

D5.3 Concept Note: Integration of Scenarios with Interactive Digital Platform

WP5 Innovative, Participatory Scenario
Development for Strategic Governance
Decisions

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TRIGGER

TRends in Global Governance and Europe's Role

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CHAPTER 1

**Scenario Development and
Challenges**

1. Introduction

The scenarios developed for the TRIGGER project in work package 5 will be at their most effective when utilized for public outreach and engagement. Each of the scenarios will describe a world of the year 2050, with each scenario exploring a world of either stronger or weaker EU influence over Global Governance, and Global Governance systems that are a) more fragmented, or b) transformed from their current state. None of these worlds is supposed to represent 'The Future.' Rather, by expressing divergent future scenarios, TRIGGER hopes to encourage federal and national policy-makers to engage with the vast possibility space of plural futures. We simultaneously recognize that policy decisions do not exist in a vacuum, but are fundamentally responsive to a represented citizenry. This makes it critical for the TRIGGER scenarios to be used as platforms for deeper citizen engagement with the intersection of foresight and policy¹. In so doing, we create the conditions that foster conversations regarding preferred futures for various actor groups, and steps by which action can be taken to achieve them.

This concept note is developed to help POLIMI (leader WP6) garner citizen engagement with the TRIGGER project by utilizing the narrative components of the global scenarios to create welcoming interactive 'portals' for citizens to engage with the content in a way that is relatable to daily life experiences. A portal can be understood as a way of transporting a scenario 'user' into a more rich and textured experience of the world that scenario presents. Each TRIGGER scenario attempts to paint a rough sketch of a complex future world, and in so doing opens up an enormous number of potential narrative arcs that can increase the accessibility of the scenarios' implications². Narrative arcs can be a potent vector for engagement, as they work with human cognitive mechanisms (storytelling), and need only be cohesive within the scenario world - thus giving potential narratives a wide latitude to integrate themes, actors, and activities that define the scenario. The defining elements of the narrative arc (subject, objectives, interlocutors, obstacles) establish a frame of reference in understanding the scenario world in ways that allow for user personalization and interiorization on one hand, and deeper examination of a scenario's relationality, power, and agency dynamics on the other.

The COCTEAU platform is being developed as a platform through which the aforementioned integration of scenario elements with interactive mechanics can be engineered to foster citizen engagement with the TRIGGER scenarios. The platform's interactions can be designed in such a way as to create 'empathic reactions' - moment in which platform users form emotional bonds with the perspectives of others. These reactions are a key component of game design, as they can drive further exploration of each scenario and the wider world it creates. The ultimate goal of

¹ Bayley, Clare; French, Simon (2008): Designing a participatory process for stakeholder involvement in a societal decision. In *Group Decision and Negotiation* 17 (3), pp. 195–210.

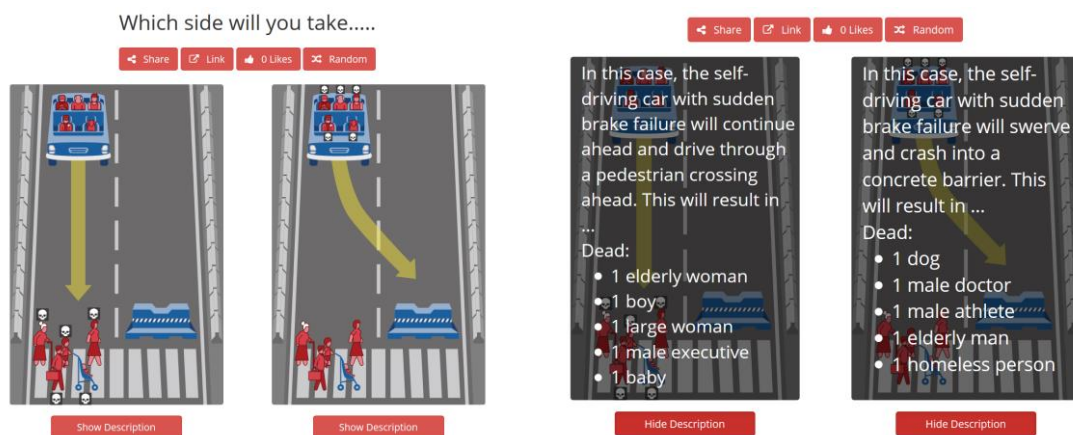
² Warnke, Philine; Schirrmeister, Elna (2018): Transition-scenarios towards socially sustainable global value chains. Insights from the SONA WSK Foresight. Working Paper Sustainability and Innovation.

fostering these reactions will be to gauge and understand a collective, future-oriented goal or a widely held sentiment, or set of sentiments, with respect to different aspects that drive each scenario. Scenario elements highlighted for use in the COCTEAU platform will have clear implications for policies being design and discussed today.

While not a direct correlation, the Moral Machine, is representative of such a series of interactions that COCTEAU could utilize to engage users. The Moral Machine project was developed to broaden the public conversation around autonomous machines by using the infamous 'trolley problem'³. Per its website: *"Recent scientific studies on machine ethics have raised awareness about the topic in the media and public discourse. This website aims to take the discussion further, by providing a platform for 1) building a crowd-sourced picture of human opinion on how machines should make decisions when faced with moral dilemmas, and 2) crowd-sourcing assembly and discussion of potential scenarios of moral consequence."*⁴

The essential mechanic of the Moral Machine platform is to present participants with two narrative paths, and ask them to select one (See Figure 1). The common premise of each situation is that a vehicle is travelling down the road, guided in part by an autonomous driving system. A 'situation' (or scenario) emerges in which an accident will occur resulting in some loss of life. How that accident evolves, and whose lives are lost, are contingent on the decision of the autonomous driving system. In a deviation from the traditional 'trolley problem' dilemma, the participant is asked to judge the actions of an autonomous driving system - which of the two paths serves the moral high ground?

Figure 1 - Images from the Moral Machine Interface showing the A/B decision mechanic and presentation of scenario description.



³ Awad, Edmond, et al. "The moral machine experiment." Nature 563.7729 (2018): 59-64.

⁴ <https://www.moralmachine.net/>

One of the prime drivers of the Moral Machine's success was the platform's simple mechanics - lending a more human centric design to approach a complex problem. By offering simple A/B selections to participants, cognitive energies can be spent with the moral dilemma presented, and not on interpreting user interfaces and alien procedures. This approach echoes UI concepts outlined in the FLUX3D method, and could be one approach to examining the mechanics of the COCTEAU system and the design of its information flow, user process, and interface⁵. This toolkit recognizes the need to engender empathic reactions from participants, though the authors recognize that envisioning futures empathetically remains a significant challenge.

The challenge of generating emotional and empathic reactions to images of the future has been critical to those developing and exploring the concept of experiential futures - a method that encourages multi-sensory 'experiences' of future scenarios as central to engagements with futures scenarios⁶⁷. In some instances this has meant the development of role-playing games⁸ and other modes of interaction developed around long term global futures as we have in TRIGGER (D5.2).

The Moral Machine project's use of the term 'scenario' is quite different from the way in which foresight and futures research often utilizes the term, and the understanding through which the TRIGGER 'scenarios' were developed. In the Moral Machine, the 'scenarios' are better understood as situations, a language that the project adopts in its own text, as the elements involved (people, vehicles, animals, infrastructure) have no exterior motivations or context - everything is condensed down to a single decision point within a situation. The TRIGGER 'scenarios' are best understood as sketches of *possible worlds*, and brief descriptions of some of the main actors and forces that animate those worlds. The TRIGGER scenarios are rich in possibilities for situations to emerge, but this requires further development and would be served by understanding the goals of the research being conducted. Developing a range of situations as derived from the TRIGGER scenarios is a process that can be served by utilizing the design approach deployed in the Moral Machine.

The Moral Machine was created to explore a critical design challenge within the development of autonomous driving systems - how should the system react to situations in which the loss of life is unavoidable (at least according to the assessment of the autonomous system)? This is a singular problem whose answers are best judged based on culturally rooted ethical and moral

⁵ Bas, Enric; Guillo, Mario (2015): Participatory foresight for social innovation. FLUX-3D method (Forward Looking User Experience), a tool for evaluating innovations. In *Technological Forecasting and Social Change* 101, pp. 275–290. DOI: 10.1016/j.techfore.2015.06.016.

⁶ Candy, Stuart. "The futures of everyday life: Politics and the design of experiential scenarios." University of (2010).

⁷ Candy, Stuart, and Jake Dunagan. "Designing an experiential scenario: The people who vanished." *Futures* 86 (2017): 136-153.

⁸ Bontoux, Laurent, et al. "The JRC scenario exploration system-from study to serious game." *Journal of Futures Studies* 20.3 (2016): 93-108.

stances⁹. In each designed situation, collective moral judgement coalesced with respect to cultural context of participants, particularly within the ‘Footbridge’ version of the trolley problem (See Figure 2 and 3).

Figure 2 - Graphic demonstrating an alternative version of the Moral Machine designed to explore the classic ‘trolley problem’ and how it can help show universals and variations in human morality. (Credit: Awad et al. (2019))

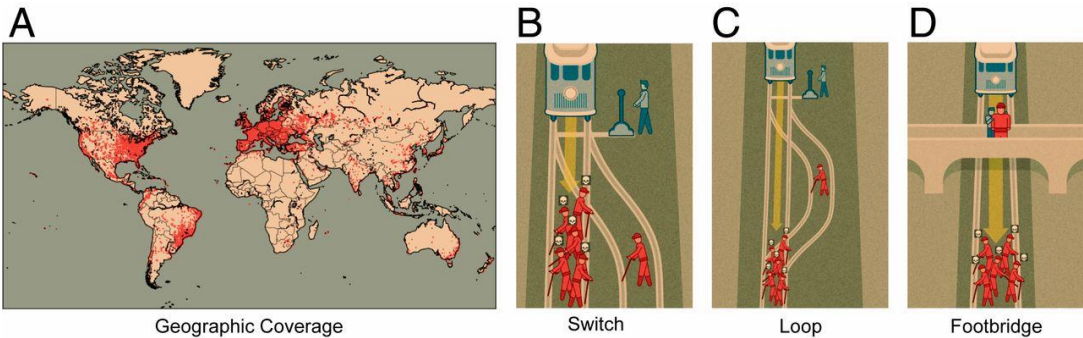
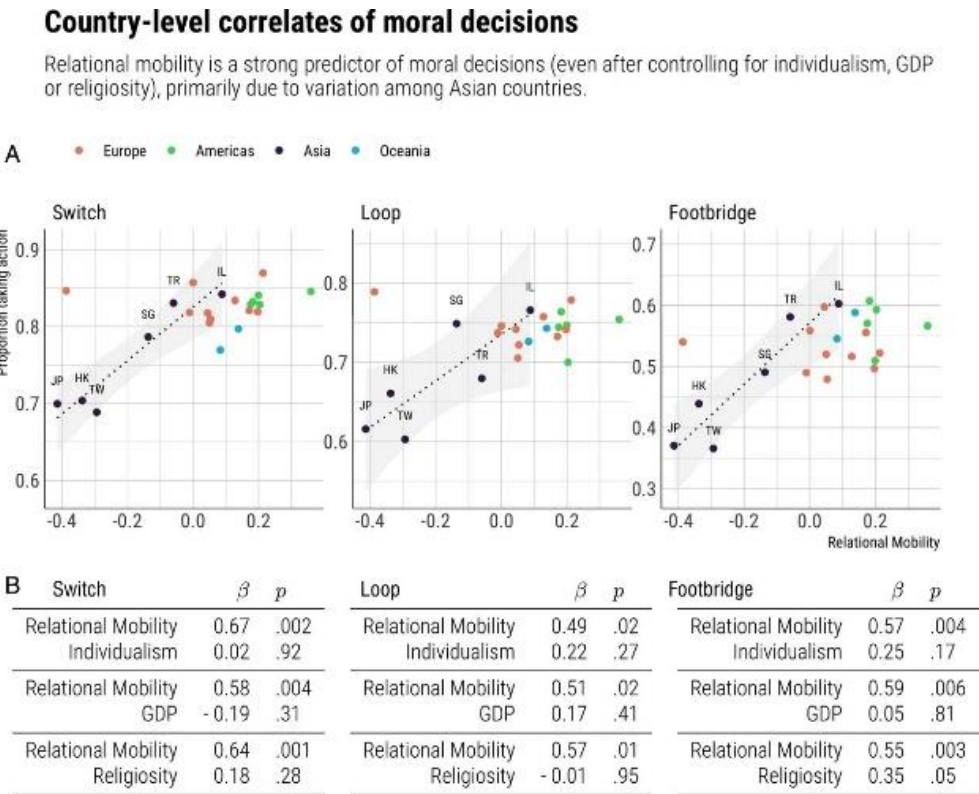


Figure 3 - A visual depiction of the data gathered from the Moral Machine examining relational mobility as a social indicator with respect to moral decision making.



⁹ Awad, Edmond, et al. "Universals and variations in moral decisions made in 42 countries by 70,000 participants." *Proceedings of the National Academy of Sciences* 117.5 (2020): 2332-2337.

1.1. Scenario Challenges

The divergence in each scenario is essential to their utility, with each world creating new circumstances in which actors must make decisions. These circumstances will often challenge user perceptions of how socially constructed systems function, both in the scenario's future, and in our contemporary times. Such topics and issues that are internal to the EU and its member states can be the basis of public policy dialogue regarding actions we take in the present that target specific social, economic, technological and environmental issues. However, some of the biggest challenges that our societies will face going forward emerge from global phenomenon and powerful external forces. Addressing these challenges - which are derived from issues in Global Health, Climate Change, Food Security, Potable Water Access, Social and Economic Equity, etc. - might encourage novel uses of policy, the creation of new governance institutions and bodies, and systemic change at the national, federal, and global level.

Such developments will undoubtedly affect the daily lives of all EU citizens, and it is here that COCTEAU is designed to function. COCTEAU, in providing interaction with diverse future scenarios, enables citizens to provide input on their anticipated reaction to change as new policy options, and governance structures, emerge in response to global challenges. Given the diversity and range of lifestyles within the EU member states, the challenges provoked by each scenario should be reflective of this scope, and should offer approachable inroads for a broad spectrum of EU citizens.

1.1.1. Scenarios and Future-oriented Challenges

The TRIGGER scenario set will encompass a wide range of global challenges, and various responses to those challenges. Some of these challenges will be shared across all the scenarios, while other challenges will emerge from developments that are unique to the individual scenario. At the time of this writing, scenario development has seen some common challenge areas emerge within each of the scenario worlds. These are challenges that the EU response would accelerate movement towards some scenarios and away from others. Potential EU responses are going to be further illuminated during the upcoming Digital Scenario Workshop Series (May-July, 2020).

For now, Common Challenge areas include:

1.1.1.1 Anthropogenic Climate Change and Biodiversity Loss.

Organizing a global response to these issues has become a central pivot point in each scenario. Responses include: a) EU formation of steady state or circular economy that is majority self-sufficient, b) EU becoming a focal point for ethical regulation and collaboration with developing

world nations, c) EU attempting, and failing, to rally global response to climate change, d) EU facilitating a move towards stronger private governance, with EU actors becoming influential nodes in global actor-networks.

1.1.1.2 Global Health and Social Cohesion

The COVID pandemic has created a new urgency around the issue of improving global healthcare services, and maintaining social cohesion through disruptions. Some challenges for global health include a) protection of private data, b) new safety nets for food/nutritional security, c) supply chains and logistics for medical supplies, d) information infrastructure for global health.

Some challenges from social cohesion include: a) defining and providing 'care for all', b) accounting for long-term impacts of economic disparity on access to quality social services (education, healthcare, unbiased protective policing, etc.), c) Understanding collective or community affects and emotional responses to internal and external disruptions.

We believe there will be many more challenges articulated during the upcoming scenario workshop series, as this topic was not originally selected in the factor prioritization activities of Fiesole.

1.1.1.3 Technological Use and Governance

Technological governance challenges include:

a) Setting anticipatory and adaptive policy and regulation, b) standards and platforms that encourage innovation and collaboration, c) combining technological innovation with 'circular economic' models regarding waste etc., d) EU as a pioneer of ethical design policy and regulation, e) EU losing competitive edge in innovation with brain and talent drain, cybersecurity issues, over-regulation.

1.1.1.4 Addressing Economic Disparities

Socio-economic challenges include:

a) divided access to various services (healthcare, digital, education), b) Unequal distribution of development opportunities, c) urban/rural divide in services and infrastructure, d) Rapidly changing labour market (automation, digitalization, 'off-shoring'), e) increasing disconnection between real economy, and financial markets, f) global economic slowdown due to COVID, g) mass unemployment, h) unrecoverable job losses, i) hobbled tourism and services industries.

1.1.1.5 Additional Factors

Crosscutting challenges include

a) hybridized threats (to territory, political process, trade disruption, etc.), b) Immigration and cultural diversification, c) destabilized international institutions (WHO, NATO, etc.), d) Acknowledging and continuing EU's role as leader in humanitarian aid, e) codifying values into policy, technology, and practice.



CHAPTER 2

**Macro Challenges:
Results from Digital Workshop Series**

2. TRIGGER Scenario Digital Workshop Series

Due to the circumstances of limited travel and mobility created by the COVID-19 crisis, the second series of TRIGGER scenario workshops were executed as a series of digital workshops occurring from June-July 2020. The first three components of the workshop series were focused on testing and expanding the scenarios that emerged from the Fiesole process, and were not explicitly designed to create COCTEAU ready challenges. During this same period, given the evolution of the COCTEAU platform and its integration into the larger TRIGGER online suite, our understanding of the needs for COCTEAU have also evolved.

It was for this reason that the final workshop was designed to enable a prototyping of how role-play might be employed as a primary mechanic of public engagement. As the scenarios are pointed toward an audience of policy makers and CSO leaders, the workshop created roles reflective of these future ‘users’ and asked workshop participants to discover and highlight the major challenges that each scenario presented to different actor groups. Each workgroup was asked to conduct these role-playing activities a) in pursuit of the achievement of one or more Sustainable Development Goals, and b) in line with their understanding of policy that would best benefit the goals of the role they inherited. Below we have attempted to consolidate those challenges according to both the STEEP+ framework, and within each of the four scenario worlds.

2.1. Scenario: EU Strong /Global Governance Fragmented (Diplomacy)

2.1.1. Challenges

2.1.1.1 Social

Building strong equal social services across the EU will be expensive for some.

Ensuring equal access to high standard potable water

Developing cultural understanding with EU neighbors (N and W African nations in particular).

Recognizing past exploitative behavior towards former colonies.

Social Equity during the Green Deal and fostering a Just Transition.

2.1.1.2 Technological

Investment in Decarbonization technological development.

Acceptance of AI technologies used for citizen access to civil and social services

Adoption of digital currency within EU and Neighboring Nations (expanded e-Euro zone)

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2.1.1.3 Ecological

Establish standards and regulations to preserve EU ecosystems and those of close neighbors.

Enhance decarbonization technologies

2.1.1.4 Economic

Develop and Support robust SME ecology in the EU

Sponsor development of light industry in N and W African nations, particularly with high environmental standards and regulations.

New markets in Neighbor Nations, focus on development for sustainable consumption.

Stronger economic competition from Pacific, ASEAN.

2.1.1.5 Political

EU commits to restitutional exchanges of technology and development funds based on colonial past...(the costs are distributed proportionally, but some EU members have little colonial past, while others cannot pay their debts)

Establishing effective citizen juries for dossier oversight

Changing geopolitical relationships (increased distance from Americas, increased threats from East).

Fostering internal EU cohesion through robust support for social services (and extending these offers later to Neighbors).

2.1.1.6 Additional

Confronting organized crime and emergent syndicates for evolving illicit exchange.

2.2. Scenario: EU Weaker /Global Governance Transformed (Governing with Gaia)

2.2.1. Challenges

2.2.1.1 Social

Social acceptance of digital credit system based on actions (similar to China's Social Credit System)

Citizen assemblies gaining influence and power over local decision making

'Smart' Communities model development

2.2.1.2 *Technological*

Addressing the demand of digital sovereignty in a highly globalized world

Developing and regulating human centric AI - enforcing regulation through appeals to ethics that can cut across cultural differences

Digital Agenda promoted by G7/G20 nations, but not necessarily other nations.

EU Blockchain adoption and observation/regulation.

Digital convergence in healthcare information coordination.

2.2.1.3 *Ecological*

Establishing and utilizing a Digital Twin of the Earth - Earth monitoring systems

Extreme energy intensity of Blockchain (DLT) based technologies - resource extraction and or heat management.

Tying local ecologies to global networks of exchange

Fostering citizen recognition of Ecological importance and organically shifting mindsets and behaviors.

Pursuing regenerative environmental policies that will have winners and losers.

2.2.1.4 *Economic*

Green Deal becomes overarching framework for EU funding - ensuring Just Transitions.

Shifting economic system to digital credits based on community actions and contributions

Localizing economic systems under the banner of Sufficiency

2.2.1.5 *Political*

Establishing and maintaining EU's role as a regulatory influencer (protecting a high moral/ethical stance).

Eroding nations states wont relinquish power over systems and services.

Organizing citizen-centered governance 'tribes' as critical nodes in private sector logistics networks.

Maintaining peace in a world ravaged by climate effects.

2.2.1.6 Additional

Data governance across technological and socio-political regulations in a world dependent on data collection.

Enforcing governance of those groups that traditionally exist in criminal or fringe enterprises.

2.3. Scenario: EU Weaker / Global Governance Fragmented (World Wide Gaps)

2.3.1. Challenges

2.3.1.1 Social

Fostering cross-cultural understanding and respect

Addressing the idea of free-riding behaviors

Gender imbalances remain an unaddressable topic in some cultures and regions.

Urban/rural divide intensifies radically

2.3.1.2 Technological

Digital and technological divide between urban and rural.

AI adopted for surveillance and sousveillance purposes

Cultural adoption (or rejection) of technologies is strong differentiator and market influencer.

2.3.1.3 Ecological

Addressing rapid shifts in ecosystem equilibrium

Uncoordinated, myopic implementations of geo.engineering.

2.3.1.4 Economic

Negotiations around extraterritorial jurisdiction and enforcement

Assuaging asymmetric shocks to economic, defense, and civil systems

Lack of agreement on taxation issues at international scale.

Privatization of international order

2.3.1.5 Political

Resurgence of old geopolitical tensions and conflicts

Deterioration of EU given social and economic disparities that tribalize European regions

Cultural turn in political organization, ideologies become parties

2.3.1.6 Additional

2.4. Scenario: EU Stronger / Global Governance Transformed (Reunited Nations)

2.4.1. Challenges

2.4.1.1 Social

Developing and ensuring social and service equity across the EU member states and citizens

Intilling Trust in EU institutions without destabilizing nation states.

Reinventing Healthcare and Education systems

Immigration and cultural acceptance

2.4.1.2 Technological

Defining and promoting 'responsible' AI/ML technological development - translating this into standards and regulations that are enforceable.

Focusing and policing research on genetic engineering

Coordinating Geo-engineering efforts to tackle climat change.

2.4.1.3 Ecological

Stabilizing and regenerating biodiversity

Science-based, strong enironmental regulations with capacity for increased global buy-in

Carbon tax administered by EU as opposed to memeber states.

2.4.1.4 Economic

Fostering transition to circular economic models to decrease waste and address environemntal impact

Encouraging investment and consumption at local or regional level

Return to multilateralism for trade

Building stronger trade ties to African Nations - Transformative relationship

EU/US joint approach to confronting growing Chinese influence

Development cooperation based on shared knowledge/infrastructure exchanges

Boosting SME ecosystems and channels for entreprenneurship

Harmonization of Tax rules

EU Web Tax

2.4.1.5 *Political*

EU focus on building and strengthening Internal citizen trust and support

EU leads critical mass of states endorsing UN power to regulate and enforce climate change policy at a global level.

EU policy promotes R&I collaboration with neighboring nations.

2.4.1.6 *Additional*

2.5. Translating Challenges into 'Everyday Life'

For the purposes of the COCTEAU citizen engagement platform, macro-level challenges that are identified within each of the scenarios will be translated into an 'experience' of what that challenges, and proposed solutions, imply with respect to their daily routines and lifestyles. This includes a more detailed look at issues like education, mobility, family and relationships, food and water, work and income, faith, culture, and other aspects of individual living. For the purposes of this document, we will term these 'micro-situations.'

Micro-situations are similar in function to the moral decision situations that are presented by the Moral Machine. They should attempt to provide participants with an overview of an assumed causal chain of events leading to a future scenario, much like the trolley problem variants (switch, loop, and footbridge (See figure 2)). However, there is a design challenge that confronts the COCTEAU team. Whereas the trolley problem presents the situation as closed and lacking context, the micro challenges will have to account for, or at least address, the uncertainty that exists between actions today and repercussions at some much further point in time. The problem explored by the Moral Machine is also contingent on the collapsing of context and uncertainty and that the situation presents¹⁰. Addressing future oriented challenges, wherein causal chains may be much more complex if they exist at all, will have to acknowledge the roles that context and uncertainty play in generating empathic responses to images of the future and the situations that inhabit them.

One approach to the translation of macro-challenges into micro-situations is through the creation of future persona - representatives of a particular future that can take familiar and unfamiliar

¹⁰ Jaques, Abby Everett. "Why the moral machine is a monster." University of Miami Law School: We Robot Conference, April. 2019.

aspects of the world and personify them¹¹. When elements of the present and speculative futures can be presented within a future persona, it can ease the acclimation of a user into that future world. This acclimation also allows for role-playing mechanics to facilitate user cognitive adoption of the world with avenues for emotional exploration of the effects and impacts of the macro policies that drive change for individuals lives and livelihoods. By exploring various social relationships through the avatar of the future persona (communities, organizations, exchange networks, etc.) a platform user can learn much about those possible worlds as viewed from an individuals perspective.

Furthermore, because these avatars are an infinite resource once those relationships have been developed, they provide the platform itself with vital data on sentiment, prospective actions, and other user generated interactions. Cross referencing different exploratory pathways that users choose within one or more future persona can be the root of analysis regarding users' latent future-oriented affective responses. Enabling functions for users to develop and alter future personas (creating new relationships for instance) could also be a useful way to understand how citizens in the present react and respond to radical macro-scale change.

A persona creation template would include such attributes as:

Table 1 - Future Persona creation template and example data

Attribute	Example Persona
Name	Juno
Demographic info (age, gender, race/ethnic identity, nationality)	39, Diverse, Mixed (Chinese/Swiss), Netherlands
Family Unit	Partner, 1 daughter, Partner's mother
Work	Restaurant Industry
Habitat	Urban Apartment
Mobility Modes	Public
Consumer Habits and Patterns	Vegan, 3R (Reduce Reuse Recycle)
Organizational Affiliations	Agnostic,
Recreational Activities	Gardening, Music, Math Games

This information could then be used to explore the manifestation of different macro scale challenges across one or more of the TRIGGER scenarios. Personas could inhabit multiple scenarios, though their relationships will have to be altered to cohere to the circumstances of each scenario. Allowing users to interact with the same personas, across multiple possible

¹¹ Rosa, Aaron Bronson. Distributed futures: Mixed-reality systems at the nexus of governance, experience and preferred futures. Diss. University of Hawai'i at Manoa, 2015.

scenario worlds, can be a powerful vehicle for generating emotional responses and building empathy for perspectives from those scenarios.

Personas in Situations

After developing personas, and adapting any personas that may be included in more than one scenario; the next important step is to create believable situations for them within the context of those scenarios. These situations should bring together elements of the persona with other facets of the scenario, creating a game-like challenge that users must navigate. A well designed situational exchange can host a number of emotional response moments (hope, anxiety, frustration, exuberance), all of which should be crafted to expand the users knowledge of the world, and the capacities that both individuals and systems have to take action in those worlds. Given the range of macro challenges in each scenario, the creation of even a single persona through which to navigate these scenarios produces a significant space of possibility for creating situations. Personas need not be 'futuristic' in and of themselves, but should tell a very personable story about the future through their daily-life interactions within each future.

By briefly expanding on the example persona described above, Juno, we can begin to see the dynamics at play in this process.

With respect to the macro-challenge of climate change - a challenge that each scenario world has addressed in different ways - we might have Juno's seemingly normal daily life interactions. Each interaction between Juno and the scenario are capable of reflect both the state of climate change, and the systems and policies in place and effecting Juno's choices. For instance:

Governing with Gaia: Juno's breakfast choice (vegan) is rewarded (network actors credits). Juno's work (bartender) is socially valuable and a focal point for intersecting communities. Juno's family life is challenging (multi-generational) but adequate (sufficiency is valued). *Example Situation: Juno must choose whether to spend credits to go on a long trip to see old university acquaintances, or save them for an upcoming public referendum concerning water infrastructure (likely to pass, but 'every credit counts!').*

or

- **World Wide Gaps:** Juno's vegan lifestyle is out of necessity and lack of reliable food sources. Juno's family belong to a number of enclave community hubs, though their ideological commitments are not very strong. They are primarily members for survival and for the sense of

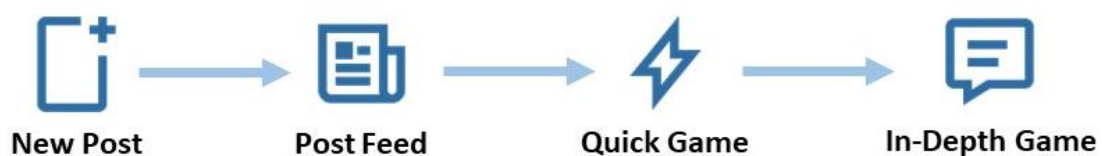
community. Juno's work provides a thin base on which the family persists. Juno occasionally acts as an information provider for various groups visiting the city, but is wary of the sometimes violent conversations overheard. *Example Situation: Juno overhears a plot to enact cyberwarfare against the city's water system, but knows the leader of the group very well through enclave meetings.*

These examples illustrate the concept of utilizing futures personas as mediums for relaying information about different scenarios, and hint at the rich and textured interactions such a system could provide for platform users.

2.6. COCTEAU User Experience and PERSEUS Integration

The COCTEAU development has been ongoing since the inception of the project, and has provided some advanced design documents that can help illustrate ties-ins between the TRIGGER world scenarios and the user interactions the platform will enable.

There are our primary modes of interaction that platform exhibits during the user experience (See Figure 1). Co-creation activities are engendered within the New Post zone - a process that enables users to add content for consideration by other users within one of the challenges. The collective user posts can be viewed in the Post Feed, and updated (and possibly community scored) stream of posts from the userbase. Quick Games can be activated in which a user engages in a series of questions and rankings regarding emotional responses to images that reflect the challenge being presented. In-Depth Games provide extended game play interactions, questions requiring more detailed and thoughtful responses. Both game play versions enable the users to collect a number of points based on responses and number of completed steps.



The presented user interaction flow enables a number of entry ways for future persona to enter into the user interactions. New posts could be designed as a process to help users design future personas - either reflective of themselves or wildly different from their real life. This would be a process similar to character personalization or creation flows that are frequently seen in games - a process that allows users to take ownership (and create a connection to) the game from the onset. Post Feeds would be moved to a later stage in the interaction flow, and the Quick Game

would be the type of onboarding process that gives users a 'playable' orientation to the platform. This could actually be a series of short games - each designed to introduce new element of the platform, and begin introducing each long-range scenario. Quick games should all be designed around a timeline of 5 to 10 years toward the four TRIGGER scenarios.

In-Depth Gaming could take players, and their future personas, through a 5 or 6 steps series of exploration interactions within each scenario. These interactions would be designed as critical situations for the persona within the context of that future. The situations would be designed to reflect the state of the world and the state of the persona, as each timeline progresses toward the world of 2050 outlined in Deliverable 5.2. In-Depth Game play would incentivize players to continue through the phases of scenario exploration by offering new ways to upgrade their characters, increasing point rewards, and options to garner social 'status' by sharing their accomplishments.

The Post Feed would then become an updating record of new user personas actively exploring and interacting with the challenges outlined in each scenario. This could be tailored to show information regarding peer-level users (advanced users see only advanced News), and would reinforce the social aspect of game play. Finally, users would also have the ability to start and play as multiple persona, once certain accomplishment thresholds had been attained.

What does this data of interactions have to do with the interests of policy makers, and the assessment of public sentiment and political affect with regard to both macro scale challenges of governance and the implications of policy for daily-life? Great Question.

The amount of future oriented data that such a platform would be able to collect (in a safe and anonymous fashion) can provide unique insights into the mindsets and future-oriented intentions of users. This platform would not be designed to have citizens direct input on policy, but would allow policy makers to assess how anticipated policy impacts might be received, and how that reception might provoke emotional responses and socio-political behavior changes. More importantly, this platform would enable policy makers to view how users empathically connect to the prospects that futures present. Since challenges offer the chance to find optimal solutions,

presenting the impacts of proposed solution within a designed, but very specific situational encounter within the platform, would allow for timely measurements of user sentiment.

Figure 4 - COCTEAU Memers interaction flow diagram



This data could be viewed within PERSEUS, in an easy to grasp aggregate form organized by initial macro-challenges facing the EU, and later populated by emergent challenges that policy makers face. Requests for new COCTEAU persona quests could be submitted by policy makers, and these new narrative branches could be offered to platform users quickly. With incentives and game mechanics already in place, the design and addition of new situations would be a relatively streamlined process.



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