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Game On: Foresight at Play with the United Nations

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Abstract

In recent years, the widespread growth in popularity of games and simulations within futures, broadly defined, designates a clear movement to utilize play as a strategy for engagement and learning. While more practitioners and researchers are using games and simulations, critical and reflective analyses of these platforms have not kept pace. This article provides an overview and examination of a foresight gaming system initially developed for the United Nations Development Programme. The tool was subsequently redesigned and deployed for various projects, which provides a unique opportunity to review the benefits and constraints of such approaches.

Introduction

As dynamic tools for engagement and substitutes for more traditional workshop approaches (Jungk & Müllert, 1987), games of various scale and scope have become increasingly popular within futures (Bontoux, Bengtsson, Rosa & Sweeney, 2016; Bok & Ruve, 2007; Daheim & Hirsch, 2015). Clearly, there is a shared sense amongst futurists that games "work," and increasing attention within the field is being paid to the assessment and outcomes of "experiential" approaches (Candy & Dunagan, 2016). Online games, specifically massive-multiplayer online role-playing games, have drawn greater attention and acclaim within and beyond futures, but, in recent years, card-based games have proliferated across the broader futures space. Popularity, however, does not correlate to efficacy and/or impact, and there is a continued need to analyze critically the constraints of such tools and approaches, their benefits both intended and unexpected, and how they can and might shape objectives and somewhat more serendipitous outcomes. This article seeks to remediate this gap by charting the development, design, and re-deployment of a card-based foresight gaming system initially created for the United Nations Development Programme (UNDP) in 2014. That the United Nations (UN) system commissioned a foresight gaming system is itself a testament to the normalization of games both within and beyond futures, and foresight is generally positioned as part of innovation programs and projects within the humanitarian and development sector.

The *foresight eXplorer* was first built for an event in Tonga but evolved for further engagements in fYR Macedonia and Montenegro.[1] Each project had decidedly different objectives and outcomes, and much can be learned from the strategies and tactics used in fashioning a card-based game to forge speculative insights for

policy, planning, and strategy development. In addition to mapping the mutation of the *foresight eXplorer*, this article reviews two recent card-based games to substantiate, as well as complicate, how such approaches can and might be effectively and efficaciously deployed.

A Tale of Two Games

In 2014, the Polar Learning and Responding: PoLAR Climate Change Education Partnership at Columbia University's Barnard College developed EcoChains: Arctic Crisis. The game focuses on helping players learn about interconnections amongst the Arctic's marine food system, the role of sea ice in maintaining a balance amongst different species, and challenges and changes to this landscape. Receiving funding from the National Science Foundation, the PoLAR Hub has made a concerted effort to assess the impact of its games—a requirement related to funding. In 2015, a small controlled experiment (n=41) was run to compare the learning gains between EcoChains and more traditional methods, specifically a "magazine-style" article featuring comparable content. Researchers sought to reveal which format (game versus article) would produce more robust outputs in a few key areas:

1. Knowledge of Climate Change and the Arctic Region
   - Does the educational approach affect immediate gains in knowledge and longer-term retention of knowledge?
   - Does the educational approach affect self-assessments of learning and gains in knowledge?
2. Attitudes and Beliefs about Climate Change and its Impacts
   - Does the educational approach affect attitudes toward climate change, the Arctic region, and humans' role in and responsibility for climate change and the Arctic region?
3. Information-Seeking Behaviors
   - Does the educational approach affect engagement and motivation to engage with climate change information and resources?
4. Systems Thinking
   - Does the educational approach affect level of systems thinking about the Arctic region and ecosystems?
5. Impressions of and Engagement with the Intervention Experience
   - Do level of engagement with and/or enjoyment of each educational approach differ?
   - Does level of engagement with the educational approach affect knowledge, perceived knowledge, attitude, behaviors and systems thinking? (Pfirman, Lee, O'Garra, & Bachrach, 2015).

In addition to a follow-up survey carried out four weeks after the experiment, participants were also given questionnaires and a mapping exercise to complete.

According to the results, game players demonstrated greater and more diverse subject matter recall than those who simply read the article, which is to say that the game led to greater understanding of the content (Pfirman, Lee, O'Garra, & Bachrach, 2015). Game players also showed more attachment to the subject matter, which is evidenced by a clear majority stating that they had an increase in knowledge about how they might personally and individually help protect the Arctic region. Interestingly, while the game created more engagement and learning, it did not surpass, or equal, the article in fostering systems thinking. The team behind EcoChains postulates that this somewhat surprising outcome has much to do with the variable nature of content that arises during gameplay—a challenge not uncommon with games designed as substitutes for workshop exercises. For many in the futures field, however, this might raise an eyebrow as many, if not most, contemporary futures methods invite, if not necessitate, a systems thinking approach. What can and

should be learned from this outcome? Can table and card games be designed to allow for serendipity as well as focused learning?

In 2014, the European Commission's Joint Research Center (JRC) inaugurated its Policy Innovation Lab by creating a serious game. The JRC's Scenario Exploration System (hereafter JRC SES) was built as an engagement tool for a scenarios project on moving toward a sustainable EU by 2035. Conceived as a "foresight gaming system" and built upon the 2X2 matrix method, the JRC SES walks players into alternative futures scenarios by staging a series of actions and challenges organized by rounds with varying time horizons. Unlike EcoChains, experiencing, and co-creating, a possible future is an explicit aim of the game, which uses role-play to locate players within four alternative futures. As with EcoChains, pre-existing content, specifically a set of scenarios, was utilized to guide the development process, which was convened collaboratively between experienced foresight gaming system designers and JRC staff. As of Summer 2017, the JRC has run dozens of sessions and repurposed the game for multiple projects. Based on post-session surveys and interviews with players, the JRC SES's designers concluded that: "the game has found a satisfactory balance between giving sufficient information and keeping some complexity from reality, keeping a sufficiently high pace and introducing game dynamics for fun and creativity" (Bontoux, Bengtsson, Rosa, & Sweeney, 2016, p.105).

While much of the feedback on player experience was positive, the game's creators call attention to the challenges surrounding time, specifically the length of play and how this can affect learning outcomes. They explain, "It was clear that in cases where there was limited time after the game had finished, players often didn't fully understand the process and the effects of what they had just gone through" (Bontoux, Bengtsson, Rosa, & Sweeney, 2016, p.105). As with more traditional workshop exercises, especially those involving post-it notes and large sheets of paper, time and pacing are significant issues surrounding the use of board, card, and table games. What both EcoChains and the JRC SES make clear is that games usher in a host of benefits and constraints that necessitate different framings—attentiveness to form as much as content—to achieve a successful engagement.

In looking at both EcoChains and the JRC SES, one can see that many of the challenges of moving participants through workshop exercises are common, if not enhanced, when using games. Perhaps the greatest difference between more traditional methods and games is the intentional utilization of play as a means to foster creativity and enhance futures thinking. It has been suggested that games and simulations are well suited for action research and learning, especially how "social-technological systems work and how to manage them" (Bok & Ruve 2007). Although there is great debate, and much suspicion, about the degree to which complex systems can and/or might be "managed," games as an action research method, specifically as an "embodiment of democratic principles in research," are clearly important for those continuously seeking to "democratize" workshop spaces and challenge participants to explore futures experientially (Carr & Kemmis 1986, p.64). The impulse to democratize workshops and the overarching need to foster experiential explorations of futures, even within a relatively short period of time, are the two axioms that led to the design and subsequent redevelopment of UNDP's *foresight eXplorer*.

Tonga *foresightXchange*

In recent years, the United Nations (UN) system has implemented an aggressive effort to deploy futures and foresight as part of its overall innovation agenda. One of the groups leading on this approach within the UN system is the United Nation Development Programme's Global Centre for Public Service Excellence (GCPSE), which is a jointly funded initiative with the Singapore government focusing on innovation within the civil service.[2] In June 2014, I was contracted to lead the Tonga *foresightXchange*—a joint venture between the Prime Minister's Office, Government of

the Kingdom of Tonga, and UNDP, led by GCPSE, with logistical and financial support from UNDP in Tonga, the UNDP Pacific Centre, and UNDP's Innovation Facility.

The 2014 Tonga *foresightXchange* was made up of three connected events:

1. Public event held on 19 Aug 2014 in Nuku'alofa featuring an introduction to strategic foresight, futures literacy and an array of foresight tools, namely the *foresight eXplorer*;
2. Private event for the Government of Tonga held on August 22, 2014 in Nuku'alofa providing an overview of the results from the public event; and
3. A side event at the Third United Nations Conference on Small Island Developing States (1 September 2014 - Apia, Samoa) with presentations from His Excellency the Prime Minister, Lord Tu'ivakano; Helen Clark, UNDP Administrator; Masagos Zulkifli, Senior Minister of State (Foreign Affairs and Home Affairs), Singapore; and Dr. Jim Dator, Emeritus Director, Hawaii Research Center for Futures Studies.

On Tuesday, 19 August 2014, the first, and largest, event of the 2014 Tonga *foresightXchange* took place in Nuku'alofa—a workshop for 100 citizens to imagine their preferred future for Tonga. Once word spread about the event, attendance ballooned to somewhere between 110-130 participants. The theme for the event focused on shifting a predominant narrative: "From Small Island Vulnerability to Big Ocean Prosperity," and this served as an aspirational vision, and overall guide, for the day.

In preparation for our mission, which was the first time in country for almost everyone, our team was put into contact with a local facilitator whose primary task was to offer insights as to how we might best engage participants and localize our processes. During one of our team calls, we were told that the Planning Ministry often conducts consultations with rural villages and remote island communities, but this process is often informal and limited in scope. Seeking to disrupt this dynamic while also fostering an engaging space for cultural and traditional content to emerge, the *foresight eXplorer* was designed to help participants imagine their preferred values, behaviors, and structures for Tonga's future.[3] The tool uses a hex-based design to emphasize connections while also providing a clear constraint—as it is only possible to make six connections per card.

Participants could either select predefined cards or enter their own content in each category, and many groups generated content in Tongan using blank cards, which were made available in all categories. Participant-generated content was integral to localizing the overall process, especially as all of the game cards were printed in English only—an extremely unfortunate result of the project's rather short lead-time. After connecting values (such as democracy, integrity, honesty, religion, etc.), behaviors (such as kava ceremony, gift-giving, policy-making, interisland commerce, etc.), and structures (government ministry, education system, community council, monarchy, etc.), participants added both challenges (such as Extreme Weather, Resource Scarcity, Sea Level Rise, Inequality, etc.) and opportunities (self sufficiency, innovation, shifting gender roles, research, etc.) to provide more depth and complexity.

Additionally, participants were asked to create "wild cards," or emerging issues as a way of concluding the game and as a setup for the next exercise, which focused on narrative development through a persona. In Figure 1, one can see how participants used the *foresight eXplorer*, which also included a board to direct play. Additionally, all of the content created during this table's session has been transcribed below.

Figure 1. Snapshot of a Completed Board

- Values: Democracy, Health, Tradition, Integrity, Honesty, Prosperity, Family, Religion, and Decolonization.
- Behaviors: Observe Holy Days, Kava Ceremony, Sports & Exercise, Following Laws, Child Rearing, Job Creation, Gift Giving, Policy Making, and Inter-island Commerce.
- Structures: Education, Healthcare, Parliament, Military, Government Ministry, Internet & Telecom, Executive Branch, Land Tenure, Tourism, Community Council, Monarchy, Judiciary, and Education.
- Challenges: Sea- level Rise, Inequality, Cultural Change, Extreme Weather, Energy Dependent, Corruption, Economic Downturn, Aging Infrastructure, Resource Scarcity, Brain Drain, and Migration.
- Opportunities: Self Sufficiency, Prosperity, Shifting Gender Roles, Security, Equality, Research, Innovation, and Work & Life
- Wild cards: Civil War, Epidemic, Strike, and Tsunami.

Feedback from participants and observers indicate that the public workshop was well received, and this likely has as much to do with the open nature of gameplay as much as the content. In short, players build a scenario as a mosaic—one where complex relationships and interconnections are visualized directly in front of them.

Pre-created content for the game was developed in consultation with UNDP and its government partners, and one of the key questions that arose during this process was whether or not to include Tonga's four core values: Fefaka'apa'apa'aki (mutual respect); Feveitokai'aki (sharing, cooperating, and fulfillment of mutual obligations); Lototoo (humility/generosity); and Tauhi vaha'a (loyalty/ commitment). These are closely associated with the nobility, and although Tonga has made great strides to democratize, it continues to be a highly striated society. The decision to omit these values was predicated on the hypothesis that such an interjection might lead to performative responses, which is to say that we did not want participants to choose values they thought should part of Tonga's future but rather those they wanted to define a preferred vision. The top three values used during the event were prosperity, family, and health. This result validates our decision not to include the core values and speaks directly to the often complicated and contentious means by which futures are imagined by citizens.

Each group was assigned a minimum of one facilitator, and many groups had two—one proficient in Tongan and another with experience facilitating foresight exercises. All groups worked at their own pace during the 90-minute session, but only three created and placed wildcards, which was the final stage of play. One of the primary challenges related to using the *foresight eXplorer* is data capture. Unfortunately, high-quality images of each board were not taken, which means that some details were invariably missed.

Results from the public event were collected and reported directly to the government during a private session with the Prime Minister and his cabinet. This content was also put forward at the Small Island Developing States Conference held in Samoa later that year. While the response to the event and the outputs from it were well-received, the *foresight eXplorer* was not institutionalized or re-deployed as a means of public engagement, although an updated Tongan-language edition was produced shortly after the public event. As an instrument for engaging citizens, the *foresight eXplorer* appears to have been an effective workshop tool for harvesting local insights. Although there was no post-event survey, both GCPSE and its government partners directly expressed their overall satisfaction with the engagement. As for participants, four of the seven editions of the *foresight eXplorer* were "lost" at the public event, which suggests that some attendees found value in the tool.

Water for Life

Based on the strength of the Tonga *foresightXchange*, I was again contracted through UNDP to lead a foresight engagement focusing on the development of a strategy for water management in the Strumitsa river basin in southeastern fYR Macedonia. Framed as an "enhanced survey tool" to ease concerns about the tool's aim and purpose, the *foresight eXplorer* was substantially redesigned to suit the local context and specific needs of the Water for Life (hereafter W4L) project, which was comprised of three series of events:

1. A prototyping session held in Skopje on October 14, 2014;
2. 10 multi-stakeholder workshops held in each of the region's six municipalities from October 15 – December 12, 2014;
3. A final event to report W4L results held in Strumitsa on December 15, 2014.

The aim for each multi-stakeholder workshop was to generate insights and data on the key challenges and opportunities surrounding the Strumitsa region. A local firm facilitated all W4L workshops in Macedonian, and simultaneous translation was provided for the final event. Workshops were organized in both rural and urban municipalities, including Bosilovo, Konce, Novo Selo, Radovis, Strumitsa, and Vasilevo. In total, 210 citizens attended one of the workshops, and 83 citizens, including participants from many of the workshops, came to the final event. At every workshop, all groups completed a scorecard after each round of play leading to 397 unique entries from 84 gaming sessions (two per group) run during the 10 workshops.

Although the W4L *foresight eXplorer* used the same basic model for play (hex cards organized by category placed in a specific order), significant changes were made to the surrounding workshop structure as well as elements of play specifically related to data capture. To support data capture, facilitators took photos of each round of play for all groups in each workshop, and all workshop data was made publicly available in both Macedonian and English. In stark contrast to Tonga, players used the tool twice during a half-day workshop. In the first session, players were asked to work collaboratively building mosaic scenarios on the challenges of today. Key prompts for this session were:

- What Challenge will have the most impact on the Strumitsa River Basin today?
- Which Action best fits with one of the Challenges?

- Which Resource most relates to the Challenges and Actions in play?
- Which Stakeholder is most impacted by the Resource or can act to solve the challenge using a specific Resource?

After a short break and a brief presentation on "futures literacy," players were asked again to use the *foresight eXplorer* focusing instead on 2020. Key prompts for this session were:

- What Wild Card do you think will have the biggest impact on the Strumitsa region in 2020?
- What Opportunity do you think can have the biggest effect on the Strumitsa region in 2020?
- What Resource do you think is most critical to a Stakeholder & Action relationship in play?
- What Challenge best connects with the other cards in play?

One of the biggest shifts from Tonga to fYR Macedonia was the introduction of tokens, which generate another layer of data. Players were asked to weigh cards using tokens during each round of play, and this dynamic led to content that reflects localized concerns and insights. For example, "Evacuation of Local Population" was a participant-generated card created in the Opportunities category. It emerged three times in three different workshops (Bosilovo, Novo Selo, and Strumica C), and received weightings of 6, 7, and 10 on a scale of 3-12 (minimum to maximum). Although this card did not have a high frequency throughout many workshops, the strength of its weighting, as well as the fact that it came up in three different workshops, demonstrates its significance. Further detail surrounding this particular example helps to frame how token weighting leads to more complex and contextualized outputs, which further strengthened the tool's overall efficacy as a means of engaging citizens. In the Bosilovo workshop, the wildcard played just before the Evacuation of Local Population was Turia Dam Destruction. In the Novo Selo workshop, the Wild Card played just before the Evacuation of Local Population was Ilovica Mine. In the Strumica C workshop, the Wild Card played just before the Evacuation of Local Population was also Ilovica Mine. During the Water for Life project, the Ilovica Mine was under construction, and its looming presence clearly had an effect on how citizens imaging the future of the Strumitsa region. While the Ilovica Mine was expected to have an immense financial impact on the region by creating jobs, results clearly show that citizens were concerned about its potential environmental impacts.

To help make sense of the workshop data, a number of social network analysis visualizations were created to showcase the relationships between urban versus rural municipalities, category-centric results, and workshop-centric data emphasizing foresight explorer session, which have been separated by time horizon (2014 versus 2020). In Figure 2, the center of each network has either the Urban or Rural node. Additionally, the color of each line corresponds to card category: actions (yellow); challenges (green); opportunities (light blue); resources (blue); stakeholders (purple); and wild cards (red). The thickness of each line corresponds to token weighting: Urban (Radovis A & B and Strumitsa A, B, C, & D) were scaled 3-10 while Rural (Bosilovo, Konce, Novo Selo, Vasilevo) are scaled 3-12. The top number represents the highest number of tokens played. As with all official reports, images were produced in both English and local language, and the raw data sets were also made available to make outputs, as well as the overall project, more transparent.
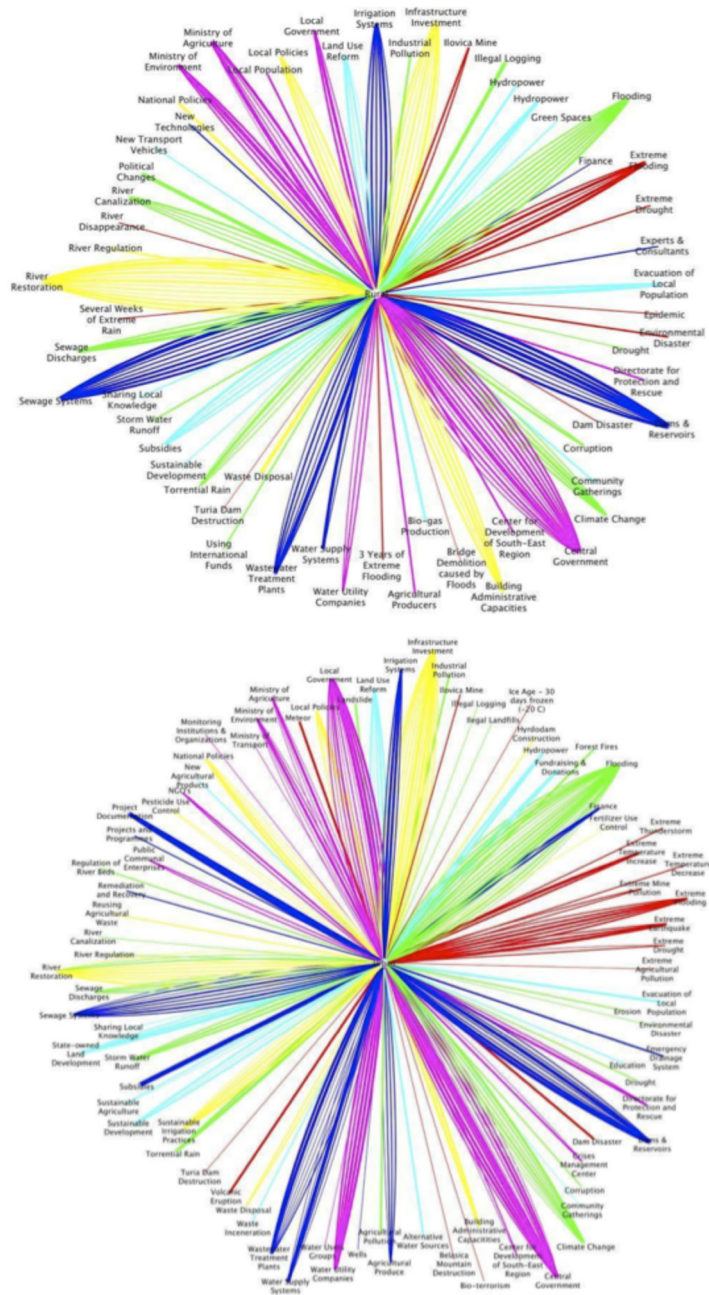
Figure 2. Visuals Created Based on Data Outputs

As an enhanced survey tool emphasizing collaboration and discussion amongst multi-stakeholder groups, the efficacy of the *foresight eXplorer* clearly lies in its deployment as a facilitated workshop exercise. The degree to which it operates as an actual "game" is relative to the degree to which one emphasizes the win condition, which seemed unimportant, if not completely irrelevant, to workshop participants. For this project, data capture remained a significant obstacle, especially given the complexity of the outputs, but the scorecard system and close facilitation

worked well enough to harvest card data. There were, however, a few challenges. Facilitators took digital photos of each group at each workshop, but many were difficult to read, which speaks to continued challenges around design. Content for the W4L *foresight eXplorer* was adapted from the European Commission's programme of measures for water management, which was overly technical for some participants. The degree to which one utilizes technical or more general content to build out a game such as the *foresight eXplorer* raises a significant issue surrounding customization and localization. As there has never been a generic version of the tool, the process for getting the content and gameplay dynamics right ought to been seen and understood as an iterative and experimental undertaking.

UN Montenegro

The United Nations Development Assistance Framework (UNDAF) is a five-year planning document designed to bring together agencies and their government partners to meet local needs more efficiently and collaboratively. The UNDAF provides an opportunity to mobilize resources and identify key areas for projects and programs as well as create clarity for donors. Each UN country office must engage in lengthy process to produce its UNDAF, and this entails extensive citizen engagement. Based on the strength of the Tonga and fYR Macedonia projects, UN Montenegro was awarded funding through the United Nations Development Group (UNDG) to use a foresight approach as part of its UNDAF development process. As the lead consultant on this project, I suggested using the *foresight eXplorer* tool. On June 15-16, 2015, UN Montenegro hosted two events for Youth and Experts with over 40 attendees from the private sector, NGOs, academia, and the local community featuring the tool.

These new voices workshops featured a fully localized *foresight eXplorer* designed with content from post-2015 consultations, a human rights-based approach, the Sustainable Development Goals (hereafter SDGs), and preliminary data from the Country Analysis, which is a report that provides an overview of country-level data on key social and economic indicators. Focusing on prioritization and localization, Montenegro's *foresight eXplorer* was developed to provide a mechanism for workshop participants to identify the key trends and emerging issues shaping Montenegro's future. Similar to previous engagements, the tool used a simple pattern of placing cards and tokens to facilitate a discussion on opportunities, challenges, actors, actions, values, and "jokers" or emerging issues. Pre-defined content was provided for each category except for "jokers," which were entirely participant-generated. As with other versions of the *foresight eXplorer*, participants were also given the option to utilize blank cards during each round. In contrast to the fYR Macedonia version, token weighting was shifted to focus on two dynamics: likelihood and preference. Participants placed a token on cards to visualize likelihood (red - extremely, amber - somewhat, green - not very) or preference (purple - very, blue - somewhat, white - not very) during each gameplay session.

The morning session for each workshop focused on Montenegro's "Likely" future to 2021 while the afternoon centered on a "Preferred" future for Montenegro to 2030. These dates aligned with the end of the UNDAF (2021) and the SDGs (2030). For the morning session, participants began by placing opportunities, challenges, actors, actions, values, and "jokers" or emerging issues, but for the afternoon session, the order was changed: values, opportunities, actors, actions, "jokers" or emerging issues, and challenges. This was done to reinforce the importance of values as a starting point for imagining a preferred future. Over 480 unique data points were generated by the two workshops. Data capture was completed through 1) participants, who were given sheets to record their card placements, token values, and details for each card; 2) table facilitators, who noted card placements and tracked significant points of discussion; and 3) the workshop facilitator, who recorded card placements and token values.

Figure 3. Montenegro Foresight eXplorer in Action

Figure 4 visualizes all of the opportunity (green), challenge (red), actor (amber), and value (blue) cards placed by participants. Using the same color system as the cards, this image uses the workshop (Youth Voices and Expert Voices) as center points to show the relations and connections between the four main categories. Looking at the bottom of the circle, which is sorted alphabetically, one can see that Youth was one of the most popular cards, and it was used as both an Opportunity and Actor during both workshops, which demonstrates the overall emphasis on Youth that emerged during both workshops. Expert Voices, whose attendees were mostly over 30 years old, were more likely to see Youth as an Actor.
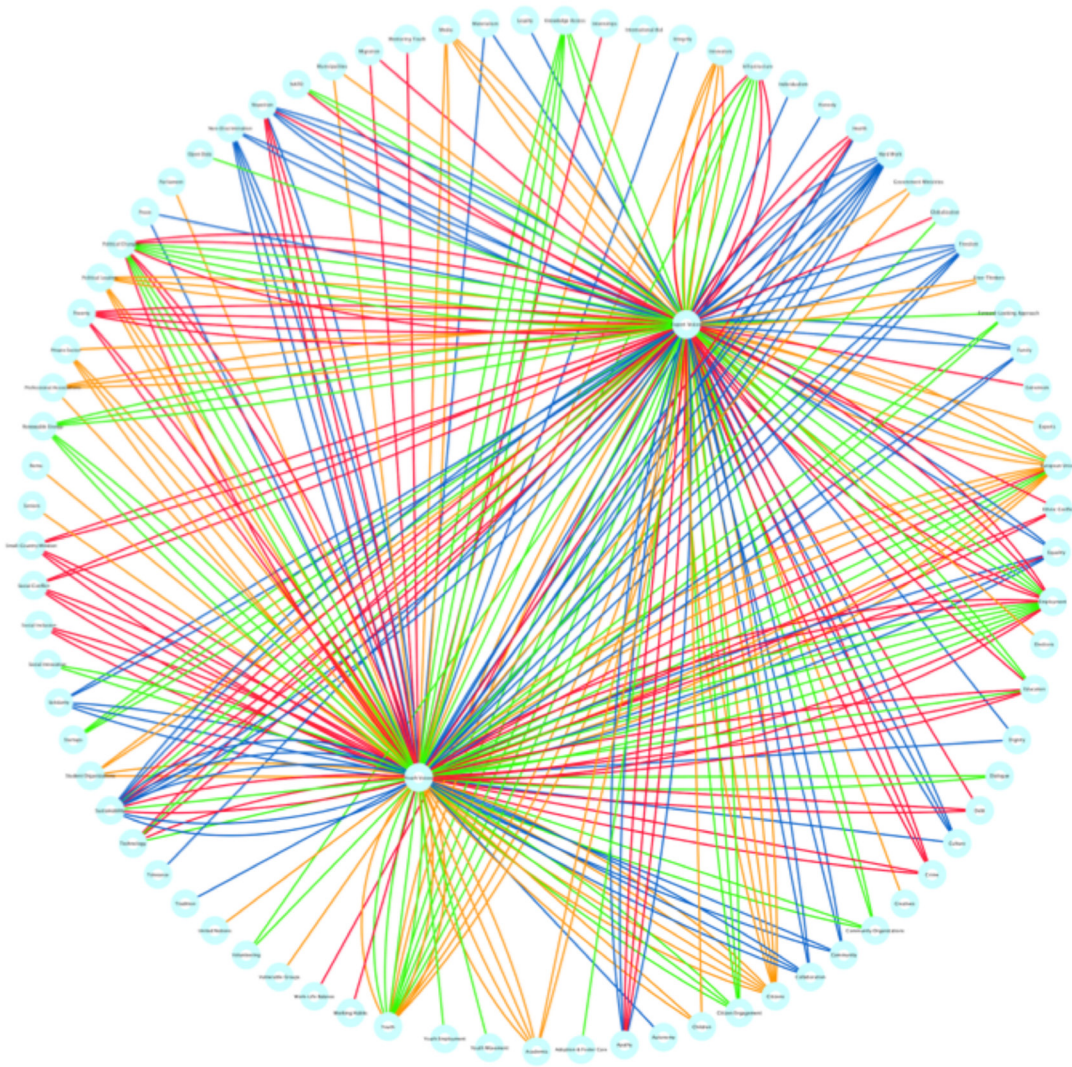
Figure 4. Visual Created to Display the Foresight eXplorer's Complex Data Outputs

Capturing the depth and complexity of the conversations at each table was a challenge, even with a facilitator for each group. The pacing between groups was quite different, and although each group was given 45 minutes to complete the facilitated exercise, some finished early while others needed have used more time. On the whole, groups who had a more hands-on facilitator appeared to finish the exercise with time to spare. Overall, feedback from both workshops was positive, and about half of all participants completed a post-workshop survey. When asked whether the tool was useful for thinking about the challenges and opportunities of Montenegro's future, 47.8% strongly agreed and 26.1% agreed. When asked if the *foresight eXplorer* was useful for promoting equitable dialogue on Montenegro's future, 47.8% strongly agreed and 17.4% agreed, but 21.7% disagreed. When asked about whether the tool provided content that reflected real-world challenges, opportunities, actors, actions, and values, 39.1% strongly agreed and 30.4% agreed. Based on the above results, it is clear that the *foresight eXplorer* was, for the most part, seen as an effective and efficient tool for engagement. During the life of this project, other tools, including

scenarios and backcasting, were used with both citizens and government, and outcomes from the *foresight eXplorer* engagements provided core content for these methods, which shows how the tool can be deployed as a means of prioritizing and localizing content for additional approaches. UN Montenegro's efforts using foresight, and the *foresight eXplorer* in particular, were highlighted in a research paper commissioned by UNDG on how UNCTs might use foresight and alternative futures as part of the UNDAF process (Tully, 2016).

Game On

Building on decades of experience shaping the field, Sardar defined futures as "the art of anticipation based on the science of exploration" (Sardar & Masood, 2006, p. 67). Earlier in the same piece, Sardar observed that "experimentation is not a possibility in futures studies" (Sardar & Masood, 2006, p. 67). Although he was clearly alluding to the recalcitrant temporality of the future (as a time and place that has yet to come), futures is, first and foremost, about images and imaginings of the future, which shape perceptions about what is and is not possible from the here and now. From this perspective, games and simulations offer a hands-on means by which to experiment *with* (rather than upon) the future of futures. Indeed, various types of games and simulations, which have been used by futurists and others in and around the field for decades, embody some of the core tenets and long-standing practices of futures: systemic, yet playful, inquiry; engaged and collaborative curiosity; and anticipatory action learning through experiential approaches.

The design and redevelopment of the *foresight eXplorer* for multiple projects in differing contexts constituted an intensive exercise in localization--an aspect that is necessary for any successful futures engagement and a critical dimension to contemporary development and humanitarian aid practices (Bonacker, von Heusinger, & Zimmer, 2017). As a tool for dialogue and exchange, the *foresight eXplorer* definitely requires time and resources to adjust, particularly with regards to gameplay dynamics and content. This, perhaps more than anything else, is one of the greatest benefits and constraints of this tool in comparison with more traditional workshop methods. The processes of localization and customization, which were always done in conjunction with UN colleagues, becomes an important outcome of using the *foresight eXplorer*. Shared learning about how to engage citizens using foresight and games was done collaboratively and emphasized the necessity of prototyping. This insight was clearly taken to heart in both fYR Macedonia and Montenegro, who both redesigned and redeployed the *foresight eXplorer* for additional projects.

The evolution of the *foresight eXplorer* demonstrates the ways with which games and futures can be integrated and utilized together as effective tools for engagement and learning across multiple contexts. As the complexity of the tool, as well as the data it produced, has mutated over the years, one thing has remained constant: the need for continuous iteration and experimentation. What began as a simple card-based exercise morphed into a foresight gaming system designed to generate a range of complex outputs and outcomes. The degree to which the *foresight eXplorer* democratizes workshop spaces has much to do with the local context as it does with the design of the tool itself. In Tonga, turn-based play was an asset for complicating local cultural dynamics. In fYR Macedonia, the addition of tokens for weighting was integral in making the tool more dynamic and generating complex data outputs. In Montenegro, the *foresight eXplorer* was a key element amongst other methods that dramatically enhanced the planning process resulting in the adoption of the UNDAF in 2016.

As a futurist, games have become an essential and irreplaceable part of my repertoire. There has certainly been projects where a game, or enhanced survey tool, was not the right fit for a client's intended aims and outcomes, and given the current appetite for such approaches, talking someone out of making a game is not always an easy task. Indeed, one necessity of the ongoing "gamification" trend has been to meet enthusiasm and interest with critical and reflective insights on what games

and simulations can and cannot do, although I remain surprised at the creative and dynamic ways with which such approaches continue to flower and bear fruit (Morris, Coker, Zimmerman, Gill, & Romig, 2013). Whether one is seeking a new way of engaging workshop participants or finding an innovative means to deliver custom learning outcomes, foresight gaming systems have proven to be an effective tool for amplifying "plurality, diversity and multiple perspectives, which "are essential for understanding and steering through postnormal conditions" (Sardar 2016). As with any other method, games must continuously be localized, customized, and hacked to create more hopeful, decolonized, and egalitarian futures on a variety of scales. Game on.

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Endnotes

1. The collaborative insights and design contributions of Dr. Aaron B. Rosa, who also participated directly in Tonga, was invaluable on all of these projects.
2. The Global Centre for Public Service Excellence recently launched the Empowered Futures Initiative (EFI), which focuses on the application of foresight methods and tools to strengthen the capacities of public service. GCPSE has made many reports on its work, including the Tonga foresightXchange, available here: https://issuu.com/undppublicserv/stacks/0e148acc085840398d ef6044467bb756.
3. Dr. Jim Dator, who directed the Hawaii Research Center for Futures Studies for over 40 years, developed the values, behaviors, and structures framework as a means for teaching governance design. For more on his work in this area, visit http://futures.hawaii.edu.

References

Bok, B. M., & S. Ruve (November 2007). "Experiential Foresight: Participative Simulation Enables Social Reflexivity in a Complex World." *Journal of Futures Studies* 12, no. 2: 111–120.

Bonacker T., J. von Heusinger, & K. Zimmer (Eds.) (2017). Localization in Development Aid: How Global Institutions enter Local Lifeworlds. New York: Routledge.

Bontoux, L., D. Bengtsson, A. B. Rosa, & J. A. Sweeney (March 2016). The JRC Scenario Exploration System - From Study to Serious Game. *Journal of Futures Studies 20*, no. 3: 93-108.

Candy, S., & J. Dunagan (2017). Designing an experiential scenario: The People Who Vanished. *Futures* 86, 136-153.

Carr, W., & S. Kemmis (2004). *Becoming Critical: Education, Knowledge, and Action Research*. New York: Taylor & Francis.

Daheim, C., & S. Hirsch (October 2015). Emerging Practices in Foresight and Their Use in STI Policy. *Science, Technology, and Innovation Policy Review* 6, no. 2: 24-53.

Jungk, R., & N. R. Müllert (1987). Future Workshops: How to Create Desirable Futures. London: Institute for Social Inventions.

Morris, B. J., S. Coker, C. Zimmerman, D. Gill, & C. Romig (September 2013). "Gaming science: the 'Gamification' of scientific thinking.' *Frontiers in Psychology*. Volume 4, 1-16.

Pfirman, S., J. Lee, T. O'Garra, & E. Bachrach (2015). Better retention through game-play - Eco-Chains: Arctic Crisis card game. Presentation at American Geophysical Union Meeting.

Sardar, Z. (2015). Postnormal times revisited. *Futures 67*, 26-39.

Sardar, Z., & E. Masood (2006). *How Do You Know? Reading Ziauddin Sardar on Islam, Science and Cultural Relations*. London: Pluto Press.

Tully, C. (2016). Applying foresight and alternative futures to the United Nations Development Assistance Framework (UNDAF). Retrieved on June 8, 2017, from https://undg.org/document/applying-foresight-and-alternative-futures-to-the-united-nations-development-assistance-framework/