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OPEN LETTER

Developing Inclusive Community Platforms: A Catalyst for DEI Community

[version 1; peer review: 1 approved, 2 approved with reservations]

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Abstract

Developing inclusive communities is important to enhance individuals' well-being yet this brings the challenge of actively engaging and leveraging the diversity of residents in communities. Such significant social challenges are prominent in Japan, a focus of this article, as the most advanced aging society in the world and thus relevant to European and other countries. This paper explains a major government initiative that takes an innovative approach through leveraging a social technology, a Digital Twin of a community, to understand and address inclusiveness of a community leveraging population approach. The purpose of this letter is to provide researchers and policy makers insights into the approach taken to stimulate reflection on the potential for adaptation and replication.

Keywords

DEI; Population Approach; Inclusive community; Inclusivity Indicator; Digital Twins; Well-being; Narratives; Service design

This article is included in the Marie-Sklodowska-Curie Actions (MSCA) gateway.

Open Peer Review

Approval Status ✓ ? ?

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Any reports and responses or comments on the article can be found at the end of the article.

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Introduction

Developing inclusive communities is important to enhance individuals' well-being yet this brings the challenge of actively engaging and leveraging the diversity of residents in communities. Issues related to social isolation and other distortions in interpersonal connections have, however, been exacerbated by societal transformations, including: weaker ties with family and neighbours, urbanization, rise of digital communication technologies, and demographic ageing. Such significant social challenges are prominent in Japan, which this article focuses on. Japan is the most advanced aging society in the world due to the increased life expectancy and declining birth rates. Therefore, its experiences and societal challenges provide relevant examples for Europe and other countries worldwide, as they may face similar issues and situations in the near future. Hence the purpose of this letter is to introduce a new research initiative that is developing a novel approach, in order to make the research project's intent and key elements visible and thus a showcase for researchers, policymakers, and other stakeholders with a view to possible adaptation and replication.

While Japan as a society has traditionally placed a high value on human relationships (Davies & Ikeno, 2002; Doi, 1973; Hendry, 2003), Japan has the highest proportion amongst 20 OECD member countries of individuals reporting little to no interaction with people outside of their families, at 15.3% (OECD, 2005). Correspondingly, in The World Happiness Report 2019, Japan ranked the lowest among G7 countries in terms of happiness levels, and 32nd out of 36 OECD member countries. While objective indicators in the survey such as GDP and average healthy life expectancy rank relatively high, subjective measures such as "freedom to make life choices" ranked 65th and "generosity" ranked 144th. Furthermore, the level of happiness among the Japanese people has declined over the past decade (Helliwell *et al.*, 2023; Figure 1). To contribute to addressing these issues, in 2023 the Japanese government funded a five-year major Strategic Innovation Programme on "Developing Inclusive Community Platforms". One of the four sub-themes[i] of the programme, the project this article focuses on, taking an innovative approach through leveraging a social technology, a Digital Twin of a community, to understand and address inclusiveness of a community.

In order to enhance the well-being of all community members, the project adopts a population approach addressing the

[i] The other three sub-themes are: Measures to enhance individual autonomy; Measures to improve the happiness of child-rearing generations and women; and Measures to enhance the well-being of people with disabilities and older adults.

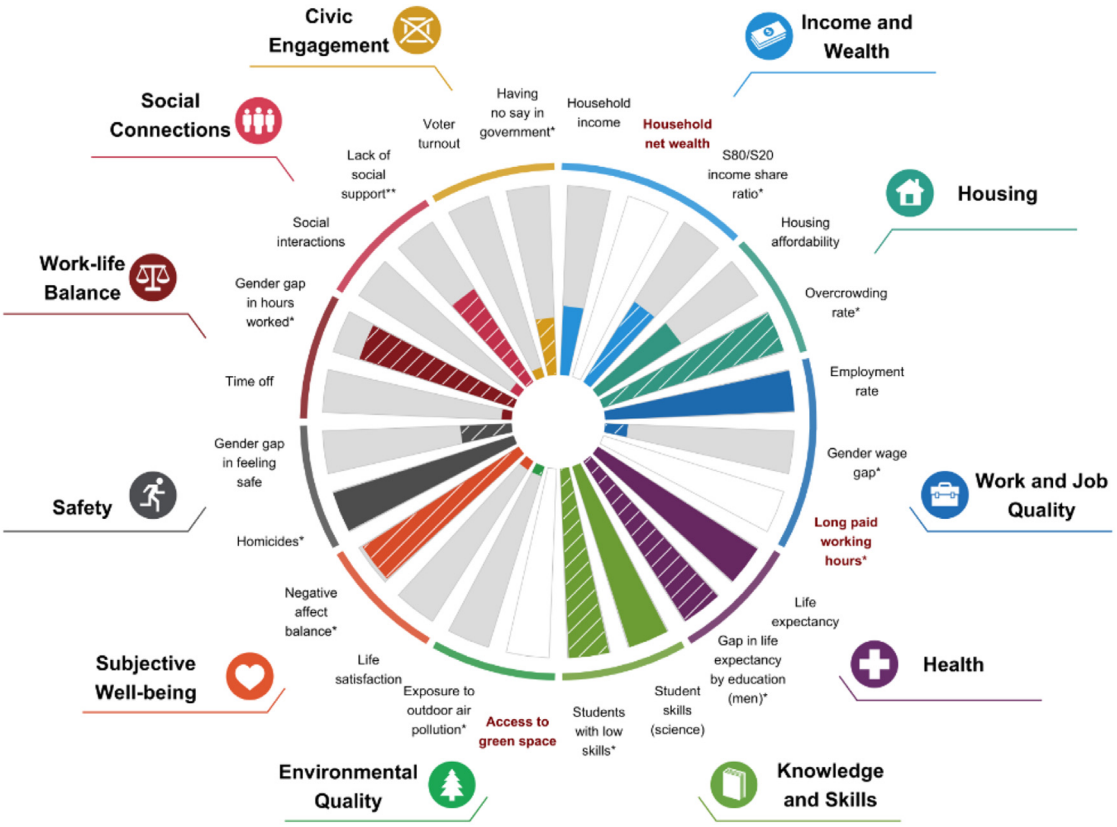

Figure 1. Japan's current well-being, 2022 or latest available year. Source: Helliwell, J. F., Layard, R., Sachs, J. D., Aknin, L. B., De Neve, J.-E., & Wang, S. (Eds.). (2023). How's Life in JAPAN? World Happiness Report 2023 (11th ed.). Sustainable Development Solutions Network.

community as a whole. This is in contrast to a high-risk approach that aim to reliably identify and protect individuals at high risk, as this is viewed as being effective for tax-funded policies (Farrington, 1998; Moffitt, 1993). The high-risk approach has a significant challenge, however, in limiting engagement with non-high risk residents, which comprise the vast majority of the local population. This project, therefore, places a significant emphasis on reaching out to unengaged and indifferent groups in regard to the social issues explained above. These groups are numerous yet not fully included in the community. Therefore, the project prioritizes their voices, stories, and perspectives through *narrative*-based population approach (Cabinet Japan, 2023).

Furthermore, narrative interviews complemented by insights derived from a systematic review of 1,649 academic papers revealed the necessity to clarify what is central to achieving inclusivity in society today. For instance, in the case of Japan, a major group to engage are older adults, particularly those who are socially isolated such as due to more limited physical and cognitive capabilities, whereas another smaller group who often feel isolated are parents of young children (Cabinet Japan, 2023). In terms of the notion of inclusion, two key aspects that emerged were centred on tolerance and autonomy (Galston, 2005; Raz & Mendus, 1988).

The social impact this project aims for is to maximize the diverse well-being of each individual and realize inclusive communities. To enhance the inclusiveness of communities, key to the approach taken is the development and implementation of a platform that utilizes "social technologies" grounded in social science and digital technologies. The envisioned inclusive community platform here refers to "a sustainable package of services and businesses designed to support the development of an inclusive community. These services are made accessible for selection and use (through adoption or purchase) by residents – the primary agents of the community – as well as by local governments, companies and NGOs engaged in community development. This is based on each individual's circumstances, the happiness they aim for, and the unique conditions of their communities" (NIBIOHN, 2023). Yet, the social technologies that would enable a transformation in values and behaviours in a community to enhance DEI have not yet been established. Nor are the human resources pivotal to active engagement within a community sufficiently fostered. Additionally, there is a lack of technical infrastructure for utilizing data that could contribute to preventing social isolation and maximizing well-being, making it difficult to assess, systematize knowledge, and replicate successful models. Furthermore, people's highly specialized needs increase the challenge to achieving viable and sustainable initiatives (c.f., Cabinet Japan, 2023).

Approach

The project is pursued through an interdisciplinary-based Action Research Method. To enhance the inclusiveness of communities and achievement of equity for their diverse members, a fundamental shift in people's attitude and behaviours is crucial, such as in relation to tolerance and autonomy. Achieving such transformation requires leveraging a broad spectrum of "comprehensive knowledge" - not only to rely on scientific and technological knowledge but also encompassing humanities and social sciences. Such "comprehensive knowledge" facilitates the development of social technologies capable of influencing people's attitudes and behaviours (Cabinet Japan, 2023, p.8). Therefore, this project adopts an action research method, not limited to academic contributions but rather aiming for a profound societal impact. Multiple cycles of development, validation, and improvement across various communities and municipalities aim to establish social technologies that enhance inclusion for all generations (c.f., Akiyama, 2015).

Specifically, the following three main research actions are being pursued:

1. Life User Digital Twin:

   This project envisions a Life User Digital Twin (Figure 2) as a means to externalize and integrate individual values and preferences, making them interpretable and analysable at the community level. The integration of personal data into the Digital Twin needs to achieve high privacy protection. The Digital Twin is constructed by partial aggregation (micro-aggregation) across similar people: this allows the inputs collected at individual level, such as from surveys, to be represented as probabilistic relations to outcome variables of interest. The resulting Bayesian network graph model (Pearl, 1998) enables estimation of the probability of behaviour change in response to an intervention under certain conditions. The development of such a Digital Twin reflects learnings from past initiatives aimed at improving inclusivity. Initiatives need to respect the roles, situations, values, and intrinsic motivations of both community service users and providers, while also enabling reflection and reframing of values within collaborative projects that lead to behavioural changes. Additionally, platforms that mediate interactions between users and providers need to foster participation and facilitate mutual engagement, with support tools to use the platform designed for wide access. Such platforms have the potential to overcome typical inhibiting factors to use of appropriate services. This would include providing timely recommendations and information on appropriate services for an individual. Also, the platform would support matching of participants to appropriate activities, such as an alignment between participant's literacy level and the difficulty of the activity, which reduces participant anxiety or boredom. Through such mechanisms the Digital Twin would support overcoming barriers to participation, which has also been identified as a common success factor.

2. Inclusivity Indicators and Evaluation System:

   A key challenge is to quantify and visualize people's social isolation and individual well-being in daily life, which hinders analysis of the current situation and limits development of policies based on data. The project considers both academic insights and empirical evidence

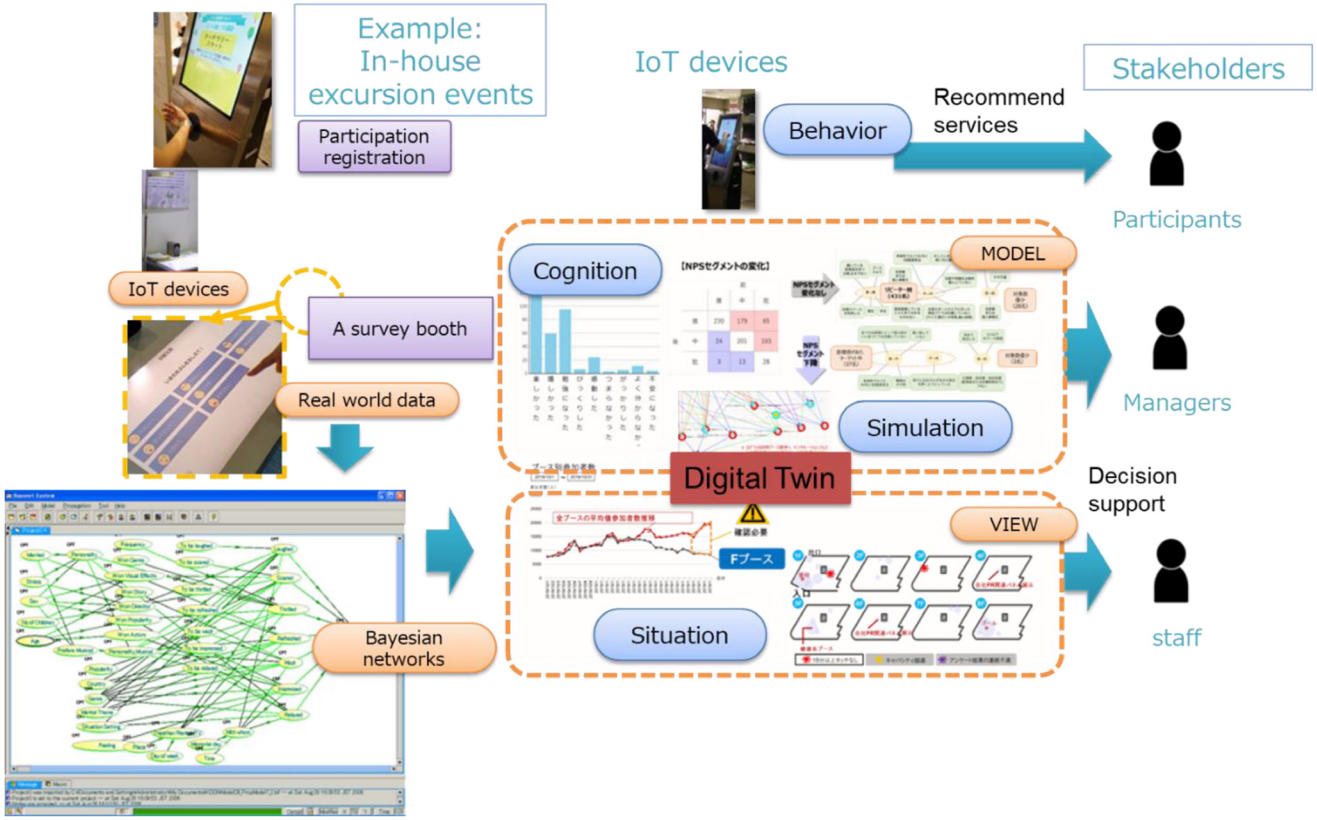

Figure 2. Life User Digital Twin.

from field sites to conceptualize indicators to assess inclusivity. This entails formulating hypotheses for intermediate indicators (Key Performance Indicators, KPIs) and success factors (Key Factors for Success, KFSs) capable of capturing the transformation of inclusivity during interventions. The indicators will be validated through statistical analysis of ongoing evaluations and verifications in multiple areas within a research field, and comparative assessments across multiple regions, as well as consulting experts.

Correspondingly, the project will create an evaluation system to assess inclusivity in each community using statistical data (quantitative surveys), narrative elements (qualitative data such as dialogue, storytelling, and episode-based approaches) as well as data from use of the Digital Twin: this variety of data will be assessed through a relevant set of indicators from the KFS-KPI library. Furthermore, the system incorporates a "logic model". This model establishes a causal link between KFS, KPI, and inclusivity. It is based on academic research and empirical knowledge from field practitioners. The logic model, pooled and updated by both researchers and practitioners, is integrated into the system. It aims to guide users, based on the evaluation results, towards effective practices, such as policy implementation and social actions, to promote inclusivity. While there are indicators commonly used internationally, the questions underlying those indicators remain fixed regardless of societal changes or location (e.g., WHO-5 Well-being Index, Psychological Wellbeing Scale, The Warwick-Edinburgh Mental Wellbeing Scales). This, however, is less suitable for an action-research approach that across diverse communities aims for impact through different sets of initiatives. Therefore, to enhance the versatility and applicability of the indicators, this project will also develop a tool that automatically generates appropriate indicators for each use case and thus enables calculation of the inclusivity of the community. Thus, this process will enable assessment of inclusivity over time and space: community-level indicators may be aggregated, say to regional level, and compared across communities and over time. The aim is to leverage the latest technologies such as AI to visualize "inclusivity", so as to support the devising and evaluation of policies.

3. Guideline development through human resource development and service demonstration:

The project aims to serve as the core for transforming people's values and behaviours. A focus will be to develop and implement methodologies and supporting tools for

finding and fostering individuals who play a core role in communities to enhance transformation of values and societal tolerance. These tools include evaluation of intervention outcomes, factor analysis, and assistance in developing improvement plans based on real world data collected locally. Also, a priority will be to promote the development of human resources amongst local government employees, local professionals, and corporate staff with the capability to effectively utilize data and the tools.

The social implementation of the Digital Twin, inclusivity assessment indicators and evaluation systems, and AI-enabled visualisation and analysis will be across diverse communities. Thus, town planning guidelines will be developed for diverse regions nationwide, encompassing human resources development methods and operational strategies such as for use of community spaces or under-utilised land or facilities.

Discussion

The specific challenges faced by communities vary depending on their characteristics, from urban areas to depopulated areas. For instance, in Japan a growing number of communities face declining populations of both labour force and residents, though other communities face other challenges. Overcoming this fragmentation of needs is important to enable providers of services, public and private to operate effectively and sustainably. Through collaboration between industry, government, and academia, the aim is to develop an AI-based Digital Twin technology platform that in each community/region enables residents, local governments, and community-oriented businesses to select and utilize the necessary services. Furthermore, the common platform design enables recommendation of exemplary initiatives and services based on similarity across communities assessed through the rich data integrated into the Digital Twins. That is, the platform will develop and standardize methods for community planning and fostering public-private partnership businesses. This enables the optimization of initiatives and budget allocation, as well as estimation of the potential value and cost-effectiveness of initiatives and business ventures across communities.

Moreover, many collaborative projects involving industry, government, and academia tend to see initiatives and activities in the region gradually wind down once the project concludes, even if they employ action research methodologies. In this project, however, to implement the aforementioned results into society, we are designing an intermediary organization, acting as a liaison between residents, communities, businesses and local governments. Furthermore, these intermediary organizations, acting as platforms in various regions, will support local communities and engage in data-driven businesses utilizing the Digital Twin technology constructed from local data. Beyond the conclusion of the project, the aim is for core companies providing community services to continue to roll out services nationwide through the inclusive community platform. In turn, this should support inclusive communities with high sustainability to autonomously sustain themselves going forward. This approach fosters societal impact through sustainable transformation by enhancing the efficiency of community services, enriching well-being, and nurturing lasting inclusivity for the future generations.

Ethics and consent

Ethical approval and consent were not required.

Disclaimer

The views expressed in this article are those of the authors. Publication in Open Research Europe does not imply endorsement of the European Commission.

Data availability

No data are associated with this article.

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Wolfram Manzenreiter
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Who is doing what and how when modeling DEI digital twins in Japan?
The Open Letter showcases the ambitions and goals of a novel AI-based approach to invigorate community functions and preserve residents' well-being in Japan. As sub-project of a larger five-year cross-ministerial strategic innovation programme (CAO 2024a https://www8.cao.go.jp/cstp/gaiyo/sip/sipgaiyou.pdf), the 'interdisciplinary action research' project sets out to develop a 'Community Digital Twin' as technological intermediate for next-generation city planning and index- building to evaluate inclusiveness at the local level. The implementation of a Digital Twin to manage inclusion at the local level of a given community reflects the techno-optimistic vision of a 'super-smart society' in which social issues as well as economic growth are efficiently handled by 'leveraging ICT to its fullest' in merging cyberspace and physical space. The systematic integration of digital and real life worlds, initially promoted by the Japanese government's Fifth Science, Technology and Innovation Basic Plan (2016-2020) and further adapted in its sixth instalment, has been popularized by the catchy phrase of 'Society 5.0' (CSTI 2015 www8.cao.go.jp/cstp/kihonkeikaku/5basicplan_en.pdf).
As the authors point out, social isolation has become a pressing issue all over Japan. Population shifts into metropolitan conglomerates, paired with low fertility and demographic aging, and the amenities of a well-organized consumer society have propelled the erosion of family and community connections, the two main pillars of social belonging in any society, and arguably more so in Japan (Ronald and Alexy 2011)[ref 6]. Municipalities throughout the country nowadays are faced with the challenges of maintaining community coherence and functionality, despite the rapid decline in population size, tax income, and infrastructure investments (Lützeler 2018)[ref 5]. The Open Letter singles out senior citizens and single parents as particularly susceptible to social isolation. Further high-risk populations would have to include disabled people, sexual minorities, and foreign migrants, sharing vulnerability caused by lack of acceptance, tolerance, and integration. However, survey data point out that social disconnect has arrived in the mid of society: Only 17.9% of a nation-wide sample reported in 2023 that they did not feel lonely, while more than 40% had at least occasionally or even frequently experienced feelings of loneliness. The prolonged feeling of isolation was particularly pronounced among younger age cohorts (CAO 2023 https://www.cao.go.jp/kodoku_koritsu/torikumi/zenkokuchousa/r5/pdf/tyosakekka_point.pdf.).

Other distressing indicators include suicide mortality, which has been on the rise again, particularly during the years of the pandemic, and the increase in lonely death incidences. For 2023 statistics reveal that in 8,695 cases, the deceased remained unnoticed for a substantial number of days or even weeks (average was 18 days; SSI 2024 www.shougakutanki.jp/general/info/kodokushi/news/kodokusiReport_8th.pdf).
Developing new policies to combat such grievances are without doubt highly needed, given that for a long time and until very recently both public and private sector agents have been reluctant in embracing diversity and treating minorities fairly without insisting on adaptation to mainstream society as a prerequisite for social inclusion. As late as in April 2024 a law went into effect aiming to advance measures to address loneliness and isolation. While Japan's cabinet is in charge of defining a priority plan and coordinating policies at the national level, local governments are held responsible for establishing and implementing policies of prevention and countermeasures (CAO 2024b https://www.cao.go.jp/kodoku_koritsu/torikumi/jutenkeikaku/pdf/jutenkeikaku_honbun.pdf) in line with the fundamental principles of a society in which 'not a single person suffering from loneliness and isolation is left behind; and individuals support and connect with each other' (CAO 2024c www.cao.go.jp/kodoku_koritsu/torikumi/pdf/outline.pdf). The question is if and how these cities, towns and villages are eventually going to benefit from their digital twin, as the programme introduced in the Open Letter suggests. The answer remains to be seen, not least because of the many unknowns behind the methodological foundations of an approach that attempts to model a community twin on the basis of 'comprehensive knowledge' generated from residents' narrative accounts, statistical survey data, a meta-analysis of a large body of academic papers, and insights from the use of the digital twin across multiple cycles of computation and validation.
Ultimately the project assumes that social technologies, informing and improving the intermediary digital twin in response to real world data, will be capable of identifying key performance indicators and benchmarking key factors for success, and that the case-specific policy interventions will transform people's values and thus their behaviour to enhance inclusivity.
To put all this into practice, fostering awareness, knowhow and commitment among community leaders and local government employees is crucial. The acknowledgement of diversity among regions and communities, requiring case-sensitive solutions for different communities, the use of qualitative research methods to build on local stakeholders' knowledge are all to be applauded but exactly how this is going to be put into practice remains an open question. I think it is unfortunate that the Open Letter is not outspoken on the relaization of the innovative research strategy (e.g. choice of research site/s and the theoretical assumption of how social capital, clinical data and platform utilization are supposed to increase inclusion), and I think it is unnecessary because the authors are not merely commenting on a political initiative they happened to be intrigued by but introducing the project they apparently are commissioned to steer.
For a critical review, readers would need to know far more about the operationalisation, on the one hand, and the foundations on the other. The general lack of critical reflection and transparency is letting readers wonder about the theoretical assumptions of individual well-being and community inclusion, the tricky art of quantifying qualitative information from narrative interviews for the digital model, the level of complexity the project aspires to model, and how the digital twin is expected to deal with the intrinsic unpredictability of social systems where human behaviour is critical to their structure and dynamics (Batty 2024)[ref 1].
Some people might think communities, social interaction and subjective well-being are easy to explain while in fact none of them are. My research group can attest to the methodological challenges in assessing well-being (Holthus and Manzenreiter 2020)[ref 4], the substantial weight of personality factors in experiencing subjective well-being, which even the most detailed clinical patient database fails to report and thus hardly ever surfaces in statistical analysis (Askitis 2023

ubdata.univie.ac.at/AC17194063), whereas social capital did not prove to be a reliable predictor for community affairs and well-being (Ueno, Ōsuga and Manzenreiter 2020[ref 7]; Askitis and Hundsdorfer forthcoming https://japanologie.univie.ac.at/en/socialcapital/). We may assume that in the case of this project communities largely conflate with municipalities, its sub-districts or even neighbourhoods. But the administrative definitions are often at odds with the lived reality of people on the ground, particularly after the Heisei merger wave from twenty years ago (Ganseforth and Jentzsch 2021)[ref 2]. So who (and when) decides about borders and boundaries when it comes to measure inclusion, and who or what defines the parameters to quantify inclusion? As inclusion here is a policy problem definition, the digital model designed to address it is very much contingent on political ideals or ideology and the expertise political elites are putting their trust in.

Populations and their activities are shaped by a myriad of processes, and any attempt to remodel them is causing sheer unsurmountable problems for data collection and interpretation, computation time and algorithmic accuracy for taking third- or more-order interaction factors into account. Without a thorough theory, that is a solid understanding of causality which factors in the convoluted relationships among a seemingly endless number of aspects and agents within a social system, its sub-systems and the larger ecology of similar type of systems, Data analysis can sometimes be less reliable than expected when it comes to predict the effects of political intervention (Wan et al. 2024)[ref 3].

Nothing of this is discussed or even mentioned in the Open Letter, which is not just due to space limitations, the special format of this communication or the distance between researchers intrigued by an innovative government-sponsored initiative and the project itself. A bit of snowballing investigation following the money from the hints offered in the footnotes revealed far more about the relationships between the commissioning agency, executing research institutions, their contracted partners (including one of Japan's leading commercial urban and residential area developer specialised in building, contracting and managing real estate property) and the Open Letter authors (CAO 2024d www8.cao.go.jp/cstp/gaiyo/sip/sip_3/keikaku/03_community.pdf, AIST 2024(housetsu-community-a1.jp); TWR 2024 www.twr.jp/). One of the lead authors from the Artificial Research Center at the National Institute of Advanced Industrial Science and Technology serves as project director, and all others are at least affiliated with research institutions that are contributing to the project. If not for ethical reasons, then for academic clarity I would welcome to see the authors utilize the iterant potential of this publication format to reflect or comment on the blanks and open questions addressed in this review.

Finally, a digital twin is only as good as the data it is drawing on. Given the long history of applied urban modelling and the way it failed so far to solve some of the most pressing problems of community life. such as ecologically efficient land use, affordable housing, and social disparities, it would be wise to see the value of the digital twin not so much in problem-solving but on focussing the awareness of researchers and politicians to ask the right kind of questions about how to address a political problem. Big data, augmented by real-time observations, can generate insights into patterns or trend developments, which is not bad at all. Yet without a solid theoretical foundation, can a modelling approach relying solely on post-hoc data explanation be good enough for sound policy recommendation, given the fast changes and ever-increasing complexity in our social life-worlds and the hard-to-predict impact of new technologies to come?

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Is the rationale for the Open Letter provided in sufficient detail? (Please consider whether existing challenges in the field are outlined clearly and whether the purpose of the letter is explained)
Partly

Does the article adequately reference differing views and opinions?
No

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Partly

Is the Open Letter written in accessible language? (Please consider whether all subject-specific terms, concepts and abbreviations are explained)
Partly

Where applicable, are recommendations and next steps explained clearly for others to follow? (Please consider whether others in the research community would be able to implement guidelines or recommendations and/or constructively engage in the debate)
Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Japan, diversity, social inequality, well-being

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 23 July 2024

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This article is an accessibly written open letter about a comprehensive research project developing more inclusive communities, and in this component particularly with the help of data-driven approaches and AI. Although I am not that deep into the topic to judge whether factual statements and citations are all correct, the rationale and argumentation appears sound and corresponds with the perspective based on my own position in the field.

Developing a Digital Twin (DT) of an inclusive community is a very ambitious endeavour, as life in a community can be considered life in its entirety. The authors of this article seem to be well aware of this and provide a comprehensive system of domains that they plan to take into account. As such they combine a highly technical approach with a social science approach to inclusive communities. Moreover, their approach seems robust in that they employed a community wide narrative method to detect which themes matter to the community and combined this with a vast literature analysis. This was done to ensure the validity of the DT to monitor inclusivity at large.

The three main research actions presented are: 1. to build a Life User Digital Twin; 2. to develop an inclusivity evaluation system; and 3. to develop practices by way of guidelines and demonstrations. What I particularly like about the approach is that these actions are embedded in an (apparently, large-scale) interdisciplinary-based Action Research method. If done properly and authentically, this should enable the research team to work on the transformation with local stakeholders in a collaborative and joint learning curve. However, this will not be an easy process, as from socio-technical studies we know that there will be resistance from the prevailing regime, as the result of routines and materials that work against the social change in communities that one will try to achieve. For this it will be of primary importance to safeguard the critical voice in the action research process. One way to do this could actually be to work in a transdisciplinary way, by including people from the community as co-reserachers and co-developers. Moreover, going through the learning curve together, is part of the transition process itself, so this appears rather at odds with the frame of "rolling-out" such as presented in the closing paragraph. But some more on this below.

I also have a concrete suggestion for the evaluating and monitoring framework: there is mention that a number of (mental) wellbeing scales will be used. However, what would seem particularly useful in this regard could be an indicator system that is explicitly based on the capability approach (CA) as that approach includes not only individual side of wellbeing, but also the contextual and situational conditions to facilitate it. The CA provides an integral way of looking at wellbeing and also social justice, and therefore could be well-equipped conceptually to capture various kinds of inequities that lead to exclusion in communities. Understanding these mechanisms well is quintessential to fostering wellbeing in communities and societies, and a DT

that provides an independent (and therefore trustful) data and information source of good quality could prove a valuable resource for those in positions to act (i.e. persons in political or other positions of power).

Finally, I do have one worry. Between the lines this project, as with many projects that have a clear technical component, seems to follow a somewhat techno-optimist stance. To follow up on my previous remark on safeguarding the critical voice in the action research process, I would urge the authors to also stay (self-)critical as to what the DT will actually be causing in the community systems (including their system actor stakeholders such as companies and governments). Even if authors themselves stay well aware of the notion that the DT will not be *the* solution to everything in terms of inclusive communities, there is a fair chance that other stakeholders involved will have that conviction and will think and act accordingly. Then, the project could get stuck in a track towards the "technology-will-save-us" paradigm in which tendencies towards gaining more control and eliminating diversity and introducing exclusions of new types lure, while this is actually what authors want to avoid. There can be a tension with using data-technologies, such as DT, between gaining insight and control on the one hand, versus protecting individual freedoms and respecting diversity on the other. And from a normative point of view, particularly the latter, ironically, is what inclusive communities should all be about.

So to conclude, I think this is an interesting article that lays out and concretizes an approach with a DT to foster inclusive communities. However, to be better balanced for the reader I do think some discussion of the conceptual points raised above is warranted to more clearly position the project in the socio-technical spectrum.

Is the rationale for the Open Letter provided in sufficient detail? (Please consider whether existing challenges in the field are outlined clearly and whether the purpose of the letter is explained)

Yes

Does the article adequately reference differing views and opinions?

Yes

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Yes

Is the Open Letter written in accessible language? (Please consider whether all subject-specific terms, concepts and abbreviations are explained)

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow? (Please consider whether others in the research community would be able to implement guidelines or recommendations and/or constructively engage in the debate)

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Social sciences; sustainability; social practices; action research

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 23 July 2024

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Barbara Holthus
German Institute for Japanese Studies, Tokyo, Japan

This Open Letter introduces a Japanese government initiative, a 5-year program called "Developing inclusive community platforms". This program aims to improve the well-being of the inhabitants of communities, as well as improve issues of diversity and inclusiveness.
In a first step, the program conducted narrative interviews as well as a review of more than 1000 academic papers as a foundation to its program. The research methodology is that of "interdisciplinary-based Action Research". The authors of the Open Letter explain that "a fundamental shift in people's attitudes and behaviours is crucial" to the success of the elevation of well-being and improved diversity and inclusiveness. How this program is to generate a value shift however seems to remain unclear at this stage.
The program's main aim seems to be to generate statistical data in order to measure the degree of inclusivity of a community. How small or large a "community" should be thought of, what the "borders" of a community are, and the fact that communities can significantly vary by region, type, age, gender, and social class of the community members: are these questions the government project has thought of?
The Letter mentions the use of the "Life User Digital Twin", which sounds intriguing. This idea is described as a "platform", unfortunately missing a concrete example of how the platform envisioned here would be put into action to overcome barriers to participation?
The fact that the findings of this 5-year program are to inform town planning and are to help with community center planning is highly laudable. It will be a challenge to put the data generated by the long-term initiative into concrete action, but it is a good start. This author would have liked to hear more about the size of this project: how many researchers are involved? How many communities are to be studied in-depth? While this seems to be a national government initiative, the implementation of strategies from this presumably will fall into the hands of local governments? And the most important question of all: How much money is allocated for this 5-year program and for putting the findings into action to create happier, more diverse and inclusive communities throughout Japan? This author believes a lot of the success hinges on the willingness to channel a significant sum into this undertaking.
While the Open Letter does a good job of introducing this governmental initiative, the description remains to a certain way elusive, inconcrete. This might be the case with the project itself and the stage of the project at the time of writing. A critical discussion of this initiative by the authors of

the Open Letter however is completely absent – a missed chance. This author would have liked to have seen the authors go beyond the sole description of the government initiative, even if only briefly, such as for example how this project is of relevance to what the authors of the Open Letter are researching.

Is the rationale for the Open Letter provided in sufficient detail? (Please consider whether existing challenges in the field are outlined clearly and whether the purpose of the letter is explained)
Yes

Does the article adequately reference differing views and opinions?
Yes

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Yes

Is the Open Letter written in accessible language? (Please consider whether all subject-specific terms, concepts and abbreviations are explained)
Yes

Where applicable, are recommendations and next steps explained clearly for others to follow? (Please consider whether others in the research community would be able to implement guidelines or recommendations and/or constructively engage in the debate)
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: sociology of the family, gender, well-being, rural-urban divide, media, social movements, companion animals and animal rights.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.