one presenting the benefits this policy initiative will bring to Malaysia in terms of health, economic and social development; and the other presenting what will happen if high sugar consumption continues in Malaysia). A 'sugar neutraliser' speculative design was also developed presenting a future product, and thus showing that a new market may emerge in this area, which removes any processed sugar content from drinks and food.



Figure 4. The 'Sugar-free Malaysia 2050' speculative design.

These speculative design prototypes were aimed at generating public debate about the effects of sugar in food consumption in Malaysia and ways that this can be tackled at policy level. The following workshop participant quote exemplifies that their Sugar-Free proposal includes the national and multi-generational focus:

"So we've zeroed it down to a particular vision, that we want a sugar-free Malaysia by 2050. [general gasping] 2050 because, sugar is as-is in every part of our lives, our food and all that, and of course to get people to say, 'I don't want to use sugar' will take a long time, it involves changed management, mindset change, that would take a generation or more. So, even though it's 2050, we'll take it step by step. Maybe every five year or so, we'll have various strategies in place, action plans in place, to execute a sugar-free uh... economy, ya. The rationale being that even now, 40 percent of our school children are obese. I think their- BMI is 25 and above I'm not mistaken." [Workshop participant quote]

This project aimed to disrupt the usual top-down approach to policy-development that tends to be adopted to develop without sufficient consideration of the lived experiences of the intended beneficiaries and what they see as their priorities.

Policy-makers were able to understand that the designing of a problem out of which they could prototype long-term policy-solutions was much more complex and requires a more systemic consideration beyond the identification of a policy gap.

The ImaginAging project findings reveal that despite participants' initial reluctance they were able to use speculative design to arrive at a successful outcome, creating a future that they would want to live in themselves as well as for the next generation. The activities allowed participants to realise their wishes in a non-conventional manner and expressed their creativity within the present and the future.

Case Study 3

The Cabinet Office Policy Lab has worked with the UK Government Office for Science on a pilot speculative design project in government in 2015. Focused on the Future of Ageing, the project aimed to explore the challenges and opportunities of an ageing society (Government Office for Science, 2015). It took a life-course approach, including the choices that people make throughout their lives, and the implication of an ageing population.

Three workshops were run, based around themes of the future of work, services, and transport. Six separate visual artefacts were developed, tailored around the workshop themes and the city they were hosted in. Unfamiliar 'future' elements were grounded in familiar worlds, with realism generated through a literature review and brief foresight analysis. Semi-structured discussions were guided around positive and negative aspects of the images; feelings and emotions; and types of personal and institutional change.

The workshops were centred around the themes of what work, services, and transport and mobility might be like in 2040. The workshops were extremely successful, provoking a rich and active discussion around the future scenarios presented.

The images produced offered a common starting point for participants, and the elements within them leading to rich discussions around the world they contained.



Figure 5. Citizens exploring the speculative designs and offering debate (Source: Government Office for Science, 2015).

Guided discussions also allowed participants move beyond polarising debates for ‘good’ or ‘bad’ to voice opinions about the images that were not so immediately obvious – for example, their positive aspects – and the points of conflict within them (for example, how certain elements were viewed as positive or negative by different participants). This also allowed us to steer discussion away from a too-heavy focus on the technological realism of what was portrayed in favour of considering the future possibilities intimated by these artefacts (Voss et al., 2015).

Across the workshops, participants were concerned that future systems were being designed without them. For future work, it would be useful to run longer workshops to encourage participants to craft their own narratives, further developing the narratives depicted.

How to use Speculative Design and policy-making

To start the research design, identify the policy space and establish any key issues for consideration. Then clarify the research question(s) and determine the nature, extent and timing of any public participation and speculative designer involvement by developing a brief research design. Make sure to establish the key points for data collection and consider suitable approaches to qualitative analysis, such as thematic coding and content analysis.

There are many ways to make use of speculative design in the policy making process, in parallel, or in series, with other methods and as a stand-alone study. Below are three project descriptions outlining some speculative design in policy-making research designs:

1. Policy-makers commission a speculative designer to create speculative artefacts as a critical provocation for private discussion among themselves. The intention of the project is to offer policy-making specialists difficult or unusual perspectives from which to consider familiar policy issues. This could include creating speculative policies that draw on unusual objects/subjects, or one that imagine a world that does not yet exist.

2. Policy-makers commission a speculative designer to create speculative artefacts as a critical provocation for open discussion among key groups, and that discussion is captured. This means that the object created could be highly controversial and provoking of strong emotions yet contained sufficient nuances to address critical-theoretical issues that could emerge. The intention of the project is to prompt debate about complex issues and gauge significant publics' reactions to a radical possibility.
3. Policy-makers commission a speculative design facilitator to support community groups in exploring a policy space through workshops and workshop-styled activities. Together they develop ideas for speculative artefacts that embody their responses to the issues they see. Based on their work with the community, the speculative designer further develops the concepts, bringing speculative artefacts back to the group for iteration and validation. The speculative designs are shared among the wider community through a series of open public workshops. Responses are captured and used to understand the perceived benefit, need and viability of the speculative design in order to guide policy development. The intention of the project is to explore a policy space, reveal public understanding of complex issues, and to prompt ethical debate and gauge public reaction to the presented possibilities, be they solutions or critiques.

Speculative design in policy-making may be practiced by speculative designers, or by participatory groups facilitated by designers, or design researchers. It may be pursued with an anticipatory (looking towards probable futures) or exploratory mindset (considering alternatives to the probable futures), creating artefacts either affirmative of, or critical of, the status quo. Insights may be derived from the process of making the speculative design, as well as from the act of sharing, the speculative artefacts.

These artefacts may be employed within the process as inputs to further acts of speculative design or as outputs in themselves used to catalyse debate. As such, they can stimulate debate among a specific audience, or more widely among the general public, generating further insights as it does so.

Within speculative design for policy-making projects, project leaders should consider the research design parameters mentioned above as dualities. While some are necessarily binary, others—exploratory/anticipatory, critical/affirmative, & making/sharing—may be held in productive tension. As ever, the selection of research design parameters will emanate from the research question, or topic area, and the degree to which a participatory paradigm is adopted. There will always be a question as to exactly how participatory, co-creative or consultative the research design can be when speculative design in policy-making works with necessarily small sample sizes. However, this should be recognised as a feature of a qualitative method, not a limitation of a quantitative one.

The artefacts created through speculative design in policy-making projects combine a deep engagement with current issues with ethical and political concern at society's direction of travel. They are both an examination of social and technological possibility and a concrete expression of that intersection, as such they may be conceived as either exploratory or investigatory acts that speak to various degrees of likelihood or desirability.

What do I actually do to use Speculative Design in policy-making?

Potential futures contend with each other for supremacy, they intersect and interact in many unexpected ways. And they can grow from the smallest of things, just like trends. So where do we look for the small signs, the trends, where do we find the first beginnings of change signals? How do we identify the things we need to think with?

You might use something like the trend map below with many intersecting lines of possibility. Or you might work with trends in a more everyday way, or somewhere in between.

The PESTLE framework may be familiar to some as it is commonly used in risk management where more headings are developed below each category. PESTLE is a mnemonic which in its expanded form denotes P for Political, E for Economic, S for Social, T for Technological, L for Legal and E for Environmental. It gives a bird's eye view of the whole environment from many different angles that one wants to check and keep a track of while contemplating on a certain idea/plan.

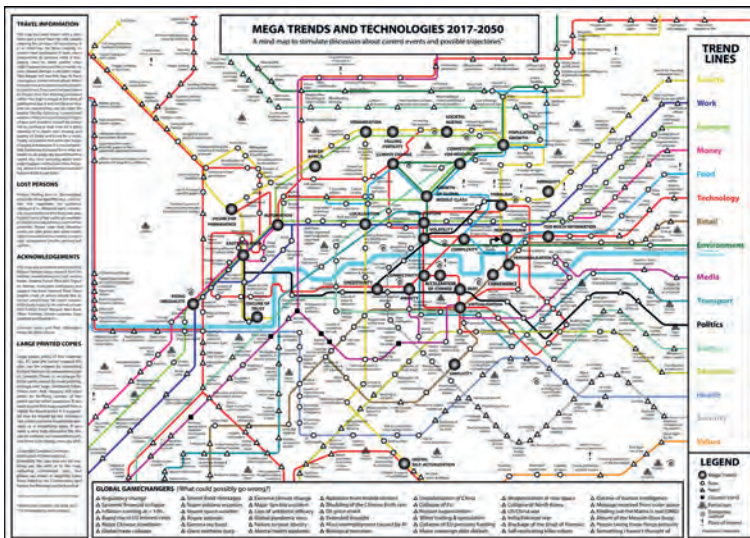


Figure 6. Trend map example (Source: Richard Watson, www.nowandnext.com, 2019).

For many of us Technology has been, and continues to be, the biggest disruptor of our age. So, there is plenty to consider from that angle, indeed that is where the roots of speculative design reach back to, but there are also shifts in Politics from left to right or right to left, in Economics there is the fast boom and bust, or the slower growth and decline. There are all kinds of Social shifts, The Legal system is always reinventing itself through case law and precedent. And there are longer term trends in the Environment that cannot be ignored.

Using the PESTLE framework is a good way of identifying different trends and insights. The questions in the table below will help you on getting a start on this.

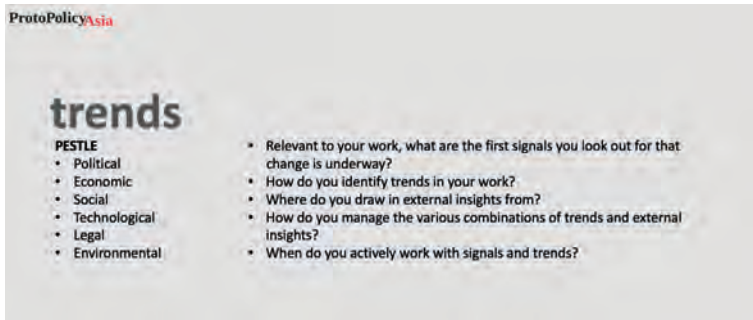


Figure 7. Using the PESTLE framework to develop speculations.

Combining and crossing trends is a great way of developing interesting speculations. Here are some steps towards speculations.

1. Identify a topic area, consider the issues and how they affect different people.
2. Identify a current trend, or trends, that help to shape our understanding of the topic area or exacerbate the issues and consider how it, or they, intersect with the topic area.
3. Specifically consider technology trends that might intersect among themselves and think how they might intersect with the topic area.
4. Create speculations at this point of intersection. Create as many 'What if?' questions as you can. Cross your ideas! Have confidence in your questions. As examples, here are some 'What if?' questions from Dunne and Raby's 2013 book, *Speculative Everything: Design, Fiction and Social Dreaming*, "What if human tissue could be used to make objects? What if everyday products contained synthetically produced living components? What if we could evaluate the genetic potential of lovers? What if we could use smell to find the perfect partner? And, what if our emotions could be read by machines?"

5. Among all the speculations that are created look out for the unexpected ideas, the ones that are a little provocative. The more speculations you have the more likely it is you will get something interesting.

The speculative design, the thing, springs from the speculation. Therefore, developing the idea for a product, service, or bundled product and service helps articulate the story of a thing. Someone has a problem, a solution is presented through design, the problem is alleviated or resolved, and a life is transformed.

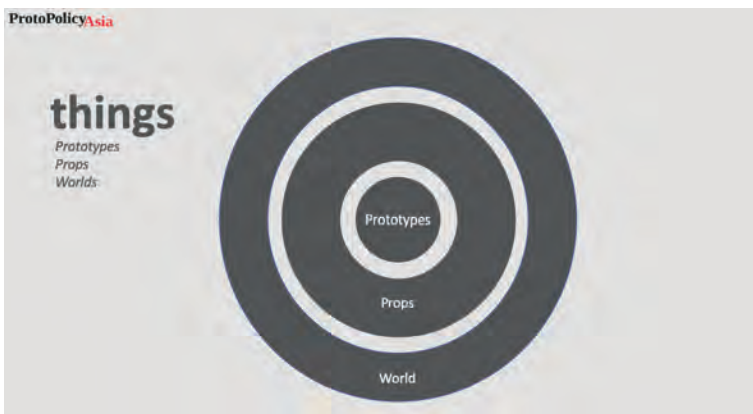


Figure 8. Developing speculative design prototypes, 'things'.

So, we need to know the story of the product? We can start by making a scenario, like the one shown that begins to point to features. And we can do that even more productively by making a version of it to really explore its features and how it might work for whoever uses it or benefits from it.

And if we can't make the thing itself then there are other things we can make that point to it. For example; paperwork, instruction manuals, flyers etc. can take sides in an argument or tell the stories surrounding the product in a more textual way.

We also need to remember that such a product could only occur in a specific context and the overall design concept indicates how the imagined world operates and how it is different to our own.

Speculative designs are thought experiments that encourage us to think differently about the world, to do so they make statements through design that provoke debate. So, when making them it is important to test the ideas to see how many of them make you think differently about things.

We can approach these methods from either a fantastic or mundane perspective. Does the idea change the more everyday it is? The more mundane it is? Or does it make more of a point if it is more fantastic? Not fantasy, but somehow less tethered to the real, to the everyday that we know. How do changing these things make the design come alive as a way to say something to its audience. How does it tell its story or make its argument?

So, to recap, at their simplest level speculative designs ask What If? questions. What if this thing existed? What if it existed at its most minimal, its most ordinary? What if it existed at its most maximal, its most extraordinary? And at such and such a time? And in this particular place? What is the nature of this thing's benevolence, how viable is it that it might come about, and what is the commercial and social need of it?

Summary

Design methods such as speculative design might create a symbiotic relationship between the public and governance structures. Including speculative design as a tool that pushes boundaries, can serve as an opening for governments to engage further with senior citizens themselves.

The opportunities of speculative design in policy-making are the added value of an enhanced interaction between the civil service or parliamentarians in the form of physical objects rather than more traditional communication mediums from government such as written reports. These types of interactions may contribute to more inclusive policy-making as lengthy government reports isolate those tranches of society that arguable might be able to contribute the most to the policy process.

Lastly, the data and insights generated by speculative design can create empathy and a deeper engagement, which are beneficial for evidence-based policy-making.

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