Making Tomorrow collective

design fiction and more for your organization
MAKING TOMORROW

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Making Tomorrow collective
Welcome,

In this book, you will learn how to become a bandit without leaving the office. Well, almost.

The hold-up we propose concerns all those methodologies that blossom in the corporate field and that, for you, remain at the stage of ‘buzzwords’ used in meetings.

Liberated companies, Business Model Canvas, organizational agility.... The models change constantly. If all these approaches share the merit of helping a company enter the realm of practices usually reserved for experts, the profusion of diverse theoretical concepts and groundwork tends to hamper accessibility.

So you can adapt and quickly acquire the skills linked to these approaches, we have created a collection that allows you to master certain skills through the sharing of experiences and feedback.

To help you discover the creative secrets that underpin these approaches you will be guided by a host of practitioners who reveal their methods.
This will involve the Making Tomorrow team. Nicolas, Oliver, Martin and Pauline are respectively a researcher, an anthropologist, a creative strategist and a designer. They share their experience of Design Fiction in the service of corporate strategy, as well as their own practical learning curve.

Make projections, free up long-term vision, construct a transformation plan for the future of your company... How do the major firms that will survive the 21st century’s challenges go about things? How can you reasonably project yourself further than three to five years into the strategic future when such a period is already too long to allow room for the uncertainty of the world we steer through? Get preparing a pragmatic hold-up today, masterminded by those responsible for strategy, risk, or innovation. Our explorers guide you towards the key elements needed to construct a collective awareness, so allowing a widespread mobilization that moves in the right direction.

A good hold-up is a successful hold-up. With this in mind, you can begin to grasp the practical essentials in just a few hours. This manual highlights exercises you can undertake in your professional environment: hold-ups in meetings, projection seminars, or strategic committees.

Happy hold-up!
The future cannot be predicted, but futures can be invented. It was man’s ability to invent which has made human society what it is.

Design fiction is a prospective method in rupture with the probabilistic exercises that dominate all reflections on the future. Increasingly used in organizations, it allows them to prototype and test their futures thus making the best decisions concerning their upcoming orientations.

Design fiction is a project-based approach that involves creating artefacts suggesting the world to come; not only through their form, but also through the interactions they can offer. The practice is part of ‘world building’ i.e. the construction of fictional worlds that favor prototyping as a method of suggesting the complexity of one or more possible worlds. Therefore, it can have various finalities depending if this exploration of fictional worlds: speculates on the diversity of possibilities; debates the pertinence of these possibilities; explores their strengths or weaknesses; tests the pertinent concepts via a mid-term vision.

It is difficult to explain the growing success of in-company design fiction. However, our understanding of the area does prompt us to formulate two hypotheses.

The first of these concerns the sociology of innovation: the “new spirit of capitalism” described by sociologists Boltanski and Chiapello has absorbed both the cultural and countercultural worlds, making design a legitimate management tool and transforming the world of the arts today into a sector run like a business. Design fiction finds its place in this dynamic by offering a regeneration of the design thinking approach with a movement towards more creativity and imagination.

The second hypothesis deals with our collective relationship to time. At the end of the 1990s, philosophers identified what they saw as the end of an era, that of the “great tales”. Since then, we have thus become lost in a world vision based on immediacy, having meagre resources to produce a collective narrative capable of the sort of mass mobilization that can be the case in the context of space conquest or the building of a common European project. We observe in the industrial world – and more generally in both civil and political societies – a need to reopen this vision and to work towards a collective commitment. Design fiction is an answer to this need for projections. It allows design tools to leave the project universe and to integrate that of vision and strategy. By giving a tangible form to the prospective scenarios, it plays the role of mediator in the debate surrounding the negotiation of futures. In the spirit of such key debates, it also allows staff or citizens, who were until now seldom mobilized in decision-making or action planning, to come together around a table in an open and illuminating environment.

The term ‘world building’ was used for the first time in 1820 and then appeared in A.S. Eddington’s work *Space Time and Gravitation: An Outline of the General Relativity Theory* (1920) to describe how to imagine hypothetical form different laws of physics. The term is employed in science fiction and in fantasy literature as a means of creating an environment around a plot.

Design fiction is the fruit of our era and is therefore not neutral. It is a formidable tool, which is also the expression of our own relationship with the world. In this regard, it deserves to be questioned.

The heterogeneous nature of this practice can be partly explained by the diversity of its origins and its very recent emergence as a distinct domain. Design fiction practitioners experiment and attempt to assign to the approach a slightly different content and format depending of their own discoveries and goals. Will it help a company to imagine its next product line? In this case, design fiction will put the accent on testing concept propositions and positively highlighting specific company assets. Do we want to use design fiction as a dialogue tool in a participative project? Here, a dystopian angle (in other words, a voluntarily negative and frightening vision of the future) will be appropriate to aid the questioning of a vision judged to be dominant. Those in the creative occupations and science fiction authors will value the capacity to project into the future; designers in the university sphere and activist groups will place the emphasis on the approach’s potential for social criticism; finally, consultants will underline the potential to innovate in the service of creating sought-after offers. It comes as no surprise that in this abundance groups form in defense of their vision to the detriment of others. We invite the reader to be vigilant.

Design fiction is a means – not an end – and therefore we would prefer to see it preserve a certain flexibility that would allow it to continue to adapt to each challenge while enriching its diverse postures that we do not consider to be mutually exclusive.

A dystopia is a work of fiction that depicts an imaginary society organized in such a way as to prevent its members from achieving happiness. This narrative form aims to alert the reader to the adverse consequences of a particular ideology or practice.

To know the pillars of design fiction and to position this tool among other prospective approaches, that are just as rewarding and useful, allows a method to be adopted without assuming a partisan stance.

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INTRODUCTION

Understanding what Design Fiction offers compared to other Forecast methods.
Human beings have always tried to predict and understand what was to come. The methods used were as varied as their cultures and beliefs: from aspidomancy (interpreting the signs present on a shield in the center of a circle) to ornithomancy (analyzing birds’ behavior) by way of hieromancy (reading in the entrails of animals sacrificed to the gods) and every other path possible, humans have tested almost everything... without great success.

Post-war, in the USA, there emerged an approach of which the ambition was to lay the foundations of a “science of the future”: futurology. Heavily oriented towards technological progress, this positivist approach attempts to foresee what tomorrow’s world will be like. It most notably resulted in the 1974 opening of Technology Assessment, a research center consecrated entirely to the approach. Among the first of its tools invented, the Delphi method is doubtless the most well-known.

Other approaches, inspired by the army, have also been created and regularly used since the inter-war period.

The Delphi method, conceived in the U.S.A. in the 1950s by N. Dalkey and O. Helmer of the RAND Corporation, is a method of prediction that capitalizes on expert opinions in an attempt to evaluate what tomorrow’s world could be. In addition to giving their own views, each expert also has to react to the other opinions voiced in order to create a loop of analysis and commentary. This plurality of experts’ opinions seeks to underline convergences and proof of consensus on what orientations to assign to a project. It also aims to shed light on zones of incertitude that could question a project’s feasibility.

One example is scenario planning: a method employed to imagine flexible long-term plans that anticipate orientations to come, and that was much used within companies. Shell, notably, democratized the method by illustrating its capacity to anticipate and react to surprising crises such as that of oil prices: an unheard of
crisis scenario before this time. The practice of scenario planning takes as its starting point an analysis of the environment’s key elements of which it makes projections on the possible evolutions depending on the probability that they will occur. From this base, simulations are then produced and related in the form of scenarios in order to define the details, explore their concrete consequences, and evaluate the resulting opportunities. In the company context, for example, this exercise creates probable scenarios to gauge the firm’s current offer and that of the future, to envisage the emergence of new markets, and, finally, to raise awareness of major ruptures.

To our knowledge, the notion of a scenario for the prospective procedure appeared for the first time in On Thermonuclear War, a book written by Herman Kahn\(^1\). This work delivered projections on the subject of possible nuclear attacks that would skew the international balance of power. To do so, it drew substantially on fictional stories. When presenting this approach to one of his friends working in Hollywood, Kahn received the suggestion that the term 'fictional story' could be replaced by 'scenario' (today understood more as ‘screenplay’), which inspires more creativity and is more likely to be taken seriously in the very militarized world of such a foresight\(^2\). Having adopted the term, H. Kahn, now employed by the RAND Corporation, brought this method with him. A scenario is thus defined as the detailed description of a hypothetical sequence of events that could occur.

All these approaches nourished each other and contributed to the edition of numerous foundation-laying reports such as the Meadows report\(^3\) or the procedure behind the Millennium Project.

Generally, and until the end of the 1980s, all these approaches consisted of an attempt to predict tomorrow in a statistical manner, trying to achieve maximum complexity in terms of both available data and analyses. This great hive of activity came to a sudden halt with the fall of the U.S.S.R. and the end of the Cold War. Despite their research and publications, few futurists at this time — indeed, perhaps not one — had anticipated this event. It generated a very real catharsis in the research environment and, in the early 1990s, most notably gave birth to the practice of foresight.

With this approach, contrary to its predecessors, the world is no longer seen as open. Here, the aim is not to determine trends and simply to extrapolate them into the future because now ruptures are integrated as possible occurrences. The approach is also much more systemic, seeking to go beyond the basic technological stakes. Finally, it is an approach that recommends action: it is not purely descriptive, but rather becomes a tool for acting on the future.

Use storytelling and prototyping as tools for imagination and action when rethinking tomorrow. With the questioning of classic prospective approaches, a certain number of creators, especially designers, rose to the task of proposing new methodologies such as design fiction. The concept was born at the end of the 2000s. It has been attributed either to science-fiction writer

\(^1\) K. Herman Kahn, Thinking about the Unthinkable, Horizon Press, 1962.


and essayist Bruce Sterling⁴, or to Julian Bleecker⁵. Both these Americans gravitated in the digital innovation sector and both supported the idea of a porosity of representations of the future between productions in popular culture—in particular science fiction—and consumer items. J. Bleecker can be congratulated for having offered a very clear definition: “Design fiction as I am discussing it here is a conflation of design, science fact, and science fiction. It is an amalgamation of practices that together bends the expectations as to what each does on its own and ties them together into something new.” Sterling proposed a field of expression that would be widely adopted. A mix of representations from popular culture including not only borrowed interfaces and aesthetics, but also the work of more or less radical designers, which hinges on using this proximity to question representations of the future⁶. This approach, which can be perceived as techno-centered much like the forecast of the first period, does in fact highlight imaginary elements from science fiction and asks just how pertinent contemporary technological orientations really are.

Design fiction appears here as a way of making apparent certain biases which, without the approach, would remain tacit cognitive projections that are non-problematized. Once represented and experienced by a public these have the potential to underline the possible harmful implications that can no longer be ignored. The underlying methodological principle, developed from these initial propositions, is simple. It consists of creating fictions that shed light on tomorrow’s world then, through use of these fictions, returning to today to define how best to act now. From this point of view, design fiction capitalizes on the scenarios method, notably backcasting.

Backcasting was defined in 1982 by John B. Robinson as a planning method that begins with the definition of a desirable future and then rewinds to the present to identify the programs and actions that can be launched so that future and present connect. It originated in the U.S.A.‘s energy management policy of the 1970s. In statistics, it is considered to be the opposite of forecasting as it entails predicting the unknown values of independent variables that could exist, in order to explain the known values of dependent variables.

Independently, British designers Anthony Dunne and Fiona Raby, then teaching at the Royal College of Art in London, theorized a similar approach by giving it a more political orientation thus making the form become more radical. In their first writings, their design fiction (not yet called by this name) is positioned as an alternative to industrial design. This position would later evolve. Their approach drew explicitly on the meeting of two fields of creation to stimulate questioning on the shape of the future. This is clear from their landmark work: Speculative Everything: Design, fiction and social dreaming which appeared in 2013⁷. This critical method prolonged an older tradition that, since the 1950s, had brought together a number of activist

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designers without ever resulting in the coherent and intelligible character of Dunne and Raby’s model.

For this reason, we can highlight the links between design fiction and the practice known as parafiction\(^8\) i.e. “experiments with reality”. The best-known example of parafiction is that of “artists” such as the Yes Men who center on falsification in order to encourage public debate.

By playing with reality, these New York artist-activists provoked a strong emotional reaction and used this to raise consciousness of the extreme stakes that they sought to denounce. Bias can therefore be voluntarily provocative.

Due to its radical nature, this perspective underlines a point of friction concerning the practice of design fiction itself: how far can we go in the “momentary suspension of disbelief”? How do we accompany this specific moment so that the public preserves its capacity for reflection even, ideally, raising this capacity thanks to the approach’s participative element? In other words, at what point should we lie and temporarily manipulate so as to produce a “good” design fiction resulting in concrete effects? These questions are asked because dystopia is powerful and can risk making fear the center of reflection. How then to guarantee the proposition of a panorama of situations wide enough to allow a public the chance to compare options, even to generate new ones, and not limit ourselves to dystopian approaches? Finally, if design fiction’s strength is its potential to mobilize, how can this mobilization be used as an open situation allowing surprise?


In November 2008, the Yes Men activist collective distributed more than 100,000 copies of a false issue of the *New York Times* in the streets of the city. Dated for six months in the future, the false New York Times announced the end of the Iraq War. The operation, mobilizing a distribution team of 1000 volunteers, was also relayed on a copy of the newspaper’s website. The aim was to make the public react and to pressurize the Obama administration into respecting its commitments. A similar technique had already been used in the 1960s by young Californian opponents of the Vietnam War.

This is why an anchoring in the scenarios method, thanks to its concern for systematization, offers a pertinent complement to design fiction born from design’s critical branch. A complex object, the design fiction is also hybrid, forged from a melding of practical strategic scenarios, speculative design and a form of activism resembling that found in parafictions.

The marriage of forecasting and design therefore produces an interesting research path despite having notable limits which have been evoked here. It renews the probabilist exercise centered on the writing of probable scenarios. Each approach — design and futurology — gains from being confronted by the other.
By capitalizing on the exploration of popular culture, design fiction also frees itself from conventional visions of the future. With a classic approach to foresight, the probabilist dimension is decisive: what are the probabilities that a given event will occur and how do we adapt to it?

Using imaginary elements from popular culture, design fiction capitalizes on the inherent creativity of the design approach, so enlarging the range of possibilities. The materialization of futures that results from this is inherent to the practice of design and thus fundamentally different to other foresight approaches.

With narrative and far-reaching visions of what tomorrow could be like, design fiction capitalizes to a great extent on scenarios: the practice does indeed allow the presentation of fictional alternatives for tomorrow. By then adopting a critical stance in line with “art-activism”, these alternatives can help to convince, to create debate, or even to innovate, as will be explained later. Finally, the combination of these two elements permits the creation of genuine objects for debate or innovation, so avoiding ready-made recommendations.
AN ACTION-GENERATING APPROACH TO DESIGN FICTION

The stages of design fiction presented:

During our sessions within companies and public bodies, we have been able to experiment with different methods that produce possible scenarios of the future. Such experimenting has allowed us to elaborate a method in four stages which we will return to later.

Above all, the most important finding to come out of these experiments is the reduced capacity of design fiction, particularly in its most critical component, to make debate emerge from today’s world. The results show that most participants react in a binary fashion by either accepting or rejecting en masse the scenarios offered, while rarely seeking to alter or improve them. On this precise point, design fiction’s weakness is clear and we cannot therefore expect it to generate the level of constructive debate dynamics hoped for.

Despite this limitation, design fiction still remains a powerful instrument for driving change, engaging action and stimulating both invention and innovation. A necessary focus on this perspective allows the approach to be used in its most effective manner: the elaboration of a final scenario. From this standpoint, the acceptance/rejection bipolarization generated by design fiction, perceived as a weakness during the debate phase, becomes a strength when confirming the final scenario. Presented in a concrete form, this permits convictions to be created, whether they be desirable or not. If the scenario is adhered to this will facilitate the skills mobilization needed to help it evolve and be improved. As already stated, our practical work with companies has led us to adopt a four-step method that can be qualified as: 1. Working imagination, 2. Working storytelling, 3. Working form, 4. Working tension.
These four elements constitute a global approach that aims to become immersed in imagination, to extract from it plausible futures, to construct fictions for the future and, finally, to result in commitment and innovation.

The reader can thereby discover a source of inspiration that can help develop personal methods. This is because each phase can be employed either on an individual basis or in a multidisciplinary team, as well as in collaboration with citizens or potential users of the developed objects.

Here, you will not find an exhaustive synthesis of the possible fields, but rather the fruits of our experience and of convictions grounded in practice, with all the limits this can involve.

Step 1

WORKING IMAGINATION

1.1 MAPPING IMAGINARY ELEMENTS
1.2 CORING IN AN IMAGINARY WORLD
1.3 DEFECTIVE IMAGINARY ELEMENTS

This first step is analytical. It consists of a certain number of fictions and their placement in perspective in terms of the chosen theme. These fictions can belong to different categories—cinema, literature, art, or any other form of expression—the only criterion being their suitability as a means of generating hypotheses or material for debate. They constitute a stock of bricks that will be used to build the next steps.

As hypothesis generators, they allow access to a huge reservoir of reflection and imagination compiled by their different authors, often with no pre-defined constraints. This absence of established norms meant that, through fictions, we became free, or at least less shackled by the consensual models, common ties and tacitly shared views that limit the workings of truly creative imagination.

As raw material, they can produce a complete environment within which we can analyze possible uses, as well as technological and organizational innovations: interactions result. Indeed, fictions, particularly those that belong to the so-called “science-fiction” category can be extraordinarily powerful where innovation is concerned. Often, they can open a path to possibilities that would never otherwise have been imagined by experts within the sector.

Besides this specific characteristic of access to the improbable, the unimaginable or the unpredictable (which no one can dismiss as impossible future realities), fictions also have the advantage of playfulness which is likely to gain a public’s attention and stimulate implication. In this way, the work on these different fictions is a powerful tool that privileges the emergence of original hypotheses. It could not have been formalized with a blank page handed out at the start of a session coupled with a group dynamic lacking the right resource. Opting for fiction opens up a host of possibilities and allows doors to swing open and inhibitions to disappear. From this point of view, the higher the number of possibilities involved, the more productive the process. However, for this to be the case care must be taken not to commit the error of dispersing efforts among too many disparate choices, some of which could prove incompatible.
The second step opens up creativity with the notion of working the story: identification followed by narrarive construction of possible scenarios inspired by both material collected during the first phase narrative and by the organization of this material around a defined research theme. These different scenarios could be classed as more or less probable according to their level of innovation and to their rupture or otherwise with current trends. The choice of the most reasonable hypotheses, while prudent, will not be the most productive. The results achieved will not be far removed from what basic common sense would have reasoned without any complex process of reflection.

On the contrary, the method’s worth is to go further by working at the outer edge of futures predicted in fictions so as to extrapolate the mechanisms that would have been employed if such a method had not been used. Indeed, innovation’s, acceleration in all areas shows that prudent extrapolations are less and less capable of pertinently predicting what the future will be. The field of possibilities continually widens itself, and fictions, constructed without bias or constraint, are best placed to allow us to envisage multiple variants, including the most far-fetched.

The third step entails working the scenarios to give them consistence by using artefacts that will illustrate the real implications of the choices made during the previous step. Here, it is a question of prototyping possible futures so that these representations, as realist as they can be, allow participants to imagine the diversity of the resulting consequences. Prototyping differs from storytelling narrative. While the latter is generally rigid, the former is easier to understand, as well as more flexible and functional, so allowing to play effectively with the range of possibilities. Artefacts obtained in this way thus enjoy a “conversation starter” role letting participants speculate freely and propose a variety of alternatives.

To depart from common idealistic visions of an “enchanted” future of which the banality limits creativity, it is preferable to focus on a dystopian approach. Contrary to a utopian vision tending to idealize the future, a dystopian approach is especially stimulating for the public involved thanks to the discomfort engendered by the embracing of all future possibilities, even the most disconcerting or unacceptable. It encourages a consideration of all paths open to exploration, not only those that may seem desirable. This prototyping, which is one of the major particularities of design fiction, reveals all its value in the final step.
The step concerning working the form has enabled a public to be mobilized by pushing them to produce concrete prototypes of possible scenarios together. However, this prototyping is not an end in itself. It only constitutes a means of accessing the final step that we have qualified as “working tension” and which consists of testing the different scenarios retained by analyzing the conditions of their effective deployment as well as their consequences. This working of tension will allow judgements to be made on the character, desirable or otherwise, of certain proposed trajectories, and to examine the actions and conditions needed “as of tomorrow” to achieve them. Indeed, the debate on fictions is not a culmination, but rather a means of identifying in-depth, and in a dynamic fashion, the constraints and consequences of an initial choice. Prototyping is therefore a tangible representation of what can be expected. Ready to be reworked, such a representation can then be manipulated and adjusted to achieve a final form that succeeds in global acceptance (or rejection…) and, from there, a will to act.

This method may be used as much in companies as in public institutions or other structures. By making a future solid, it can reveal a public’s tensions and misunderstandings: revelations that would not have appeared had classic extrapolation methods been employed. Such classic approaches include graphical trend analysis, scenarios of use and arguments in pitch form—none sufficient for presenting all the dynamics entailed and their consequences.

Design fiction makes visible a greater number of issues and stakes. In this way, it represents a powerful testing tool. Reactions generated by fictions are thus possible counterpoints to the dominant thinking among a group of conceptualizers, thereby opening up a formidable debate/dialogue. Such a debate will be even more effective as the participants will be motivated to become involved. To achieve this, they could be asked not to spend too long criticizing what is proposed, but rather to offer firm alternatives.

This method of managing a debate is more positive and motivating as it allows a public to go further by formalizing preferences. Such commitment is the key to the quality of the propositions formulated. Concretely, design fiction could, for example, involve creating a fictional consumer report that would stimulate speculations about the dynamics of the future, either probable or undesirable. This initial distortion of reality “forces” reflection in the direction organizers hope. Ignoring the fictional character of a particular scenario, participants will be even more motivated to analyze and bend it: they will feel they are taking actions on a reality and not on a purely speculative exercise with no firm repercussions. The feeling of genuine responsibility in future orientations reinforces participants’ involvement and motivation. In addition to being a mobilizing force, design fiction becomes an operational instrument for decision making and intervention.
WORKING IMAGINATION

Become immersed in an uncertain and open context
Earlier, we identified one of design fiction’s major risks: due to its power it encloses participants in the exclusive scenario of what is presented to them. For this reason, we support a method that is not centered on direct and unequivocal criticism, but rather that goes beyond by requesting alternative scenarios. It is this task of imagination that we organize in the three following stages: 1. Use what is imagined, 2. Clean up what is imagined, 3. Enrich what is imagined. This process redefines design fiction as imagination engineering that tests what is produced through concrete, treatable and modifiable prototypes.

Such an approach allows the creation of links with past practices. This only works if imagination engineering is at least partly developed in collaboration with industrialists. In this way, it can help evolve new industrial strategies and sell them successfully to the target public. One example is that of the company Shell Oil whose grand visions of American urbanization during the 1930s were prophetic in terms of the post-World War II period. There therefore exist extremely dense retroactive loops between “fictional facts” from popular culture and “scientific facts” from real life. Two rapid illustrations of this follow.

Firstly, from imagination to industrialization with Motorola’s StarTAC, launched in 1996, which has distinct echoes of the Star Trek communicator of the 1960s. The close similarity between the name of the phone and that of the series is, most certainly, not a coincidence. There are few doubts that what was imagined in the 1960s had a certain influence on American designers and engineers in the 1990s. Indeed, this inspiration functioned on two levels: that of technology and industrial design, and that of marketing.

Secondly, from industrialization to imagination with productions such as Microsoft’s Future Visions. This is a short story collection based on the company’s research work. By connecting science-fiction authors and researchers, Microsoft obtains out-of-the-ordinary visions of tomorrow nevertheless anchored in current research.

These two examples underline strongly the chains of interaction between fictional imagination and the reality of industrial output. David Kirby’s book Lab Coats in Hollywood (2011) supports this relationship, presenting the role scientific consultants play in cinema productions and how they are employed to make fictional works more plausible.

1 Futurama, New York World’s Fair 1939–1940, N. Bel Geddes. A projected vision of American urbanization in 1960, sponsored by the General Motors Corporation, and based on a model made in 1937 pour Shell Oil (Shell Oil City of Tomorrow).


1.1 MAPPING IMAGINARY ELEMENTS

Taking imagination seriously is now much more than the creative tool evident via B. Sterling’s literary collages and J. Bleecker’s visual games. It is a strategic element with multiple potentialities. We propose three tools to encourage this creative and critical appropriation of the future.

Producing “imaginaries” has always been peculiar to humans because they ask themselves how the future will be and how to cope with it.

The first Chaldean horoscopes date from 5000 B.C., but the original divinatory techniques are even older. Since the dawn of civilization, the production of future fictions has grown exponentially. Faced with what today seems to be an entire world of diverse interpretations and projections, organization is key so as not to embark on an adventure in a less rewarding direction. Mapping imaginary propositions is this method’s first step.

An imaginary concept refers to representations of an object in the collective unconscious. It is specific to a social group: myths, cosmic and religious beliefs, utopias, fables and fictional tales nourish a symbolic representation that gathers a group around a concept. For example, flying cars have been a powerful collective imaginary concept since the end of the 19th century, popularized in fictional works such as Back to the Future, Harry Potter or The Fifth Element.

Faced with a particular subject—for example, future travel or perhaps the future of the soldier—such a mapping aims to identify and class all the proposed hypotheses. This first step will allow a raising of consciousness concerning the continuum from the most common themes (those that present a genuine risk to free thinking) and the least exploited themes (those that can perhaps produce the greatest number of innovations).
For example, the illustration opposite details the representations of what could be the soldier of the future.

This mapping of hundreds of imaginaries on the enhanced soldier respects the typology of many fictional genres: films, video games, literature, etc. Using this multiplicity of media is especially interesting for our project as it can go beyond the inherent constraints of each genre and thus greatly increase the diversity of hypotheses. The soldier of the future as imagined by American cinema is very different to that seen in European literature. One vision is techno-centered while the other embodies a tougher and more rugged image. We can add a temporal dimension to this categorization. Represented by their evolution over time, imaginaries allow the rediscovery of certain themes’ origins, and repositions them in the social context of the time. They also engender the realization that some themes that may seem innovative today are in fact old-fashioned and redundant. For instance, this is the case of robots in farming or the development of food pills of which we can find the first instances more than a century ago.

Imaginaries are cultural objects which, by their diffusion, transform themselves through interactions, appropriations and re-appropriations. Communication sciences talk here of “motives” as a term for recurrent elements that seem to grow stronger (i.e. to become more evident) with the passing years. These recurrent elements constitute memes: cultural bricks which only make sense to a particular group. Indeed, by observing various representations of the future of the same concept (e.g. to communicate), of the same object (e.g. the telephone), even of the same interaction (e.g. vocal communication by telephone), two types of information distinguish themselves.

Mapping resulting from the systematic analysis of 289 imaginary representations of the soldier of the future in different cultural fields

One is the appearance of durable recurrences that can be represented in the form of a “lineage of imaginary elements” defined as “strong” due to its persistence. These, like the flying car, can sometimes almost be caricatures. The second type of information is a “weak” lineage of imaginary elements that may in some cases even be described as “dead”. These are abandoned explorations which can be reassessed in the light of contemporary and future stakes.

What the production of lineages of imaginary elements aims to do is place at a safe distance certain commonplace ideas that bridle visions of the future. Such ideas can be qualified as cognitive traps.

**Identifying cognitive traps**

When analyzing imaginaries, the main risk is of falling into a mode of ready-made thinking: all recurrent elements presented as futurist in gray literature or on the social networks used by innovation workers. We can therefore question how rewarding it could be to focus on driverless flying craft, omnipresent in visions of the future. Even if they could become more accessible in tomorrow’s world, their usefulness as stimuli for innovation is limited. Here, it is not the technological object itself that is of interest from a prospective point of view, but rather its functionality and the environment in which it will need to evolve. This is where the true issues are found; not in the object itself that will more than likely exist in the near or not-so-distant future. It is therefore necessary to prevent participants falling into cognitive traps that can represent shared imaginations (flying cars, humanoids, etc.).

**Questioning fantasies and fears**

Imaginaries are always linked to a certain period. They therefore represent the challenges and stakes of that particular time. If we look at Walt Disney’s EPCOT project, developed in the 1960s, the suggested uses of a driverless car concern leisure and sharing. However, the current visions of the same object are strongly linked to how this way of travelling can save time which may then be used for working. Putting into perspective these two visions of the same technology’s utility allows distance to be taken in terms of the model being elaborated for a flying car. Analyzing these imaginary elements in a historic and not a thematic manner lets questions be asked of the issues of each era. It also aids the understanding of the fears and fantasies associated with a particular time and thus helps to relativize current approaches.
The enabling of a lineage-type tool is a relatively long process and requires several work sessions based on a large amount of material. Approximately 50 image sheets—from widespread sources (advertisements, comic books, novels, short stories, etc.)—are needed to allow the emergence of at least two lineages with a total of around 20 items. The sheets should display chronological indications (dates), but will be easier to work with when they also show complementary information on the place of origin (for example, the country, in order to avoid an over representation of certain zones), a description of the action and those involved, and the reasoning behind the selection made (why the images stimulate). Lastly, a visual representation, perhaps with color coding, will make a final interpretation simpler. Ideally, to make this task successful, each team will need to include members who have already worked on imaginaries or are even experts in the field. These are the people who could provide enough rich and out-of-the-ordinary material to make the work as productive as possible.

We have tested numerous models of representations. While a temporal lineage benefits from a coherence where history is concerned, it may be counterproductive if only small samples are treated. For less than 20 or so images, we recommend a visualization by thematic clusters. For example, in the specific case of the relations between the soldier and protective armor (How is it controlled? What interactions are involved?), an analysis of imaginary elements by cluster allows the identification of between three and ten key issues and enables these to be represented more easily.

Once the mapping is set, the organization of several activities can prolong the learning undertaken together: try to prolong the dead/weak lineage for the next five to ten years in order to imagine a series of possible transformations; integrate a mark or structure within the lineages to anticipate their meeting points and to explore their extensions (What happens if a particular company works on the subject?); identify the deeper aspirations behind the dominant lineages to which we can assign a more pertinent concrete form that can also avoid caricature.

A 2019 mapping workshop of imaginary elements concerning a soldier by students of Audencia Business School’s Advanced Master in Marketing, Design and Creation.
1.2 CORING IN AN IMAGINARY WORLD

In practice, an imaginary element is a representation via a medium (film, book, song, advertisement, research paper, etc.) of what our future could be in terms of the mutation of our environment, our food, or our relationship to mobility or technology.

Certain films have made a mark on their eras by their impressive capacity to describe future worlds in a credible manner and have therefore made a durable impact on the public. Perfect illustrations of this are *2001: A Space Odyssey*, *Blade Runner* or *Minority Report*. These films’ remarkable capacity to create believable representations of the future, in some respects resistant to the tests of time, rests on the effort on coherence made when conceiving these worlds. Taken individually, most of the technologies and innovations shown on-screen had already been tested at the time albeit as prototypes or as imaginary elements. As already stated, the technological objects themselves are less important than their integration into credible imaginary worlds and the enabling of their interactions.

One example from *Blade Runner* is the existence of “replicants” that entails the creation of a controlling organization and the employment of adapted technologies such as the Voight-Kampff test. Design fiction’s strength is to re-employ science fiction’s scenario-based aspect which is able to integrate innovation in terms of virtual worlds.
Coring in an imaginary world can be instigated in a similar manner to that of the "futures wheel", conceptualized by futurist Jerome C. Glenn in the 1970s.

The futures wheel graphically visualizes the direct and indirect consequences of a change, or particular development, concerning a given theme. The central term describing the change to evaluate is in the center of the wheel. In our context, this is defined as a strong aspect of the imaginary element to be analyzed. Next, the events or consequences that spring directly from this development are positioned around the central term. Finally, the most interesting indirect consequences or trends or events are placed around the first-level consequences. Mind mapping may be used to connect terms, while levels of analysis are often marked by concentric circles.
Coring imaginary elements can be undertaken in a group workshop or in subgroups of five to eight participants. It uses a resource in the form of a wheel divided into five or six wedges each corresponding to an imaginary element. At the wheel’s center we find the challenge to be worked on. It is difficult to analyze more wedges than this during the same session.

To give the session a rhythm, the imaginary elements should be digested in a period of between 30 seconds and a minute. Ideally, these elements will be videos which can immerse participants more rapidly than reading an extract from a novel. We recommend that these video sequences illustrate an atmospheric scene from a film as this will not only stop participants focalizing on the action, but will also avoid them seeing interactions or situations that are too specific. Certain montages of scenes or compilations are effective, with some fans providing quality online productions that we can use as material.

After each viewing, participants take turns answering the following question: “What form and what attributes would a solution to my need involve if it existed in this world?” Here, there is not the need to envisage a scenario of tomorrow’s world as this comes in a later step. Instead, the aim is simply to ask questions on the way in which our industry or our activity could exist in the future.

This exercise is relatively problem free thanks to its visual character. Firstly, you need to identify the key elements of each world, then to extract the consequences of these characteristics for the challenge chosen. This approach should not question the challenge itself, but rather propose alternatives that can be radical yet plausible. The answer is rarely unequivocal and may take the form of an illustration or of a brief script highlighting the world’s specific attributes.

The final result is a combination of all the concepts revisited: five or six per team. Next, choose those that seem the most interesting in terms of a framework unique to each project. Most often, this framework will follow two axes: 1. Links to current propositions, 2. Pertinence bearing in mind the environment’s plausible transformations.

The critical point of this exercise is the choice of resources. They should show rich and diverse universes. Worlds too close to the present or sequences too centered on an ultra-precise detail of interaction seem to diminish the capacity for appropriation. On the contrary, atmospheric sequences of unusual worlds, even those bordering on caricature (such as the scene where Wall-E explores the spaceship in the film of the same name5) offer an excellent starting point. The diversity of resources also engenders a spirit of openness to far-off worlds that departs from more classical projections of the future.

A variant consists of assigning themes to the creative work by knowingly soliciting extreme answers: “What is the ‘risk’ present in such or such a universe?”, “What would be the uniquely preferable responses?”

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5 See the sequence from the film Wall-E, directed by A. Stanton, 2008. Consulted on 01/06/2020, See the scene, https://vimeo.com/233790281.
Imaginary elements are an excellent way of finding inspiration or testing concepts. They can propose answers that rise to the challenge thus becoming a source of inspiration, or else produce answers that are inadequate. In the case of the latter, they will become a source of inspiration if their “error” can be forgiven by trying to find out how they could be made to work in real life.

In the film Babylon A.D., we find a good example of the first situation where imaginary elements offer solutions. Actor Vin Diesel uses a phygital map to find a route. The map is made of paper, but interaction with it is digital. Leaving Russia to travel to the USA, he presses once in the middle of the ocean. This changes his itinerary so he can take a submarine rather than make a detour via the North Pole. This interaction, which lasts less than two seconds, allows the hero to change mode of transport on the same interface: something tools such as Google Maps can as yet only perform in a limited fashion.

This example presents a precise interaction, but we can also analyze imaginaries in a more macroscopic...
manner so as to understand a context. In the case of the *Star Wars* saga, for instance, during the Jedi council meetings, those absent take the form of more or less life-size holograms. Here, in comparison to the other absent members, Yoda seems less small than when he is seen fighting by their sides. It therefore seems that a sort of democracy exists in this assembly so that those represented are limited in size difference. Inversely, when Dark Sith speaks to his subordinates, he is represented in a massive and imposing manner. Simply the way of digitally representing someone in an imaginary world can therefore shed light on much more complex social organizations.

Another example from *Star Wars* is that we hear spaceships move and explode during combat. This non-realist ruse is designed to give the scene rhythm. We understand that a battle, fought in space where the lack of air does not allow sound to travel, would rapidly become boring for the audience. If we then try to forgive this situation, we can imagine that sound could become a sensory indicator created voluntarily for pilots and gunners so offering spatial knowledge of other vessels’ whereabouts. In this case, consulting a radar screen in the cockpit could be replaced by a reproduction of the noise from an approaching enemy craft so that we could know intuitively and immediately where the other vessel was.

With these examples we cannot be sure of the true motivations for such choices of representation. Such precautions probably aid an audience’s understanding and limit costs in terms of decor. In this way, in American science-fiction films, holograms are classically shown as lined and unsteady images. The only function of these characteristics is to show that what we are seeing is a hologram. Much more sophisticated technology could be used by special effects teams, but this would be more difficult to understand and even counterintuitive for many interactions.

The aim of this exercise is to make allowances these representations and to ask systematically what are the good reasons (plausible) that would justify this type of interaction if they really existed. As with *Babylon A.D.*’s phygital map, or the hierarchical social representations of holograms plus geolocation via sound in *Star Wars*, this process allows scenes to be rerouted towards original propositions.
As we have already seen with the example of Babylon A.D., representations within imaginaries must be analyzed with care as they adopt untested means to try to envisage a situation that they enrich or transform. Almost always, the solutions presented in such imaginaries cannot be transposed unaltered. In addition, their innovative character is not immediately evident. How can we therefore recognize and decrypt them?

The R.I.P. method is a practical and simple tool used to redirect scenes towards original propositions and, true to its name, progressively kill off less fertile imaginary elements. We have developed this tool, as its acronym suggests, to help teams mourn certain ideas or representations initially proposed as part of an imaginary element and thus truly identify unusual paths for innovation. It invites participants to forget what they already know about a subject, allowing them to go beyond conventional ideas to the point of demolishing them by bringing a new outlook to a situation.

**R / Record projected situations within the imaginary element**

The first stage involves bringing together between 20 and 30 video sequences for an issue that has been defined more or less precisely (e.g. artificial intelligence, smart cities, driverless travel, etc.). These are illustrated by short videos of less than three minutes. Care should be taken to launch the process by underlining aspects and uses outside those usually shared via common projections and trends. In around 30 seconds of video, each scene will present one or more interaction either between users and systems, or between systems themselves. A quality sequence will show the interaction with the targeted technology as precisely as possible thus allowing a more complex appropriation of the scene and of its consequences. The participants use a tablet to watch sequences as often as needed and to pause them if required. For each fictional extract, participants must list and record the situations presented: the use for which the new technology is destined, for example.

Situations close to reality are eliminated. The aim is to keep only the situations of high originality as these are what will allow the identification of new directions.

A workshop aiming to elaborate on imaginary elements that exploit new energy sources, Making Tomorrow collective, 2019.
I / Isolate the most unusual suggestions

You now possess a repertoire of imaginary elements that depart from the norm. You can next isolate the most off-the-wall imaginaries and solutions of which the strength comes precisely from questioning normal visions of the subject. How does this imaginary element vary from trends? Or, how does it prefigure trends to come in five or ten years’ time? How does it stimulate or even shock? In this way, a sequence presenting a flying car—as seen in Back to the Future—can perhaps evade the first filter, but risks being eliminated at this stage as it shows a very well-known dimension of transport: the quest for speed, the desire to escape the limits of the road, etc. The same idea of the flying car is represented in a chase in The Fifth Element. It can nevertheless be kept if it allows the participating public to highlight its surprising aspects, such as using a car’s roof as the way to access the vehicle, or considering the drive-in as the primary mode of food consumption. Undertaking this exercise may frighten certain participants as it entails exploring uncharted routes. Such people need to be encouraged to accept that the unexpected or the unthinkable will occur. Their mission is therefore to gauge how these situations are likely to develop and then to act on this in order to get the best results from the situation.

This means the person coaching the session has to have a resolutely benevolent approach that seeks to save imaginary elements by all means possible. Such a sequence also lasts between 30 and 40 minutes.

P / Project in reality

Now the question to ask is the following: what is the contribution and the value of such a solution? Could it be legitimate in the eyes of potential users? What genuine problems encountered in real life can be answered by this imaginary element? In what way could it change our daily lives?

Combine imaginaries together and invite participants to take seriously strange or dissonant aspects without bias so that they can be transformed into concrete propositions for today’s world. If we keep the idea of entering a car by its roof, we can wonder what can be achieved by entering in this way and not by the side doors we use today. For example, would it enable the authorization of other rapid modes of access in emergency vehicles? Could it reduce packing trunks and let us envisage other storage spaces? Once again, certain imaginary elements will be rejected because the unusual effect is diluted or disappears. In other situations, apparently futile or bizarre interactions can, thanks to a cross reference to reality, produce useful innovations susceptible to solve real problems. The ideas generated are produced on separate activity sheets within small groups and then shared collectively.

By establishing a frame of analysis for imaginaries that encourages the unusual or uncommon, we have in fact created a theoretical framework for real-life innovation. Flying in the face of simple benchmarking, this stimulates a team to play with unthinkable combinations that can reinvent reality from the starting point of new perceptions.
Formulate a paradoxical proposition for the future
It is clear then that design fiction capitalizes on imaginaries: a first step involving research that may be combined with a more classical analysis of the environment such as that performed in strategy (e.g. PESTEL), or with an analysis of trends to come. The aim is therefore to produce enriched material that allows the production of scenarios to open onto the field of possibilities. This approach’s second step can be called scripting, or working storytelling. Here, the goal is to generate scenarios that stimulate and are plausible, while extracting participants from the probabilist dimension of classic prospection. The result: shed light on tomorrow’s world where biased assumptions abound.

To achieve this, the tool most often employed is the futures cone; notably because it widens possibilities, before then refocusing on plausible (and particularly, preferable) elements. Next, we suggest working on storytelling in the form of the exquisite corpse: a metaphor born of improvisational theater that seeks to combine elements mainly from the environment in order to produce original visions of tomorrow’s world. Finally, the scenario loop permits movement back and forth between both uses or fictional technologies, and between uses or plausible technologies. The ultimate goal is to capitalize on the fictions and so determine the best current conditions for deployment.

2.1 futures cone

The futures cone⁶ is perhaps the most popular tool mobilized in the design fiction framework (next page). It aids anticipation of a large number of variables thanks to a very simple representation. It is cone-shaped, most often open towards the right. On the left, the present is represented by a single point. On the right, the future corresponds to an open and infinite surface. From the single point, several interlinked cones delineate the zones which, when they are further from the horizontal timeline, are considered to be less and less likely.

This graphic enables a first appropriation exercise to be undertaken in order to rate the futures defined in terms of their plausibility. The certain future is found at the cone’s heart, less probable futures are on the periphery. The accent is also quite often put on another aspect: the preferable future. Once the cone’s first outline is filled out, we can begin to imagine a second cone within it which allows the identification and sorting of propositions, at the same time taking care to select those propositions that seem more preferable for the organization.

This elegant and classic tool is not fault free. In particular, it presupposes that the present is a single starting point. This denies the existence of concurrent world visions, of balances of power, or simply of the diversity of a market that is not constructed of a single segment or by a single culture. A project wishing to put diversity to the fore could benefit from combining two cones in order to identify new shared futures that are both plausible and preferable. This exercise needs to be accomplished in parallel by, for example, two work groups, before

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identifying via the successive extrapolation of one cone after the other, possible common ground. In this case we would recommend work to be done in two successive sessions to allow the generation of new propositions.

Moreover, the tool cannot define which futures at the single starting point will be presented to participants as being certain. Numerous examples exist, and to date, all that concerns artificial intelligence or driverless cars are presented to us as being certain and inevitable. Clearly, the aim is therefore to question these prepacked futures and to open up the field of possibilities.
The simplest way to begin the approach is to create "giant" futures cones so the process is not limited by paper size. By using wide adhesive tape, we can thus draw a futures cone with total freedom on any wall or floor surface.

Once this has been done, we define the final delivery deadline. This must be sufficiently distant to allow extreme scenarios to be exploited. Intermediary dates can be integrated if they seem significant (the end of the strategic loop, for example), therefore creating on the same timeline a futures cone that finishes just before.

In order to use the tool, participants need a large number of ideas or scenarios that they will place on the cone(s).

Each person comes with a scenario, presents it to the other participants and tries to position it on the cone. Usually, this immediately creates lively debate. Participants will give their points of view explaining why this scenario is more or less probable than what the person proposing thinks. At this moment, it is important to have made note of all the remarks. If the scenarios’ final positioning is key, the debates on this positioning are just as important.

The futures cone tool is extremely pertinent when we couple it with the backcasting tool presented later. In this way, it allows the repositioning of these scenarios in the present in an attempt to imagine what the next steps will be to put them into practice.

A workshop for sorting imaginaries that could illustrate a desirable world, Making Tomorrow collective, 2019.
2.2 FUTURIST EXQUISITE CORPSE

To imagine a future requires a context. This answers three needs: 1. To give credibility to the approach of exploring the future by combining both expected aspects and others that are more unusual so it is not perceived as a non-serious game; 2. To set some limits that will canalize creative activity within the structured framework thus avoiding the notion that "anything is possible", and 3. To offer a means of speculating around a main theme. Concerning this last point, the aim is to discourage discussion of a theme’s futures while remaining within it. Yes, the future of all things digital will be digital! To elaborate a credible context is therefore a key step in any exploration of the future. Initially, no relevant context exists.

Too often, an exercise in projection tends to repose on an approximate base, mobilized tacitly and therefore englobing consequences that those involved neither discuss nor reflect upon. This can range from a total absence of reflection concerning the framework, to the inclusion of “social trends” that are often based on an analysis of current products and services. In our era, we tend automatically to see the next 10 years as connected, uberized, electric and autonomous. In reality, by doing this, we only describe a sort of generalization of what trends are currently on offer. These are therefore market-produced mythologies. It thus appears essential to take a critical distance from this ready-made thinking and instead imagine forms of world evolution that are not those of a consensus view of linear progression. To be capable of producing out-of-the-ordinary scenarios, we recommend widening the creative framework by not only integrating dimensions that are often notably neglected (such as social and political transformations), but also...
by taking seriously ecological and economic aspects. In certain cases, it is preferable to undertake the same exercise at the level of the technological context, thus enabling a move away from this context’s supremacy. Exploring each of these universes independently will avoid one theme becoming so much bigger than the others. The external constraints created in this way will distance visions from the expected probabilist scenarios.

The first requirement is to look at related environments and to examine the priority issues in each area. It is through the prism of these major issues that your project should find its place. A second methodological piece of advice is to think about the diversity among the forms of world evolution. If we bear this in mind, the most obvious approach is that of an amplification of phenomena, as illustrated by Moore’s famous law (describing in an empirical and projective manner the exponential growth in performance of computer chips). The idea of strong and infinite growth, which prompts us to ask when it might reach its limits or if it is rather a permanent computer mutation. Nevertheless, other modalities of evolution exist. Firstly, its consequence: collapse, most recently brought up to date in terms of Anthropocene theories. Basically, any system can collapse, as shown by today’s absence of phone booths, the Cold War, etc. Nothing is unchangeable; nothing is condemned to certain demise.

We can also add processes of stability: certain things have a very long life. For example, the printing press that has had to face up to the radio, cinema, television and internet revolutions yet, through ups and downs, still exists.

A graphic synthezizing the four alternative models of population development depending on the limits evoked in the World3 modelization.
Source DL. Meadows, J. Randers, Beyond the limits: global collapse or a sustainable future, Earthscan Editions, 1992.
Finally, certain dimensions will emerge in parallel with others that continue existing. The CD coexists with vinyl and streaming; the bicycle coexists with the lorry and the drone. Here, we find ourselves in a complexity of the context and not in a process of substitution as is often described in the economic press.

It is by exploring these different hypotheses that we are able to think of future scenarios in a singular manner.
Before coaching the workshop, we bring together all knowledge content on the plausible evolution of the world concerned by the project, classing this content by theme: political, ecological, economic, or social. The team establishes a synthesis in the form of cards. These illustrate the plausible transformations with the help of three elements: a title, an illustration and a description of impact (What if...).

These cards should not represent a whole world (e.g. “In the future, the world will be submerged by water.”), but instead present a single brick from a world (e.g. “In the future, some urban areas will be abandoned due to rising water levels.”). Next, we choose the cards with the strongest impact in terms of the theme at the center of the mission. The exercise will work best if there are at least five cards per theme. The cards are associated to a letter describing the theme (e.g. E for ecology, EC for economy, S for society and P for politics). Other themes may be added depending on the specific project.

During the workshop, each team of three to six people receives an identical set of cards. These are shuffled and arranged by category in piles. In turn, the leader of the group takes a card from each category and places them in the center of the table. The team then has five minutes to identify coherent convergences between the cards. If, after five minutes, they cannot combine at least three or four cards, all the cards are placed in a separate pile towards the side of the table and new cards are drawn. However, if a rapid convergence emerges, the team is given five or ten extra minutes to squeeze the best world scenario from it.

Once the five cards in each pile have been used up, they are shuffled again to create, if time allows, a second round of combinations. At the end of the two sessions, each team member can, in turn, propose the ideal combination. This exercise is made possible thanks to the group’s deeper knowledge of all the cards.

This is presented in the form of a “scenario” sheet that states the numbers of the initial cards and describes the elements that constitute the world created. Care should be taken not to attempt to find coherence between cards at any price, or to conceive stories that are imperatively plausible. A good world scenario will combine very obvious elements with others that spring less easily to mind. In this way, it shows the effects rapidly of how we currently treat the workshop’s reference subject.

At the end of the workshop, the group scenarios are collected and a selection is made on the basis of non-redundancy. Minor modifications to the sheets can be performed in order to fuse two worlds together. Depending on the overall size of the workshop, we can suggest different stages for sorting and selecting the worlds created: the aim being to go towards a limited number of coherent worlds. To create a design fiction object, the choice needs to be made among a smaller number of propositions and with a critical eye. To establish a strategic plan based on scenarios, the worlds will be greater in number and linked to the diversity of their impacts on the organization.
2.3 SCENARIO LOOP BETWEEN FICTIONAL AND CURRENT CONDITIONS OF USE

Another technique for developing scenarios is to divide the lines of imaginary elements as presented above more evenly and precisely, and to compare them to both current research and technology, and to usages within society.

Once the scenarios are represented, we can then begin to go back and forth between each line—imaginarides, technologies, usages and social customs—in order to imagine scenarios for tomorrow. As an example, in Jouer avec les futurs (Playing with Futures)\(^7\), we proposed a current issue as a starting point: in a world of hyper surveillance, how can we confound drone’s reconnaissance capacity? On the basis of this technological issue, we can then look at imaginaries to find a “mad” yet interesting answer. Harry Potter’s invisibility cloak quickly seemed to be an idea that could be the subject of an unusual scenario. It then suffices to conceive this in a fictional, but credible, manner to be able to imagine three-piece suits that allow us to disappear. By crossing this idea with other advanced technology we remark that researchers are today trying to develop invisibility cloaks with meta-materials\(^8\), therefore making them invisible to certain heat sensors and under certain conditions.

Mapping multiple back and forth movements, or iterative loops, going from the imaginary element to reality and vice versa, generates historic links between our representation of an imaginary technology and its embodiment in real life innovations.

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\(^8\) See https://en.wikipedia.org/wiki/Metamaterial_cloaking.
A team of British researchers in digital humanities have produced an interesting example of mapping via an analysis of the links between fiction and reality in the evolution of the electronic book. The relationship between science-fiction works, such as *The Hitchhiker’s Guide to the Galaxy* and innovations like the iPad illustrates well the back and forth movements that have taken place over the last 50 years. The scenario exercise based on such an analysis thus entails imagining the next phase of this story. What trajectory can we envisage on the basis of each point of access (science fiction, current research, and new products brought to market)?

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By using imaginaries we can anticipate future needs and be the first to respond to them. We have already presented this first retroactive loop (from imaginaries towards reality). With the help of imaginary elements we are able to materialize threats or risks that announce themselves, evaluate their amplitude and be better prepared. It was by imagining a scenario of the social security system bankruptcy that Philips boosted his research in the health sector, especially concerning home services.

We have also previously seen that all fiction resources initially selected are a major aid to the projection of new solutions. However, it is still necessary to extract the relevant traits and cross them with reality to produce coherent and credible concepts. To achieve this, we recommend maximizing the number of back and forth movements between what is happening in the present and possible projected futures. The following exercise relies on the principle of looping to explore possible worlds and project them onto reality.

In practice, an imaginary element is crossed with a real case, which is in turn crossed with an imaginary situation. This type of exercise has, for example, led us to envisage what professional relationships on Mars could resemble, or to consider how we would cope undertaking transactions in a world like that of Wall-E.

The first cards concern different situations presented as an imaginary element of a particular fiction. One illustration could be drawn from the Germano-American science fiction Cloud Atlas that features Neo Seoul, Korean peninsula (Today’s Seoul has been submerged due to the rising sea level). The city is governed by consumerist corporations which form part of the Corpocracy empire. The projected situations in this imaginary world are varied: for example, we can see an apartment that looks like a basic concrete bunker yet is completely configurable. By using a simple remote control, the occupant can decide what environmental elements to insert. It is even possible to create ephemeral mobility by activating a road that leaves from the window.

The second type of card shows two real issues: the rise of local food chains, the development of urban micro-mobility, etc.

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A group member draws a card presenting a fictional situation. This situation will be put into perspective with a real situation. The group must therefore show how the Neo Seoul apartment would answer a genuine problem: for example, this type of abode could be a way of supporting co-living and of personalizing shared habitats more quickly. The group should then try to follow the loop and show how a real problematic gives life to a new imaginary element. What could be the springboards for a better acceptance of electric scootering in our urban areas in light of Neo Seoul’s characteristics? Do they still seem viable in this type of environment? Should they be questioned? Must they be adapted immediately? Could ephemeral street parking zones be created in real time depending on the traffic flow and mobility needs? Each situation is therefore intimately linked to a precise usage that helps in the deconstruction process and the creation of other futures.

To encourage serendipity, the imaginaries and/or real situations can be positioned beforehand on the loop. The tool allows the robustness of strategies to be tested in extreme conditions.
Imaginaries are thus a superb source of inspiration for identifying societal issues and stakes. They are also laboratories for ideas on the development of real services. When working on the production of a fiction scenario, we can therefore find inspiration in certain high-value usages represented in our imaginaries to make concrete these ideas for tomorrow’s innovation. Nevertheless, the design fiction approach we attempt to follow obliges us to manipulate these extrapolations with precaution.

Indeed, the complexity of the exercise resides in the capacity not to create too smooth a scenario: one that is too positive and too perfect. What matters is to ask questions about our use of new technologies through the invention of this object which has seemingly come from the future. From this point of view, design fiction differentiates itself a little from the design visions of major companies, as these visions are inherently positive and do not present any friction in their usages. Their value in terms of image is more important than their value in terms of use.

Let us try to illustrate the risk involved when there is a lack of distance taken from what appears to be a perfect imaginary element presenting a fluid use of a future technology. We can, for example, revisit Samsung’s commercial vision associated with augmented creation. The interface seems to come straight out of a vision projected in the police investigation of *Minority Report*. The rapidly established limit for this type of proposition is of a physical nature. Manipulating virtual objects on such a big screen proved a headache for actor Tom Cruise. It is simply tiring. This makes it highly

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unlikely that this sort of technology with this kind of interface will really see the day, except if it is at least a pleasure to use. Researchers’ body postures when testing augmented reality are much less tiring, with their elbows often remaining against the sides of their torsos. Here, we are far removed from the abundant gestures and movements presented in these fictions.

Tackling this technological trajectory should be performed in a spirit of criticism, taking into account all the scenario’s issues. Participants must avoid trying to construct a utopia, instead envisaging an object that could become part of daily life and which could even provoke collateral damage. Building such scenarios in extreme worlds simplifies the introduction of fictional elements so ensuring that the future vision is not one of total smoothness.

Scenario creation is therefore at the heart of design fiction; just as it is at the heart of classic prospection, in particular scenario planning. However, two elements make them different to each other:

The scenario method’s ambition is to be systematic and analytical

The scenario method is powerful because it is systematic and analytical. It deals with plausible occurrences by employing an analysis of world transformation dynamics from the point of view of social, technological and economic facts and events. The projections produced are based on plausible evolutions “all other things remaining equal.” For this reason, imaginaries play little part in the conception of these scenarios. Design fiction, on the other hand, elaborates scenarios by highlighting speculation prompted by absurd practices and singular mutations that position it at the edge of the strong dynamics used by those prospecting the future. That said, the creation exercise with its handful of trends is rather brief when compared to prospection reports.

If we exaggerate a little, these two tools treat the same subject—scenarios—by taking two diametrically opposite trajectories. Despite this, we are convinced that each approach has something to learn from the other, and can be enriched. Experience shows that human’s capacity to imagine dystopian contexts—those that will supposedly shake up conventions, as certain design fiction practitioners recommend—is, paradoxically, eminently conservative in that it reveals social fears that are often shared. The contribution of in-depth work of a prospective kind is thus of added value to design fiction, allowing a prioritizing of stimulating axes to be determined with greater finesse and pertinence.

In contrast, design fiction voluntarily excludes probabilist issues

With the aim of generating surprise, it is best to choose the representations of the future that will produce a tension among the people involved. Making room for extremes in this way has the merit of answering a recurrent criticism of prospects—the problems of integrating and promoting violent ruptures and, with even more difficulty, the famous wild cards13 and other black swans14.

13 A wild card is a future evolution or event for which the probability of ever becoming concrete is low, but whose impact on business is very strong. BIPE Conseil, Copenhagen Institute for Future Studies and Institute for the Future, “Wild Cards: A Multinational Perspective”, Institute for the Future, 1992.
WORKING FORM

Prototype the tangible proof of a plausible future
As presented earlier, design fiction is linked to the imagining of futures which are then brought back to the present day enabling them to be prepared or altered. For this phase, the role of prototyping is key as it concerns the fictions within design fiction. These fictional objects are the artefacts that will allow the design fiction tool to assume all its importance. A few simple rules exist for conceiving these fictions, while using them will require the adoption of principally one of two different approaches.

In terms of the rules, a fiction must:

**Be credible**

The basis of a fiction is that it is credible: if the public involved does not believe in it emotional commitment will be weak. This would be a shame as this is the method’s intrinsic force. In addition, the fiction should not be too extreme, nor too obvious. If it is too extreme, the public will have trouble suspending belief and will not become immersed in it. On the contrary, if it is too obvious or too close to reality, it will not generate the desired debate and questioning. In this era of fake news, the issue of plausibility is a complex one: can we immerse a chosen group of people in something that is not true in order to make them react? We are convinced that stating that the subject is a fiction will not allow the level of immersion needed to stimulate emotional reactions at the beginning of the process. It is therefore true that we have to accept a “manipulation” of the participants, as long as we then rapidly announce that it was indeed a fiction and give the reasons why it was produced. In other words, in the first instance, immersion is required in terms of the prototyped object: the taking of a critical distance in relation to the projected situation comes later.

To illustrate this we can draw on our own experience of accompanying the INTERREG GoToS3\(^1\) program that brought together 18 industrial sectors from the Belgian regions of Wallonia and Flanders, and the French region of Hauts-de-France, on the theme of cross-sector innovation. With the aim of stimulating the program’s partners concerning the issues of such a multi-sector approach, we simulated a press conference in front of a public of 150 representatives. Three projects were presented in this way, supported by prototypes, by product demonstrators and by a promotional video showing customer reactions. Naturally, none of these elements were real. They were all propositions that, because of their radical nature and their impact, posed a certain number of problems in terms of ethics, values and also feasibility. These concepts were invented and prototyped during two day-long participative workshops mobilizing 30 partners of the GoToS3 program. What was achieved in these workshops allowed us to make concrete a vision of each proposition and to produce a promotional film, plus the accompanying elements, thus giving more weight to the imagined fictional scenarios.

The event took the form of an evening overview of the program at which the participants were invited to listen to a number of speeches from official partners (“real” partners). They also discovered three innovations chosen from the program’s standout proposals (the three design fiction projects). After each session, the public was invited to vote for an extension of development aid for the concept concerned and to express their feelings on the value of the project (in rupture, necessary, problematic, controversial, etc.). At the end of the session, we chaired a final conference to announce the results.

Opening with a techno-enthusiastic message, the discussion progressively moved towards a far-reaching reflection on the issues of technological innovation. The linchpin of this event was an analysis of the votes, followed by a revealing of the approach used. These votes underlined the extremely contrasting relations depending on the nature of the project, therefore highlighting tensions and occurrences of blind enthusiasm.

Despite not being able to collect the individual opinions of the 150 participants, we remarked that the audience were hooked: even certain people who knew what was really happening began to believe in at least one of the three projects. In terms of design thinking, the risk taken with this project was to reroute a public event and to open it up to an unexpected form of questioning. Despite having to inform certain political representatives beforehand—to avoid setting a trap for them or making a blunder—their speeches, in line with the design fiction project, helped reinforce the approach’s credibility. As a result, audience reaction was very positive and web activity (Twitter comments, blog articles, etc.) prolonged the game of true or false in an extremely positive way.

Correspond to a given context with the right medium and the right staging

Should we announce that the proposition is not real before presenting it? The debate is truly complex and, to date, no clear consensus seems to emerge among practitioners. We ourselves conducted two exercises to try to understand the issues surrounding this notion of realism, which needs to be put into perspective with questions linked to fake news. In the first case, we presented three fictions to students of the Master’s degree in Marketing, Design and Creation of Audencia Business School. These fictions were a more or less dystopian artistic project (Hyper-reality)\(^{16}\), a company’s promotional “future vision” (A day made of glass\(^{17}\)) and a misleading conference on a military project (Micro-drone killers\(^{18}\)). The reactions were extremely polarized: more the fiction is realistic, more the public is immersed and discusses what is being shown. We can note here that the debates did not seem to prompt an evolution of the participants’ views on the themes presented. In fact, it would appear that each person reinforced his/her convictions. The distance taken with videos of this kind did not offend the public physically, in terms of security or concerning their confidence in the future.

In contrast, the Exalta diploma project of Delphine Ekszterowicz, a student on this same Master’s degree, proposed an interesting test protocol.

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Exalta is a hypothetical product\(^{19}\) composed of a bottle of oxygen-rich perfumed air. Following a focus group to unite testers and product, before which a debate had revealed the fictitious nature of the project, the student re-contacted participants a few weeks later. The respondents announced that they had started to modify some aspects of their behavior following a certain raising of consciousness due to the test. Unlike the first case where the fictions simply polarized the public, it seems that here a transformational impact occurred. What then needed to be gauged was how all of this was linked to the fiction, the theme or also the coaching provided. As we can see, the subject is far from rigid.

The fiction presented will be radically different depending on the participants’ level of expertise and on the place used for the exercise. For an experienced public, there is a need to enter into the details and explain the technological elements so that everyone becomes involved.

Exalta is a bottle of perfumed air that allows me to combat pollution by inhaling air that is four times richer in oxygen than that breathed in Paris. Its subtle aroma plunges me into distant souvenirs of forest walks.

See the documentation of the Exalta project, 2019.
Consulted on 01/02/2020, https://link.medium.com/3p2yorj1d5.


Faced with neophytes, if the fiction is well constructed it should permit “the feeling of” to suffice. In addition, the object itself should be adapted: from a false press article to a product prototype to a promotional video or a political poster, all options are possible as long as they integrate themselves seamlessly into their reception context.

For instance, for the International Agricultural Show (the SIAL) Making Tomorrow produced a small-format free newspaper of which 1000 copies were distributed\(^{20}\). This was deemed the best way to reach effectively a large target audience who would be on foot and strolling around the venue.

Exalta is a bottle of perfumed air that allows me to combat pollution by inhaling air that is four times richer in oxygen than that breathed in Paris. Its subtle aroma plunges me into distant souvenirs of forest walks.

Design fiction on the future of agriculture distributed at the SIAL 2017.

Injecting friction to ask questions

Depending on the design fiction’s sponsor, the degree of free expression and of controversy are not the same. Research work that resembles artistic creation, such as that undertaken by Dunne & Raby\(^{21}\), naturally asks questions of our relationship to the future through subversive, even shocking, objects. However, when a private company oversees the projection exercise, the effects of which could shake up the image in the short-term, the sufficiently dark tone required to provoke an audience is difficult to achieve. This is why it is necessary to reveal the proposition’s fictitious character before even presenting it to the public concerned. The conditions in which the fiction is received must be secure enough not to create a scandal. In design fiction, the prototyped object cannot be neutral or solely utopian. Its role is to create controversy, and the equation to resolve it is therefore complex for a company. The question it raises can only be subtly suggested. In all events, a work of design fiction only succeeds if the glimpse of the future described allows a public which is not clearly for or against to adopt a position and to be free to change it. The scenario can therefore purposely integrate failures: by self-projection into the daily life of the user (a dead battery blocking a machine, the breaking-off of a relationship making the recommendation of a romantic restaurant cruel, etc.); or by offering a trend-based service (profiteering that benefits from rising sea levels, shampoo for nasal hairs overdeveloped by pollution, a battery recharged by the decomposition of the human body, etc.).

In all these cases, determining a use for technology takes precedence over technical feasibility. The difficulty lies in the fact that we have become so used to showing projects in the best light that to present a concept in a knowingly dystopian manner can create a complete blockage. Often, caricature or irony wins the day, enabling participants to reassure themselves and take a little distance from a future vision that makes them ill at ease. However, the ability to present controversial aspects and to adopt a critical stance contribute greatly to an innovative approach for truly reflecting on projects.

Next, prototypes can be used to achieve two different objectives:

\textbf{Present a future to provoke reactions from the public in question}

The fiction either suggests or else clearly assumes its message. This message can be utopian or dystopian, but, in all cases, seeks to generate conviction and commitment. Without being provocative on purpose, it asks us, “What if …,” so exposing a possible alternative as an option to play with for the future.

\textbf{Innovate}

Design fiction can be employed as a stage in a creative process. Certain questions are raised, and a key issue might have held the attention of a team within the company. It can thus become the motor for a number of projects planned over the year to come. This occurs either by inspiring a new research theme (“We wanted to develop our activity in such or such a direction”), or by setting limits for the future practical framework (“We need to install such or such a watchdog so that our practices develop in this direction.”). In this case, design fiction is a means of testing different hypotheses within a sector of activities, and of playing with the available options by testing what are sometimes radical uses that can seem unimaginable today.

\(^{21}\) See http://dunneandraby.co.uk/.
We propose two simple tools for generating design fiction prototypes. The first approach, and the best-known, is drawn notably from the practices of design thinking: rapid prototyping. Here, already defined forms are filled and adapted to represent the usage of a futurist technology that we wish to test. A variant of this seeks to describe the application of a political system or, more basically, an electoral proposition. This enables us to formalize quickly the issues of harmonious living: a new balance to the social pact. The second tool consists of prototyping an object that is voluntarily provocative. The goal is therefore to suggest uses of technologies that seem extreme today, but plausible for tomorrow.

### 3.1 Fiction Boxing

An initial technique for prototyping a fiction is to produce a rapid prototype. For this, we can always prepare a simple outline such as a newspaper’s front page, an advertising handout, or an Instagram post. The aim is to evoke, via a medium that is easily appropriated by the public, a service, a product offer, a cultural activity, or a societal event by using minimum resources.

Do not be fooled by the form’s simplicity and “pre-packed” character. The substance should be well supported so that it immerses the reader in a believable future world. It is therefore the writing of the text or perhaps a presentation detail that will allow an in-depth communication of what this future holds and the suggestion of issues we face.

If we imagine a new solution to car sharing, the press article that presents this cannot be simply descriptive or praiseworthy. On the contrary, there needs to be a development not only of the current issues and stakes the company faces, but also of the consequences for urban transport and the different actors in the value chain. By multiplying the points of view on the given theme, we can create a rich and dense universe that allows exchange, criticism and a choice of options for the future.

By way of example, for a project on the exploration of Mars undertaken at the camp we found inspiration for the presentation of solutions in the work of photographer Julien Mauve and his series of *Greetings From Mars*[^22], 2015.

The series was published in the form of Instagram posts that question our practice of connected tourism, or our relationship to an image that has become more prevalent than at the time it was experienced.


In this scenario food restrictions on Mars have seen the rise of adding toppings in augmented reality to enhance daily dishes.

Finally, a solution for consuming better, or rather a risk of cutting links with one our primary senses? How much should we fool the senses so that we can eat more responsibly? What does “better eating” mean?

Another version of this rapid application involves revealing the contours not of an imagined product or service, but of a whole political system that governs a way of living together. In this case, the fiction created has to go as far as possible with a currently fashionable proposition until it provokes a use that is shocking.
For example, this can concern the modalities of a system of government in 2030. We therefore question ourselves about the historic elements that led us to enter into this system. What is the doctrine? Who are the main stakeholders, people in power, or factions? What economic system is in place (capitalist, communist, socialist, corporatist, ecologist, etc.)? How are differences of opinion resolved? How do the politicians and the public communicate? What are the inequalities and problems to be solved? Imagining these elements allows participants to extract themselves from current debates, to push their logic to the extreme and to debate the results presented.

The creation of an electoral program can also allow this exercise to be undertaken formally in a simpler manner by identifying attractive promises. This has the advantage of being able to expose radical, entrenched stances that are nevertheless coherent with each other. In the following example, the Making Tomorrow team imagined a declaration of rights for all living things adopted by the Council of the European Communities. The very choice of a non-existent European organization that, however, suggests a form of federalism, at once allows the emergence of strong political evolutions that this future will have known. Each article then highlights strong received ideas that detail the way in which this community could legislate relations between humans and the rest of the living world so that nature and all living things enjoy the same legal rights as a citizen. A tree, a river or a mountain that has the status of a legal entity could plead in court in its own name and so defend itself from certain abuses. The issues raised here do indeed go beyond solely environmental questions as this principle of governance questions to a greater extent the allowances for the living world in urban areas, in companies, etc. in the light of these new rights.

Political charter suggesting a particular governance in place, Making Tomorrow, 2019.

Could a beach, for example, sit on a municipal council to express itself on the theme of plastic waste?

In this ambiguous situation, the public debate stance that we adopt by reflex when faced with such propositions aids the creation of fiction and of a position based on criticism.
QUICKLY AND DIRTY PROTOTYPE A PRODUCT OFFER VIA A SIMPLE MEDIUM

The foundation stone of design fiction is the proposition of ultra-lifelike objects that make the future more present. In this exercise, we ask the teams to produce a tangible version of the future by knowingly using both banal forms and others lacking a futuristic aspect. For instance, to suggest a new way of interacting with information, we favor the use of a simple pair of gloves on which false sensors are stuck. So you can manipulate imaginary objects on a wall or board rather than the embedding of 3D manipulation on a flexible and transparent screen, such as that seen in Minority Report, that would be more cinematic, but less believable. If a fiction’s forms can differ depending on the aim and the public targeted, we generally recommend the creation of packaging for the object. Care must be taken here, as the issue is not to promote the object, but to help the participants to project themselves into a future world through a simulation exercise and to encourage them to become involved.

To help run this exercise successfully we provide a stock of packaging (food, supplies, etc.) and other visual resources that contribute to guiding the event.

This approach consists of three main stages:


**Choose an object**

Choose an object that will be at the heart of your fiction. To be convincing, this object needs to be provocative, imperfect and present certain faults in order to avoid publicity-style images that are often too smooth and idealized. This is one of the fiction’s key issues: to underline the drawbacks and limits as a means of creating credibility. In addition to reinforcing the prototype’s realism, the act of showing faults and rough edges also contributes to the highlighting of controversies. For example, a fiction that seeks to stimulate reaction to the use of personal data could be centered on an ordinary daily object such as a box of candy, a toothbrush, a keyring or any other thing that could be found at the top end of a supermarket aisle yet could be presented as being able to collect information on how it is used.

**1 day**
**Between 5 and 8 participants**

Rapid prototyping workshop of a piece of sports equipment linked to the emergence of new practices, Making Tomorrow, 2019.
Specify the object

The object now needs a tagline and a short description to capture the public’s attention. The tone used and the elements employed must also be the most pertinent possible. Once again, provocation is the best approach in order to gain reaction. All elements contributing to the credibility of the proposition can also be added: descriptions of major benefits, slogans, partner company logos, etc. In the case of the fiction related to use of data, we employ a pictogram to suggest the capacity of the product concerned to turn the kitchen light on, start the car, read the weather forecast, or inform an employer of the given employee’s state of health. Try to explore extreme future situations and to identify the possible consequences of a major rupture, of which the probability is obviously weak, but whose impact would be potentially huge were it to happen.

Prepare the prototype’s presentation

Confrontation with the invented project can be rapidly initiated as the prototype may be immediately placed in the public’s hands. Think of how to create a certain atmosphere and what the introductory speech should be. Will you put yourself in the shoes of a salesperson, of an engineer, or of a trend influencer to highlight the characteristics of the promoted product or service? You could repeat your concept several times, improving it depending on the public’s reaction. Your fiction is now ready to be put under tension so that its desirable character and consequences can be debated.

A falsely fabricated image advertising a training program for the colonization of Mars, Making Tomorrow, 2019.
3.2 PROVOCATIVE OBJECT

To be able to debate a critical subject, and notably its consequences in terms of innovation, we suggest creating a provocative object. This approach encourages a position to be taken concerning innovations that are today perceived as extreme, but are genuinely plausible for tomorrow. The approach remains close to that of rapid prototyping, but presents radical elements. In other words, the idea is to feature current subversive technology which is seen as ordinary in the future.

In the 1980s, if we had explained to people the amount of data anyone could acquire about their neighbors, it is likely reactions would have been negative. The question is therefore to discover what happened between this era and our own: what leads us to live in a certain environment, tolerating a certain and relative level of mass surveillance.

The aim is to discuss how controversial technology became widely acceptable in the proposed future: what are the underlying issues? The fiction concerned should allow at least two questions to be asked:

Why is the fiction currently disturbing?
If we imagine a fiction that features implants allowing us to recycle and drink our own urine, what conclusions do we reach? Is it because we have created a future world in which water has become a strategic subject that disturbs us, or is it simply the surgical operation, or maybe the idea of recycling our urine?
What are the sources of acceptability for this technology?

The issue here is to ask ourselves in what manner humans of the future were brought to accept this technology. Was it simply external evolution that saw its development, or are other elements at the origin of its acceptance?

Earlier, we presented work undertaken in the context of INTERREG. One of the provocative objects we developed was a wrapping film that allows meat to be protected during transport, but which melts in a hot pan. The basic idea is simple and intuitive: find an alternative solution to plastic packaging. The imagined process wraps shop-sold meat and produces fat during cooking. However, when the project was presented it clearly raised numerous questions: can I accept that my packaging is edible? Can I accept that other people will touch the product before me?, etc. In this specific case the work to be undertaken would be, for example, to find out why we accept eating an orange touched by others, but not meat wrapped in this way.

During an event bringing together a community of deep tech specialists (the Hello Tomorrow Global Summit), the collective imagined a false startup, Air Pollution Revealer. Before the world’s engineers and researchers, its false CEO presented his false new technology that measured fine particles in the air. His speech was also bolstered by the development of a false website presenting the technology, a false smartphone application, a LinkedIn page and a presentation video posted on social networks. These elements were produced to obtain a real suspension of belief on the audience’s behalf.

In this way, we can see how the creative work of prototyping must be extremely specific to be credible.
The goal of prototyping a provocative object is to provoke an emotional reaction from spectators. We recommend four stages:

**Define the object that will serve as a basis for constructing the provocative object**

This should ideally be an existing object of today’s world so that it communicates a form of banality concerning the future. This was true of the meat presented earlier. The other option is to invent a new object that responds to tomorrow’s issues. For example, an individual bottle of pure air for a polluted world. Unfortunately, this type of new product is sometimes perceived as belonging to the realms of science fiction which limits its effectiveness to convince and provoke.

**Define the issue we wish to address and how the object should be augmented**

Typically, if we wish to focus on the future management of bottled water we can imagine how taps, showers, toilets, etc. could “speak” to us, giving information on our water consumption, our impact on natural resources, etc.

**Imagine a usage that pushes to the limit**

Given that this type of approach can already be treated by classic innovation (converting water from toilets into drinking water, for example), it is better to define a usage as extreme as possible. Keeping the same example, we can imagine that humans in the future will accept the process of filtering dirty water from their own home to then be able to drink it. However, what happens when this used water recycled for drinking comes from their workplace or from a service station? What is the level of confidence attributed to each source?

**Create a staging for the object**

Take a photograph of the object produced. The staging can be based on a scenario; for example, placing the packaging in a store environment to guide the public’s vision and hide the artifice. For the question of future meat packaging, the prototype represented a piece of meat in a refrigerated space. Here, the refrigerated cabinet did not so much serve the object as make the idea more credible. If the team has a little more time, it can transform its packaging into a descriptive video of a few minutes that will strengthen the proposition’s anchoring in reality while still preserving a user-orientated discourse.

Participants’ reactions when imagining the product and its uses are often enough to allow an evaluation of the impact it will then have on spectators.
WORKING TENSION
Create debate on which paths to take and act in the present
Most practitioners end a design fiction exercise with a debate on the scenarios represented by the fictional objects produced during the session. This focalization on debate, which seems so natural to most people involved and produces heated exchanges among special online groups that become almost a required criterion to define the process, appears to be a sticking point for innovation tools.

Knowingly creating a controversial object is indeed an unnatural practice within today’s organizations. We are so used to presenting projects as best we can that to be asked to justify a concept with an evidently dystopian angle, or to play the role of problem creators, can cause a complete blockage. Often, we fall back on caricature or irony to reassure ourselves. However, being able to present controversial aspects and a critical outlook can bring much to the innovation process. It is therefore an exercise that needs to be well prepared. It is necessary to rehearse and test presentations so that they are convincing enough to whisk the spectators along with the scenario. More fundamentally, what is at stake is the idea of exhausting the consequences of certain received notions of the future thus making credible a particular standpoint.

Despite this, we consider that the design fiction exercise must not be reduced to this single sentence, or even that we should give it more central importance than it deserves. The first reason for this comes from our clients themselves—And afterwards, what do we do? The bigger the issue, the greater the urgency not to remain in limbo or in debate. Yet, we see that design fiction has a real capacity for encouraging action precisely because of the imperfect character of the worlds created. It therefore constitutes a relevant starting point for imagining counter propositions by going back to the knowledge gained during the creation of fictions. These counter propositions are even more pertinent because the imagined world is believable: developed from a solid analysis of the forces and interests at play.

This means the exercise is a formidable way to stimulate users’ projective reflection and to mobilize them by going beyond the usual presentation based on scenarios. The fiction possesses its own power to provoke action. It is possible to use this characteristic to accelerate a project, increase its dynamism, or to make concrete an original and relevant world vision.

Design fiction puts spectators who form an audience in the center of the process. In the relevant literature and through feedback, this point seems obvious: we bring together the project’s stakeholders or participants invited to a public debate. As seen in numerous participative initiatives, these two groups, without clear boundaries, tend to generate many more rifts than anything else. There are several reasons for these difficulties: invitations to participate sent to a small circle of people, selection by default of a population of motivated people, over-representation of opponents to the approach compared to supporters, etc. We consider that the lack of attention paid to constituting an audience reinforces the inherent risk in undertaking a debating exercise because it makes hidden disparities appear natural. From this starting point, it is absolutely necessary to take care to invite a wide range of people in terms of the nature of the project: mobilization of diverse functions within a company seeking to examine itself; integration of those for and against a project under consultation; incorporation of “silent” users and segments of populations that are in principle unconcerned by the innovation project’s framework, etc.
Certain design fiction approaches are regularly promoted because they show the capacity to stimulate a wide audience by relying, for example, on a diffusion via the popular press (here, we naturally think of the connected dental implant of Loiseau and Auger23). Such power of diffusion is very rich. Nevertheless, in line with all the doubts expressed earlier, we note that when there is an absence of a minimum qualifying of the audience, the feedback is at best hardly of use. Because—as we argued earlier—the statement would tend to reinforce “budding” positions among this audience, the overall effect is more one of reinforcement of well-established fears (for cultural, social and psychological reasons). Because fear is at the root of bad advice, it is better to examine the pros and cons serenely with a balanced outlook. In this way, a widespread diffusion to the general public, though spectacular and noticeable, remains at this stage a communication tool, or even part of the “arsenal” of arms for convincing. From this perspective, design fiction is either closer to company strategy as it produces a bright future seeking to inspire and motivate, or else resembles the approaches of activists who use the notion of dark future to warn of a system’s risks and limits.

To avoid a sort of takeover bid being operated on the critical thoughts of those involved, there remains a need to invent approaches able to make possible the free circulation of ideas, and to install a balanced tension of positions when fictions are very widely diffused.

Example of a bright future with A day made of glass from Corning. This presents a magical future where various interactions in the home rely on glass tiles. Consulted on 3/01/2020, https://youtu.be/6Cf7IL_eZ38.

To achieve this, we propose three simple tools. The first is futurist A/B testing. Rather than test versions of a product or of a current interface, we can simply test tomorrow’s alternatives in order to prepare the most preferable amongst them. The second tool suggests adopting ethics as the principle for tomorrow’s action. The third and last tool is the very archetype of action stimulation: faced with a preferable future, how can we rewind to today and construct the future in question thanks to backcasting?

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4.1 FUTURIST A/B TESTING: COMPARE TWO FUTURE PROJECTS

“if I had asked people what they wanted, they would have said faster horses.”

This well-known quotation, attributed to Henry Ford, illustrates how complex it is to grasp a population’s desires, or to measure accurately the strength and values of existing curbs in a specific area. Popular series based in the future, such as Black Mirror, Real Humans or Years and Years, present dystopias that perfectly stage the negative consequences of certain future technologies. These visions are inspired by emerging technologies which are already widely distorted or parodied by artists or designers who highlight their limits.

This can bring to mind the Metalhead episode from series four of Black Mirror that clearly references the BigDog military mules developed by Boston Dynamics and recently distorted on social networks by the Corridor Digital agency24. Here, we see a lifelike robot at combat in a human environment. The killing behavior of the episode’s robot serves to extrapolate the fear of a misjudged use of technology that is already debated in public. These same popular representations inhabit and outline tensions concerning fears about the world in question, yet do not themselves provide any recommendations on how to act.

The difficulty of projecting solutions based on new technologies, combined with a tendency to underline risks rather than benefits, make the preliminary stages of innovation a delicate moment.

One answer to these issues would be to transpose within the design fiction a comparative test between several received ideas [A/B testing]: a technique originally developed by marketing specialists. Used very early on in the process when closing the loop at the prototyping stage, the testing of similar concepts allows usage hypotheses to be validated. With the help of a simple, purposely downgraded representation which corresponds to the intermediary stage of an ongoing innovation project (usage scenario, semi-functional prototype, user guide, advertisement, etc.), the test takes the form of projecting a technology and a solution into the future. We must not concentrate our attention on the concept’s verisimilitude: users testing its feasibility, or gauging emotional reactions. In a situation of interaction concerning two options that clearly explain both risks and benefits, we test the comprehension of a piece of technology’s potential future uses.

We have notably used this approach to help a company to identify the ethical principle when faced with the emergence of artificial intelligence in client relations and in terms of the insurance packages it offers. Three false marketing kits were developed and tested respecting the norms of consumer meetings. By making the added-value elements tangible, we were able to identify the ethical stance’s weaknesses. In this case, the propositions did not resist a real usage envisaged for the future. By contrast, other ethical elements were strengthened thanks to their connection to practical issues that had not been previously identified.

The test’s strong point is therefore its redefinition of ethics as a product of interaction, and not as a predetermined posture. Only a design fiction object can propose such radicalism in the risks-benefits pairing, while, on the other hand, an A/B testing of objects seeks to highlight the benefits to then be able to test the negative effects such as those suggested by the first reflexes on usage. Unlike a classic test, here, we accept so-called technological feasibility, often to the point of making it appear truly real. The focus is on the concrete usage value (by asking questions of the manner in which the object could be adopted on a daily basis) rather than looking at a certain functionality’s preferred character when compared to others. A/B testing’s comparative posture reinforces verisimilitude while also helping to create a hierarchy of projected benefits and obstacles.
In practice, A/B testing consists of provoking a confrontation between two relatively similar projects. Design fiction is used here as a resource for committing a public of testers to enter into plausible reflection on the sector’s future.

The first stage is to define a certain number of controversies within the given environment. A useful controversy is not one that opposes a positive result with a negative result (e.g. “Should we protect users’ private lives or make money from them no matter what?”). But one that contains two complex combinations (e.g. “A service offered within the community of those using the data created” versus “a multi-stage service offered on the basis of a choice between various levels of temporarily shared personal data”).

The second stage is to produce prototypes of plausible tests in which a dystopian character does not dominate but instead appears as a secondary consequence of the proposition tested. Each proposition for orienting a future service or product is channeled through two of the following classic consumer test objects: a storyboard, a downgraded usage scenario, or a false advertising. Each pair created explores two plausible future orientations that contrast with each other. We recommend working from three or four pairs of futures so that the data acquired can be treated fully before going further.

The prototypes are then tested on a targeted user public chosen bearing in mind the diversity of uses and attitudes in relation to the field of reference. Prototypes are presented two by two and individually, each time with a different order of presentation. During this exchange, the participants voice a preference and justify it by illustrating the advantages and disadvantages of each proposition. More than the results, what should be looked for are the stumbling blocks that produce a refusal, plus the elements that prompt adhesion. These will be analyzed after the session to identify the levers for change within the area.

At the end of the session, the test participants are informed of the approach’s fictitious nature. Their reaction to this is as rich a resource as that collected beforehand.

With a more complex scenario, we can divide an issue into three or four options (A, B, C, D), and conduct a more nuanced comparative exploration (A against B, A against C, A against D, B against C, B against D, C against D). Bear in mind the question of recruitment, as the number of participants increases with each stage.

Debate workshop confronting different possible scenarios, Making Tomorrow, 2019.
4.2 ETHICS AS ACTION PRINCIPLE

When spectators react to a fiction it quite rapidly generates three elements: a limited number of convictions about what needs to be avoided, goals to achieve (sometimes greater in number), and certain practical ideas on the initiatives and propositions that could feed into an initial application of the preferable futures.

However, experience shows that it is the dystopian ingredient that tends to have the biggest impact when presented to a group. Fears are more powerful action stimulators than enthusiasm, and it is therefore very easy to transform a debate into a manipulation exercise made dynamic by the strength of such fears.

Alongside this observation, we can note that much work on extrapolation begins from the premise that, when faced with the acceleration of innovation, there must also be an acceleration in the use of regulation and governance. Design Fiction proposes speculative scenarios that aim to stimulate commitment concerning existing and future issues. Because it questions what is possible, design fiction nourishes a certain pluralism of visions, ultimately allowing us to conserve several possible choices for the unexpected problems. It is all about properly answering the existing or emerging socio-technological questions: what will this new technology or this new world contribute in 10 years’ time? Who promotes and masters this technology? What could be its indirect effects? At the end of this process, the organization will support one option against another in order to conceive a strategy.

By making a contribution in determining ethical charters, codes and rules, as well as the principles of good
behavior that should guide the implementation of innovation and technology, a future governance is a very useful fictional object capable of playing a safeguard role which frees up stakeholders’ critical mentality and responsibility. As is the case with all fictional objects cited previously, governance is not a tool for influence, but rather a way of revealing a theme’s underlying tensions, status quo and issues by making them explicit and thus visible. For this reason, fictive governance can be used in mediation between public decision makers, citizens and companies via a public debate.

The aim is to conceive a work grid that draws on the sort of positive principles from which we can generate commitment regarding their preferable character. It is in this perspective that we position the use of ethical charters. By their negative principles, summed up by “avoid doing”, they allow the clarification of practices that will be rejected. By their positive principles summed up by “encourage to”, they set goals to achieve, orient the task of construction and secure employee commitment. This is one of the reasons why we consider this tool to be of a doubly structuring nature, important for both highlighting the value of debates and stimulating action.

Ethics: A philosophical discipline concerning the regulatory principles of action and moral conduct.

Ethics principles formalize some of the values that should guide decisions and actions. They help to decide what is just and what is not, to define the attitude to adopt when faced with an evolution, and the actions required or to be avoided.

See the different noteworthy examples of ethical charters in the digital world

Ten Commandments of computer ethics, Computer Ethics Institute, 1992.


The founding principles, Wikipedia, 2005

Éthique de la recherche en robotique (Research ethics in robotics), CERNA, 2014.

Charte numérique, pour un monde numérique résolument humain et éthique (Digital charter, for a resolutely human and ethical digital world), Maif, 2017.

Define the Ethical Principles That Will Guide Your Future Action

Several half-days

Between 5 and 15 participants

Firstly, from the starting point of the extrapolations and the investigated themes, a list needs to be drawn up of the potential dangers and possible risks. To limit the framework so as to avoid, encourage, delete or create what is desirable, we can begin with a design fiction object, or else work directly on the body of imaginary elements. The objects or imaginary elements (e.g. extracts from science-fiction works) are presented to the participants in the form of thumbnails. Care must be taken not to present only problematic situations that generate too literal a treatment of the ethical question. As well as the 20 thumbnails, we recommend doubling the number of groups so that each stimulating situation already organized by theme is addressed by two groups at the same time. Each group treats the situations in two ways: the risks in terms of usage (what is directly visible, and what this creates in terms of a mediocre experience for those involved in the action) and the risks in terms of infrastructure, logistics, production and governance. In other words, what is directly invisible, but which reveals the long-term effects on stakeholders who are far away either in terms of distance or time. This second category of risks is sometimes more complicated to identify, and requires more time and in-depth development of the subject. The collected risks are classed by type, then prioritized. These two stages are accompanied by moments dedicated to exchange that can be extremely rich as they highlight the unexpected consequences of actions that, nevertheless, define themselves as positive.

Activity Sheet 10

Produce the ethical principles

The team then imagines the means for dealing with credible abuses as if it disposed of the power to legislate and prescribe norms. The movement from the risk to the charter can rest on a simple mechanism for avoiding risk (“we don’t wish to…”) or sometimes on a positive principle geared to reroute the risk (“all action should lead towards…”). As an ethical principle is a recommendation or a guide, it should incite the best possible action that respects the values the collective wishes to support.

Examples of notions to call upon: integrity, courage, transparency, prudence, charity, non-discrimination, the right to information, freedom of choice, neutrality, protection, autonomy, politeness, loyalty, equality, generosity, gratitude, tolerance, humility, etc.

Debate the propositions

During this stage, the main imagined principles of governance can be submitted to a sample of participants: citizens, company representatives, political decision makers, etc. The manner of overseeing this debate can vary. A special staging can help create empathy while also encouraging adhesion to the principles presented. For example, a leaflet such as that used in electoral campaigns could be handed out. We could also invite various experts on the issues covered to detail the whys and wherefores. Numerous techniques exist for encouraging a public to adopt a certain position: ask participants to vote for or against the principles in question; chair a conference that takes the form of a legal trial; gamify the exercise by marking a boundary on the floor in order to make participants move around, etc. To arbitrate decisions, it could be useful to ask yourself what motivated the formulation of such and such a principle. What is the commitment level that you will make collectively? Is it a deep conviction or one of the institution’s fundamental values? Is it citizen or media...
pressure? Is it assuming an exemplary position in order to flourish across a market? Is it a regulatory or judicial constraint (current or a risk in the future)?

**Analyze reactions and update principles approved by all**

Knowledge and learning from the debate are structured to highlight guidelines. For each item, the participants can propose an alternative and write their own governance. Even if it is not truly implemented at the end of the process, this governance will contribute to overhauling the organization’s current catalogue of actions, and in this way help to question the long-term directions to which the organization is committed.

An approach based on the defining of principles is a motor. We see that it truly gives a dynamic nature to the successful launch of a collective. Rapidly, the debate’s participants project themselves into making the principles operational, requiring changes to current ways of working. The team is now ready for the backcasting stage.
4.3 BACKCASTING, BACK TO THE PRESENT

Invented in 1982 by John B. Robinson, backcasting is a technique that seeks to imagine desirable futures then to go back in time to the present in order to identify the actions needed so that the desirable future in question can be achieved.

The principle is simple, but putting it into practice is more complex. After having defined a certain number of alternative futures, the first challenge is to choose which of them is desirable for the organization concerned. Futurist A/B testing, presented above, makes this initial selection rapidly possible. Once the desirable future is chosen, there comes the question of how to reach this goal, or an equivalent objective.

We propose three steps to get the best from this approach:

First, list the required milestones to achieve this desirable future

Here, the aim is to succeed in prioritizing all the tasks on the critical path so that they can be allocated correctly and that all considered stakeholders commit.

Next, analyze possible convergences

what are all the plausible trends we can mobilize to accelerate the expected transformation? For instance, the simple fact of listing stakeholders who will offer support and to contact them will allow a faster convergence towards the desirable future.

Finally, and conversely in terms of the previous case, analyze the risks of divergence

What elements of the environment could provoke a detour from the desired direction and compromise the defined ambition?

The practice of signposting\textsuperscript{26} can act as the basis for piloting a backcasting approach. This entails employing a system for analyzing the dynamic environment which allows us to furnish deciders with all evolutions pertaining to that environment. Be it convergences or divergences, the two types of information are in this way treated continually, thus guaranteeing that the organization stays on the critical path.

It is also possible to produce scenarios of “intermediary flags” by recreating fictions for the main key stages. This allows the integration of developments in progress (successes or failures), and of evolutions pertaining to the environment, while also enabling the final vision to be continually adapted so preserving the commitment of each person. Clearly, the objective here is to maintain the desired direction, but to do so without it becoming disconnected from what is really happening at a given time in the company and in its economic environment.

Faced with uncertainty there is not a single future to predict, but instead several futures to prepare. The methodical investigation of possible futures allows us to materialize their diversity. To prepare the activation of an organization and decide which changes should be made from the next day onwards, we suggest first undertaking a retro-conception exercise. This task, which comes before strategy or policy development, proposes alternatives that allow us to move towards a desirable future or else to avoid an undesirable one. Design fiction and strategy therefore combine to try to answer the double question: “What could happen?” and “What must I do?”

To respond, we propose a three-step progression which identifies the various paths possible. The trick is then to transform these paths into genuine strategic positions.

First, describe the desirable future

Unlike prospectivist approaches, design fiction seeks to define preferable orientations to be taken. The first step calls for concrete and graphic descriptions of the desired future situation at predefined intervals: three, five, ten, even twenty years. For example, we can project ourselves into 2040 and consider that we have totally finished all the projects and transformations that we wish to undertake. What must then be done is to imagine and feel what allowed us to reach this desired state. Participants express themselves in the present tense and describe the measurable results they observe: what can we be proud of? What makes us think that we have managed to change things? What key events occurred? What new solutions have we managed to put in place? The more descriptive your events, the more likely they are to create awareness. This is perhaps why, in December 2006, for at least a certain time, the fictional documentary *Bye Bye Belgium* on the secession of Flanders gave the whole country the desire to rediscover their fellow community.

Next, trace the paths to follow by establishing your organization’s evolution scenarios working from the situation you wish to achieve

Such scenarios should cover as many alternative futures as possible, and vary the paths that lead to them. This retro-conception (or reverse engineering) exercise identifies the different events that will allow the shift from today’s situation to that of the future.

Endeavor to promote what is already accessible today in order to make the stories more probable and plausible: what are the forces and resources on which we can call to help arrive at our goal? A few years before reaching these desirable futures, what have we tested again that worked well? On the contrary, what did we have to renounce? Which partners helped us progress? Three years before the target date, what allowed us to say that we were already there? Remember that you are in the future and that you must think of the past as if it really happened.

Lastly, identify the next small steps to take, and the concrete actions that you can already perform at your level

The founding principle of this exercise is that the action itself is more important than the action plan. Once you have defined the paths to follow, you will identify the small steps to take. Identifying the first, small improvements puts people into action, motivates them and makes them inclined to move forward.

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to the next modest change. Here again, the mechanism involves looking for useful proof: what would be different if you went one or two paces further? How do you measure if the transformation has begun? What gives you the confidence to go to the next level? What observations show that you are going in the right direction? Rather than attribute probability coefficients, it is necessary to help the first concrete, pragmatic and quasi-experimental initiatives emerge.

This step can take the form of a world café format. Workshop participants circulate between tables in such a way as to propose real resources or interventions for one established principle at a time, always aiming to help take the process forward. Once this has been done, the representatives of each principle sum up the actions proposed and identify the concrete commitments made to move in the right direction. They define an initial action schedule and then oversee a collective governance.

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28 The world café, developed in the 1990s, is a participative intelligence method that generates ideas among a group; its particularity is the cross-pollenization or addition of ideas via successive switching of tables. See definition consulted on 03/01/2020, wikipedia.org/wiki/Caf%C3%A9_du_savoir.
CONCLUSION

Knowingly prepare your hold-up
If you have reached the end of this compact manual and you have already started to use what it contains, well done (and thank you!). You have committed your first design fiction hold-up.

As with any hold-up, we have furnished you with the essential techniques for mastering the approach. Naturally, you will need to complete this toolkit and to explore in detail how imaginary elements and their systematic analysis are likely to change your practice in terms of prospection. You are now able to accompany organizations—your own and others—in a simple yet engaged manner.

If we are convinced that it is rapidly possible to create a difference for your organization, we are just as conscious of the fact that the qualitative leap is achievable only when the most accomplished efforts are realized. We believe in the power of imaginaries, of alternative scenarios and of prototypes from the future, but this approach cannot be taken for granted.

As an emerging practice that begins to meet with a certain degree of success, design fiction is submitted to various controversies by those who employ it. By doing this, we witness the more precise definition of different conceptions of its use: a process that is not risk free.

Since its first deployment in the U.S.A. and Great Britain at the very start of the 21st century, design fiction has not only achieved stupendous success, but also several upheavals. Already, practitioners are attempting to codify the approach and to write out its indispensable rules. In sociology of science, we call this stage that of “closure.” In this context, to be paid as an expert active within the field leads to a delegitimizing of the practices of others due to a definition that seeks to be more essential and natural, but which is in reality only a reflection of a bias. Of course, there are economic issues here, but also ethical ones because for some it is a question of defining the good or bad uses of design fiction so imaginaries should, for example, remain the preserve of causes judged to be, in principle, just.

The noble aim we can bear in mind from the current period of controversy is the desire to avoid design fiction adopting a form of “design thinkization”: far too strong a dumbing down of a principle, implying a loss of expertise and competences as well as the reduction of a paradigm. The fear is that design fiction will find itself summed up as a collection of not only methods, but also of knowledge and know-how—as a “simple” toolbox that would lose the approach’s essence.

Conversely, it seems to us that this trend is inevitable and simply reflects the success of an intelligent and passionate approach. We also believe that, unlike design thinking which is the reflection of a specific practice (the conception of objects), and thus loses its value when it is cut from its original roots, design fiction is more a coming together of several approaches which do not have the vocation of

Example of a critical reaction to a design fiction exercise, Design Friction, October 2019. Consulted on 01/05/2020, medium.com/design-friction/quel-s-futur-s-pour-le-design-fiction-d687d98e2222.
supporting one another. On the contrary, the meeting of creativity and different approaches seems to us to be a more beneficial one. If we use marketing by way of analogy, since its invention it has been distorted, adapted, twisted and reinvented. What finally delivers the verdict is the impact on organizations of each adaptation or distortion. We would like to encourage this multiple appropriation, which is why we endeavored to show design fiction’s prehistory and its multiple character rather than try to reduce it, as some are tempted to do, to solely design criticism or only fictional literature.

The path towards action for a desirable world is littered with obstacles. Design fiction seeks to aid deciders within major companies to make their commitment and define strategic orientations. The simple fact of creating knowingly controversial fictions is an unnatural practice that can even create blockages in today’s organizations where we are used to presenting projects in the best light. Often, as a form of reassurance, it is caricature, irony, or a taking of distance that wins the day. Our practice is a learning curve: presenting a critical point of view brings much to an innovation process, allowing a genuine reflection concerning projects’ issues. The definition of the ethical principles that guide the action seems essential to the construction of tomorrow’s world. However, this requires us to agree to play the game!

To this end, we chose to write about what could be described as design fiction’s “spirit” then to propose uncomplicated and easy-to-learn activity formats. The aim is not to reduce design fiction to these simple expressions, but simply to share what we deem to be the outline of its skeleton, at the same time assuming a certain number of received ideas that can be seen as hypotheses to test and evolve.
Making Tomorrow is an independent collective of designers, makers, anthropologists, prospectivists and economists who play with the future. Because what will happen tomorrow is not totally new, but rarely what we expect, the collective helps deciders in the public and private sectors to imagine new, extreme versions of their future in order to gauge its limits. And decide firmly what direction to take. Starting the very next day.

Meet the complete Making Tomorrow collective on our website.

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**Pauline Audinet**/ Designer, Pauline develops her creative tools to serve innovation strategies, through her role as a consultant at Onepoint. Mediator, she runs numerous forms of debate within organizations for their transformation.
Nicolas Minvielle, Olivier Wathelet, Martin Lauquin et Pauline Audinet
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