

Resident experiences and engagement

Sensitising booklet



What’s Inside

Hey there!

I'm excited to share this booklet with you, created as part of my graduation project to help TGV employees better understand the experiences and engagement of residents within The Green Village community. Through my research, I identified several barriers that make it challenging for residents to participate meaningfully in our innovation efforts and feel a true sense of community.

This booklet provides a glimpse into those challenges and offers a framework for community engagement that I believe can make a real difference. My goal is to help you better understand residents' experiences, align perceptions of their roles, and provide practical strategies to encourage their active involvement.

Whether or not your role involves direct interaction with residents, I hope you find valuable insights here that will help us build a more connected and engaged community—one that can drive innovation forward, together!

Who is this booklet for?

How to use the booklet?

Story time!

- Vision scenario*
- Introducing the residents*
- Short narratives on residents' experiences*

Introducing the Framework

Tools

- Moments of intervention*
- For inspiration*
- Quick insight and Impact templates*

October 2024
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Developed as part of the graduation project titled “Enhancing resident engagement through a community-based approach for The Green Village” at TU Delft for MSc Strategic Product Design

Who is this booklet for?

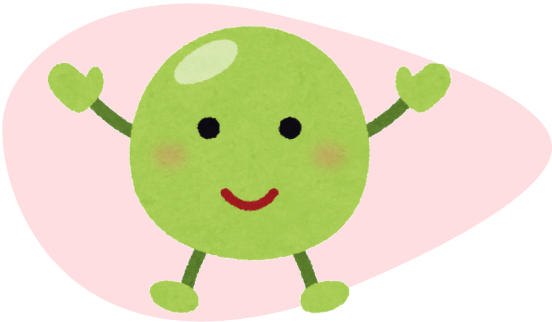
It's for you!

Whether you're looking to dive deeper into residents' experiences or want some practical tips on how to foster resident engagement in the innovation process and the community, this booklet has something for everyone. Find out which category you belong to...

You're the Pulse of TGV!

You play a crucial role in shaping TGV community alongside the residents. Together, you create an atmosphere where innovation thrives and everyone feels at home.

Sweet Pea



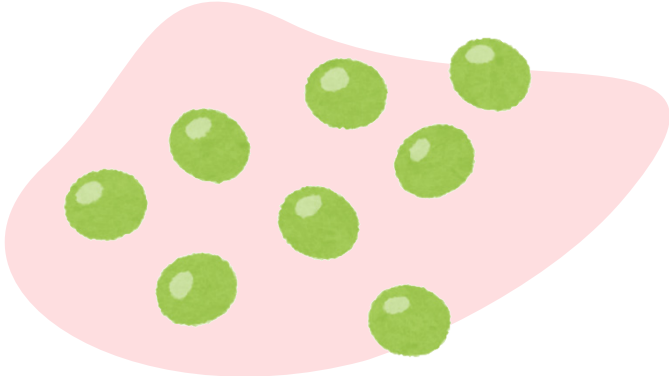
Build Empathy - Use insights to understand and connect with residents on a deeper, more personal level, fostering trust and open communication.

Positive interaction - Adapt communication to be more resident-centered, ensuring residents feel heard and innovators understand their contributions.

Your Connection Matters!

Think of yourself as the bridge between residents and innovators. With your understanding of what residents truly need, you can help steer innovators in the right direction and spark meaningful change.

Team Pea-nity



Stimulate Creative Solutions for Community Cohesion - TGV employees can use the booklet as a tool to brainstorm and develop new initiatives for improving resident participation and community cohesion.

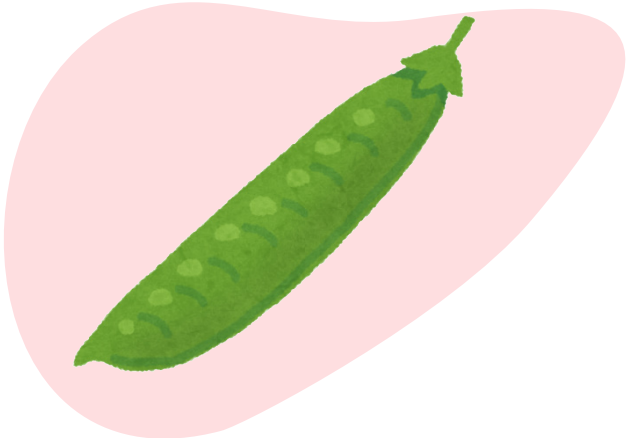
Facilitate Conversations with Innovators - The guidebook can be used as a resource for TGV employees to engage with innovators, ensuring they understand the residents' roles and how to incorporate them into the innovation process.

Problem-Solving and Root Cause Analysis - By using the framework to identify the root causes of challenges related to resident participation, TGV can ideate targeted solutions at the community level.

You Are the Changemakers!

Your interest and ideas have the power to shape initiatives that bring real change to TGV. Together, we grow and evolve as a community!

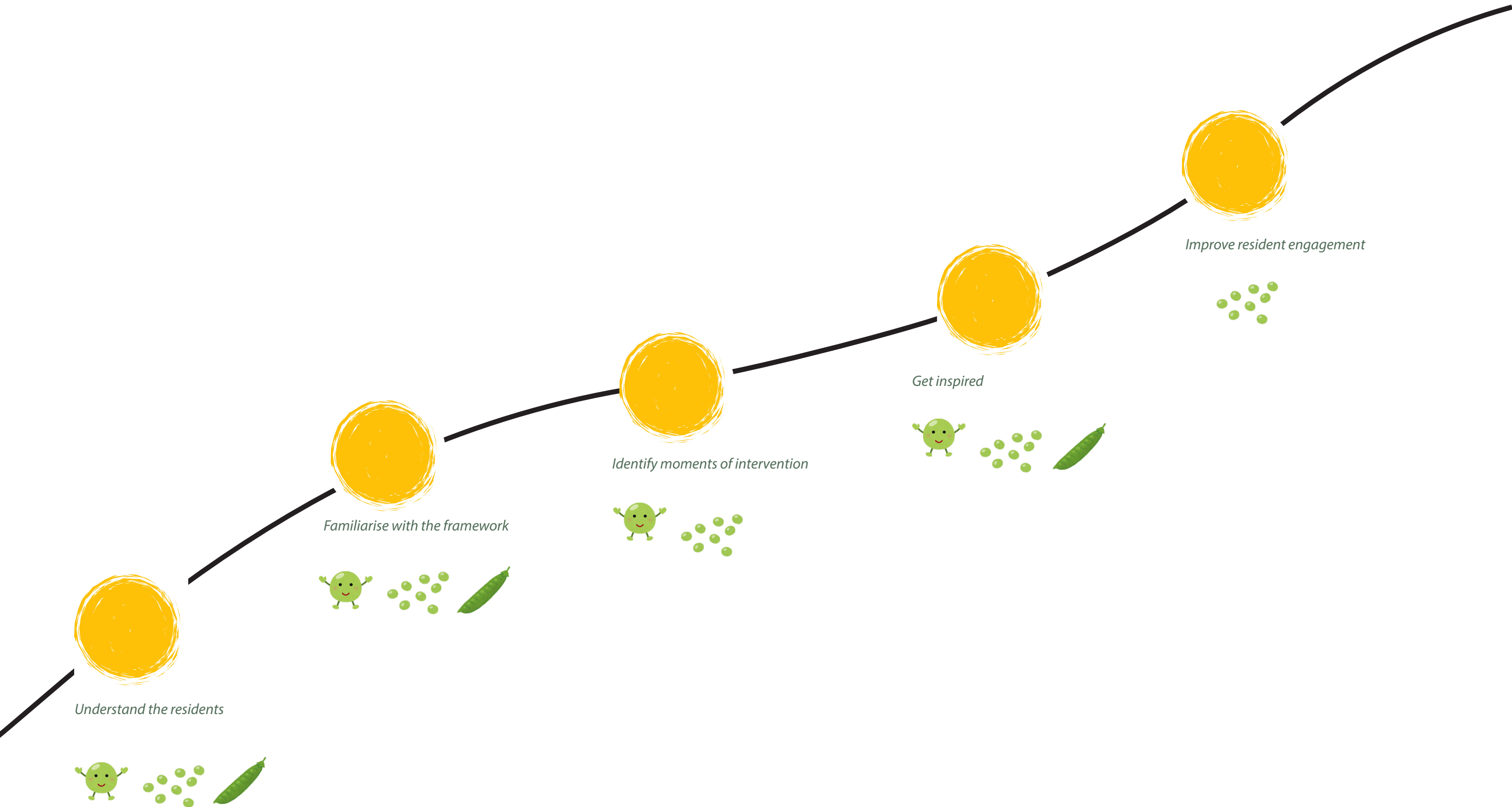
The Pea-der ship



Develop Actionable Strategies for Resident Engagement - Provides a foundation for TGV to design long-term, system-wide strategies that foster resident participation and engagement in innovation activities.

Evaluate and Strengthen Existing Practices - The framework can be used to assess and refine existing system-wide practices related to innovation and resident involvement, ensuring they align with community engagement goals.

How to use the booklet?



Vision scenario

Scenario 1

The Fragmented Future of the Living Lab Community

In this future, the "New Horizons Living Lab"—once intended to be a thriving ecosystem of collaboration—has devolved into a fractured environment where the lab's internal community of innovators and stakeholders operates in silos, driven by individual motives. Residents, who were meant to be the foundation of the lab's work, are now treated merely as test subjects, disconnected from the core vision. The innovators within the lab focus solely on their personal projects, racing to secure funding and recognition. There is no collaboration, no shared mission; each individual is locked in their own silo, blind to the larger goals of the lab. The residents, brought in only to test innovations, feel more like guinea pigs than collaborators. Their role is transactional—filling out surveys and providing data—without being consulted or valued as part of the process. The technologies they test are often irrelevant to their lives, designed for innovation's sake rather than meaningful impact. Over time, they disengage, showing up only when incentivized and offering no real feedback. Without shared goals, mutual trust, or cooperation, the living lab community—once intended to be a dynamic, innovative space—collapses into a collection of isolated individuals. The lab becomes a disjointed place where innovation lacks purpose, residents are marginalized, and stakeholders add no lasting value.

With no sense of collective identity, the living lab community falls apart. There is no exchange of value—residents, innovators, and stakeholders operate as isolated entities, failing to contribute to each other's success. The lab becomes a space of stagnation, where voices are unheard, contributions go unrecognized, and innovations fail to make a meaningful impact.

Scenario 2

The Thriving Future of the Living Lab Community

In this future, the "New Horizons Living Lab" has blossomed into a vibrant, collaborative ecosystem where residents, innovators, and stakeholders work together seamlessly toward a shared goal of creating sustainable, impactful innovations. Every member of the lab—whether a resident or a cutting-edge innovator—contributes to and benefits from a collective identity built on trust, mutual respect, and shared purpose. Innovators actively engage with residents and fellow innovators, seeking feedback and ideas that shape their projects. Each innovation is co-created, designed not just for technical excellence but with a deep understanding of residents' needs and aspirations.

Residents are not passive participants but key stakeholders who actively shape the innovations they test, voicing their insights, concerns, and aspirations. Their lived experiences guide the direction of projects, ensuring that technologies developed are practical, sustainable, and tailored to the community's needs. By learning from innovators and gaining new skills, residents become empowered co-creators, fostering a sense of ownership in the lab's progress.

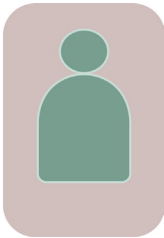
The living lab facilitates connections, encourages shared learning, and creates opportunities for both innovators and residents to grow and thrive together. With a strong sense of collective identity, the living lab community flourishes through a continuous exchange of value, where every voice is heard and every contribution is valued. Together, they drive sustainable change, developing solutions that not only address immediate needs but also foster long-term growth and resilience. In this thriving living lab, the success of one is the success of all, as everyone works toward a common goal—building a better, more sustainable future rooted in collective impact and shared progress.

Which of the two scenarios do you find more desirable, and why?

What elements of the desirable vision resonate most with you, and why?

How do you envision your role in creating a positive living lab environment?

Let’s meet the Residents



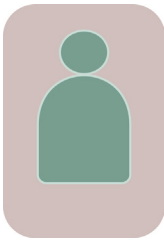
Diligent Dana
The quiet, introverted



Leadership Leo
The outgoing resident



Mindful Maya
The sensitive resident



Jolly Jamie
The cheerful and playful



Engaged Emma
The proactive resident



Welcome to the heart of our community!

Here, we want to introduce you to the wonderful people who live in our living lab. Our residents come from all sorts of backgrounds, bringing their unique stories and personalities with them. Some are single, some are couples; some are feeling happy, while others might be going through tough times. This mix makes our community feel real and vibrant, just like any neighbourhood you’d find out there.

But what really brings everyone together is their need for housing—a place to call home. In addition, they all share a passion for sustainability and innovation. They’re excited to share their expertise as users and make impactful contributions to the innovation process.

Let’s focus on what brings us together instead of what sets us apart! By highlighting our shared interests and goals, we can build a stronger, more supportive community. Together, we can inspire each other and work toward a brighter, more sustainable future for everyone!

Sneak peek into our residents' lives

In this section, we invite you to explore the short narratives of our residents' experiences. These stories highlight their interesting experiences and encounters here, blending real insights with a touch of exaggeration and fiction. Our aim is to give you a deeper understanding of the diverse possibilities that exist within our community. As you read through these narratives, we encourage you to think critically, reflect on the situations presented, and decide for yourself how much of it resonates with reality. Each story offers a unique glimpse into the varied experiences of our residents' lives.

Let's dive in and see what their lives look like!

How would you feel if you were in Sarah's shoes?

What actions can you take to improve her experience?



A Resident's Onboarding Experience at TGV Living Lab

Meet Sarah, our enthusiastic new resident at the TGV Living Lab, who embarked on her onboarding adventure with a mix of excitement and confusion. As she arrived, she was greeted with bright smiles from the team, who whisked her away on a tour of the terrain, showcasing sustainable innovations big and small. "Welcome to TGV!" they exclaimed, and Sarah felt the energy around her.

As the team explained the innovations in the house and the surrounding area, Sarah struggled to keep track of all the instructions. She thought, "Do I need to remember all these? Where's my cheat sheet?" The impressive technology was fascinating, but it felt like a lot to absorb in one go.

After the tour, she settled into her new space, ready to embrace the innovative lifestyle. Feeling a bit chilly, Sarah decided to turn on the heating through the app. It felt empowering at first until she swiped the button to turn it off, only to discover that the app and the actual heater were having a serious communication breakdown. The app showed the heater was off, but the room was getting warmer and warmer.

Minutes turned into a mini sauna experience, and Sarah's mind raced as she thought, "Is it supposed to feel like a tropical vacation in here?" Panic set in when she remembered it was a weekend—no one from the TGV team was around to save her from this warm disaster. Thankfully, the team was quick to respond via text, reassuring her they'd help. In a delightful twist, an old resident chimed in with a quick fix, explaining how to reset the heater by figuring out that tricky white plug and replugging it. Relief washed over Sarah as she finally got the room back to a reasonable temperature.

As she settled in, she couldn't help but think how much easier her onboarding would have been if all this information was documented in one place. "A handy guide for dummies," she chuckled to herself, picturing a bright cover with the title "How to Not Roast Yourself in a Smart House." With a smile on her face, Sarah embraced her new home, excited to learn and grow in this unique living lab—just maybe with a little less sweating next time!

The Uninvited Visitor

It was a beautiful Saturday morning, and Sarah woke up in high spirits, ready to soak up some sunshine. With a bright smile on her face, she pulled open the blinds, anticipating a warm ray of light to greet her. However, instead of the tranquil morning she envisioned, she nearly flashed a group of wide-eyed kids on a tour of the TGV campus! In that split second, she felt like a deer caught in headlights, quickly ducking back behind the curtains as laughter erupted from outside. Her heart raced, and she couldn't help but giggle at the absurdity of it all. "Well, that's one way to make an entrance!" she thought, shaking her head in disbelief.

Later that day, while sharing her unexpected morning mishap with a fellow resident, she discovered she wasn't alone in her predicament. He chuckled and recounted his own wild experience. One sweltering afternoon, he'd left his door wide open, happily working away in his studio, when he was startled by a curious passerby peeking in, mistaking his workspace for yet another installation. "I had to politely tell them it was a private space," he said, shaking his head. "They looked so confused! Maybe we should put up a sign or something!"

As they both laughed over their uninvited visitors, Sarah suggested that it might be helpful for residents to receive some sort of announcement or schedule about campus tours and visitors. "A little heads-up would go a long way," she said. "I'd like to be prepared—after all, not everyone wants an audience for their morning routine!"



What do you think of Sarah's suggestion?

How can you help Keith?



The Loneliness of Keith

Keith, an international student and self-described introvert, had always been excited about living in the TGV Living Lab. He loved the innovative environment, the quiet, and the unique energy of the space. But there was one thing he hadn't anticipated—how lonely it could feel.

Though he knew there were other residents living in TGV, it was surprisingly hard to find them. The lack of regular, planned moments like monthly meetings or community gatherings left him feeling a bit isolated. There were occasional casual drinks organized, but given his introverted nature, Keith hesitated to attend. He liked the idea of connecting with others but dreaded the chaotic environment of mingling with strangers.

Once, he did work up the courage to attend one of the drink events. He quietly entered the common space, scanning the room for any familiar faces or other residents he might click with. But it felt overwhelming—he couldn't find a single person he knew, and conversations seemed to be happening in fast, loud circles around him. After a while, the anxiety crept in, and Keith slipped out unnoticed, feeling more alone than before.

Since then, he had stopped trying. He still loved TGV, but the absence of small, quieter opportunities to connect with fellow residents made it difficult for him to break out of his shell. Keith often found himself wishing for more structured ways to engage with the community—something more suited to people like him who didn't thrive in big, loud social settings. He wanted to belong, but the path to that connection felt unclear and distant.

The mystery of Innovations

Krish, a long-time resident of the TGV Living Lab, was known for his outgoing and cheerful personality. He loved being an active member of the community and frequently shared his experiences with new residents. So, when his family from his home country came to visit, they were excited to see what living in a “living lab” was all about. Their curiosity quickly turned into a barrage of questions—about the innovative technologies, the smart systems, and how life was different at TGV.

To Krish’s surprise, he struggled to answer most of them. He stammered through explanations, realizing that over time, he had lost track of the various innovations around him. He couldn’t explain how the new heating system worked or why some lights adjusted automatically. The once-exciting tech that he was proud to talk about had slipped from his mind as his priorities shifted.

The real shock came when he tried to show off a new device that had been installed just a week ago—and realized he couldn’t remember how to operate it. His family watched as he fumbled with the buttons and features, feeling a mix of embarrassment and frustration. How did I forget this already? he thought, feeling the pressure to impress his guests.

After some back-and-forth texting with a TGV employee and even reaching out to the innovator, Krish finally figured out how to use the device. But the whole experience left him wondering why there wasn’t an easier way to stay on top of these things. He dreaded having to rely on memory and emails for every update. Wouldn’t it be great, he thought, if there was a simple, non-intrusive way to find answers to my questions or look up how these things work? A guide, or even an app, to help keep track of all the innovations here?

Krish still loved living at TGV, but this experience made him realize how easy it was to fall out of the loop when it came to the very innovations that made the living lab special. He just wished staying informed didn’t feel like a puzzle every time.



How would you feel if you were in Krish’s shoes? Embarrassed? Or would you just laugh it off?

Have you ever found it difficult to say “no” in a situation where you felt obligated? How did that affect you?



The uncomfortable “yes”

Keith was buzzing with excitement as he got ready to meet his best friend, someone he hadn’t seen in two years. He had been counting down to this day for weeks, and the moment had finally arrived. Just as he was about to leave, a knock came at the door.

To his surprise, it was a group of technicians, all prepped to fix a leaking roof—a problem Keith had almost forgotten about. The timing couldn’t have been worse. On one hand, he was relieved the issue was being addressed, but on the other, his reunion was slipping through his fingers. Glancing at his watch, Keith debated telling the workers to come back later.

But he hesitated. He didn’t want to seem difficult or cause a fuss, and wasn’t sure if it was okay to ask them to reschedule. Feeling obligated, he urged the workers to finish quickly, hoping it wouldn’t take long. Hours later, though, Keith’s plans with his friend were ruined, and frustration gnawed at him. This wasn’t the first time his schedule had been hijacked by unscheduled maintenance work.

After some internal debate, Keith reached out to the TGV team to ask if residents could be informed in advance about maintenance schedules. That’s when he found out the work wasn’t even planned for that day—there had been a miscommunication between the TGV team, the technicians, and, of course, Keith himself.

In that moment, Keith realized how hard it was to say “no” when he felt he couldn’t, even if it meant his own plans were disrupted. He couldn’t help but think that with better communication—and a little more confidence to speak up—he could have saved himself a lot of stress and a missed reunion.

Some quotes from Residents...

“For next year, they might introduce new innovative thing in my house. OK, I learn how to use that. That's it. But I don't feel I'm contributing this.”

"Some sometimes, yeah. I feel a bit lonely because neighbours are quite separate.”

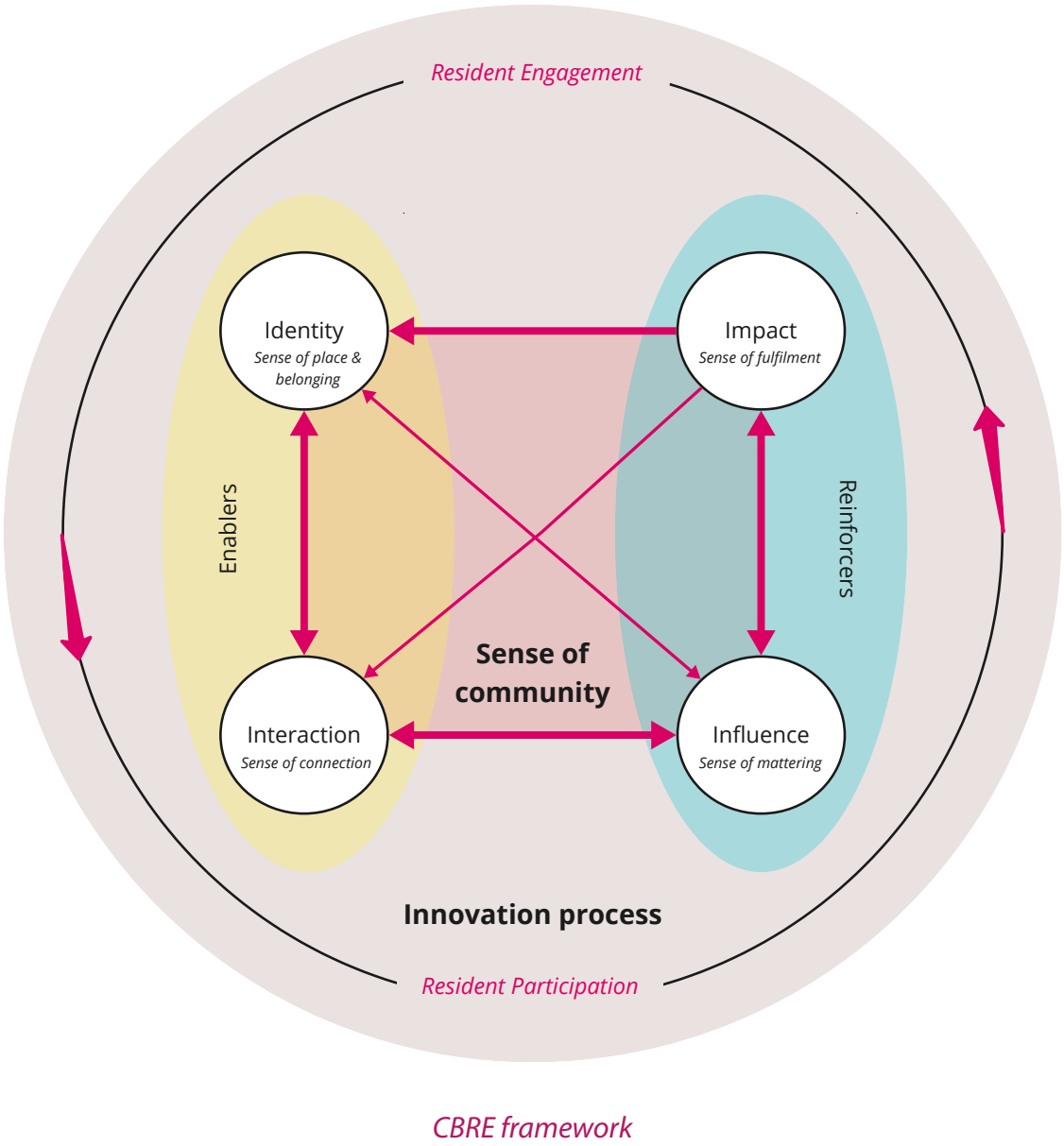
“Like as an outsider, either as an international person, sometimes you feel a bit outside of the community”

"(their current contribution makes them feel like)try person or alarm person”"

“I want to make an actual contribution...Because that’s why I live here(under such good circumstances, so I want to play my part in return).. This way i can.. It makes be feel useful, makes me feel like i matter

"(their current contribution makes them feel like)tester or lab rat"

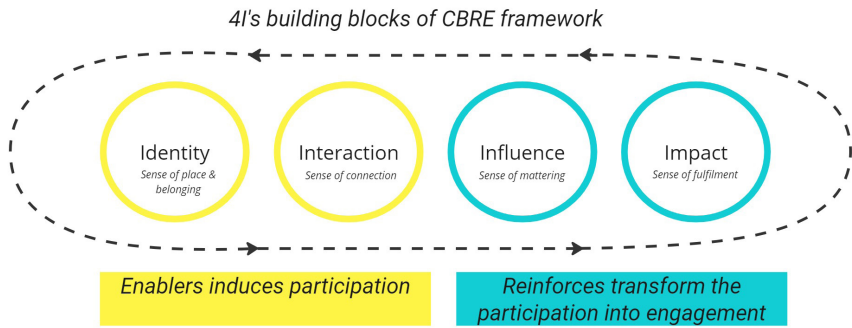
Community-based resident enagement framework (CBRE)



The core premise of the framework is that resident engagement is strongly tied to their sense of connection and belonging within the TGV community. Residents need to feel they are active, valued members of the community, that their contributions are integral to the larger goals of TGV, and that they are recognized for the value they bring. Furthermore, their interactions with the community and the innovation process should be positive, rewarding experiences that fulfil both personal and community needs. When these elements are in place, residents will not only engage more fully but also continue to do so over time, creating a positive cycle of participation.

- The framework identifies two categories of elements that influence resident engagement:
- 1. Enablers - factors that initially attract and engage residents, such as creating a sense of belonging, identity, and connection.
 - 2. Reinforcers - factors that help sustain and deepen their engagement over time, such as the sense of mattering and fulfilment.

Together, these elements form a continuous loop of engagement, where residents feel more connected, involved, and valued.



The 4 elements (4I's) - building blocks of resident engagement

1. Identity: Building a Sense of Belonging

Identity refers to how residents see themselves in relation to the TGV community, its values, and its mission. It is essential for residents to feel they are not just temporary occupants but integral members of a community that shares common goals. However, it is important to recognize that residents’ primary needs (e.g., comfort, safety, privacy) differ from TGV’s mission of innovation. For residents to align with the broader objectives of TGV, they must feel part of something larger—both emotionally and practically.

In this context, identity encompasses residents' personal motives, their knowledge and awareness of the group, attraction to the group, and their willingness to invest time and energy in the community. A strong sense of ownership—both over the group and the physical space of TGV—fosters deeper connections, while a collective mentality encourages residents to work together toward shared goals. Additionally, it includes a spiritual bond, rooted in a common passion that residents can identify with.

Factors:

- Role perception
- Clear communication
- Ownership
- Collective identity

How Identity influences resident engagement in TGV:

When residents identify with the TGV community, they are more likely to participate in innovation activities, as they feel a personal stake in the community’s success. They are more willing to align their behaviours and decisions with the community’s goals. Identity also fosters a sense of belonging, which is critical for developing emotional bonds with the community. This feeling of belonging helps residents engage more actively and feel motivated to contribute their time, feedback, and effort.

Strategies for building Identity:

- Clear communication: Providing clear, consistent information about TGV’s innovation activities, goals, and values helps residents understand their role in the broader mission.
- Alignment of resident’s role: Addressing uncertainties about residents’ roles—both as tenants and

- contributors to innovation—ensures they feel part of the group and understand their value to TGV.
- Sense of ownership: Residents should feel a degree of ownership over their living space and the activities happening around them. Efforts should be made to clarify their influence in the innovation process and their ability to shape outcomes.
- Community rituals and symbols: Holding events, festivals, and rituals that resonate with the community can create symbols of belonging and shared purpose, reinforcing the idea that residents are part of a collective identity.

2. Interaction: building a sense of connection

Interaction refers to the nature of the social relationships and connections formed among residents and with other stakeholders at TGV. The depth, frequency, and quality of these interactions significantly impact resident engagement. Positive interactions foster a sense of trust, mutual respect, and collaboration, all of which are essential for a thriving community. Interaction includes the emotional and physical investments that residents make when engaging in innovation activities, as well as their expectations for the outcomes of these interactions.

Interactions can take many forms, from casual social gatherings to formal feedback sessions. Strong social connections have been shown to increase residents' investment in the community and their willingness to contribute to its success.

Factors:

- Social relationship
- Transparency
- Trust
- Interaction quality and frequency

How Interaction influences resident engagement in TGV:

Residents are more likely to engage in the community and the innovation process if their interactions are positive, meaningful, and fulfilling. Trust and openness in communication between residents and TGV staff, as well as among residents themselves, can help create an environment where residents feel comfortable sharing feedback, raising concerns, and collaborating on innovation efforts. On the other hand, poorly organised or unstructured interactions can lead to disengagement and frustration, as residents may feel undervalued or ignored.

Strategies for facilitating positive interaction:

- Considerate planning : Activities that affect residents' daily lives, such as maintenance or testing sessions, should be planned well in advance, with clear communication and consideration for their schedules.
- Transparency: Maintaining open communication and sharing relevant updates about innovation activities builds trust and ensures that residents are well-informed.
- Safe spaces for feedback: Creating opportunities for residents to share their thoughts, both formally and informally, in an environment where they feel respected and heard is crucial.
- Shared social events: Hosting regular social gatherings, such as community drinks or resident networking events, strengthens bonds and helps build a sense of community.

3. Influence: building a sense of mattering

Influence refers to the sense of mattering—feeling both valued and able to add value. It reflects the degree to which residents believe they have a voice in the community and can shape its activities and outcomes. People are more likely to engage when they believe their input is important and that they can influence the group's direction. This includes an individual's perception of how they are viewed, the belief that their contributions to innovation are valued, and the recognition that their feedback leads to tangible changes.

Influence is a two-way process—for the community to influence residents and shape their behaviours and engagement levels, the residents need to feel that they can influence the community.

Factors:

- Recognition
- Participation
- Empowerment
- Feedback utilisation

How Influence affects resident engagement in TGV:

When residents feel valued and empowered and that their opinions are recognized, they are more likely to remain engaged in the community and the innovation process. An empathetic approach where they feel they are heard, their needs and efforts are noticed and a participatory approach, where residents are consulted and their feedback visibly acted upon, strengthens their

sense of agency and investment in the community.

Strategies for enhancing Influence:

- Show that they matter; show that they add value
- Invite genuine participation: Acknowledge their expertise and involve residents genuinely in activities.
- Empower Residents: Encourage residents to take up decision making in community related aspects (that doesn't affect professional work of TGV) through resident clubs, committees, or other platforms for input.
- Recognition: Acknowledge and celebrate the contributions that residents make to the innovation process, reinforcing their sense of influence and importance.
- Showcase feedback utilisation: Show residents how their feedback is being used by providing regular updates on changes made as a result of their input.

4. Impact: sense of fulfilment

Impact refers to the sense of fulfilment and satisfaction that residents experience from seeing the tangible and intangible rewards of their participation in the community and innovation activities. These rewards can be both tangible, such as access to new skills, opportunities, or incentives, and intangible, like a sense of personal growth, fulfilment, or contributing to a meaningful cause. Impact is not only reflected in the outcomes of innovation projects but also in the overall living experience at TGV.

This factor encompasses various elements that contribute to an individual's feeling of meaningful contribution and satisfaction. It includes rewards that acknowledge personal and collective achievements, fostering a sense of shared purpose and common goals. The success of the group and the expertise within the community further enhance feelings of accomplishment and progress.

Factors:

- Outcome
- Need fulfilment
- Rewards

How Impact strengthens engagement:

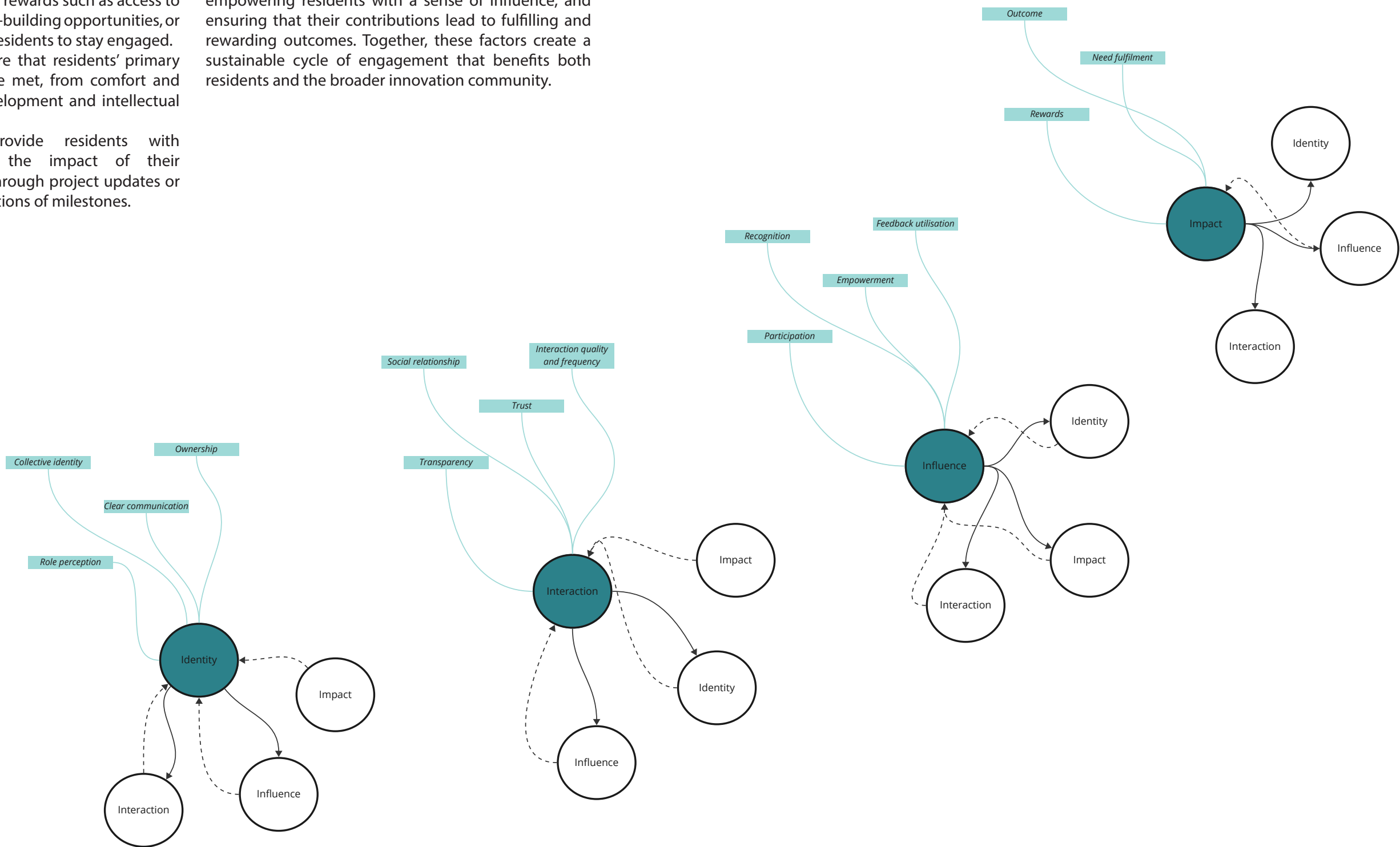
When residents can see the tangible results of their contributions, they are more likely to continue engaging with the community. Success, whether in terms of personal growth or witnessing the achievements of the

innovation process, reinforces their commitment and strengthens the bonds between residents and TGV. It is important for residents to feel that their contribution is impactful and that they witness it.

Strategies for maximising Impact:

- *Tangible rewards:* Offering rewards such as access to exclusive knowledge, skill-building opportunities, or incentives can motivate residents to stay engaged.
- *Fulfilment of needs:* Ensure that residents’ primary and secondary needs are met, from comfort and security to personal development and intellectual growth.
- *Share the success:* Provide residents with opportunities to see the impact of their contributions, whether through project updates or community-wide celebrations of milestones.

With these four elements (4I's) - *Identity, Interaction, Influence, and Impact* - this framework provides a comprehensive approach to fostering resident engagement within TGV. It encourages TGV to focus on building a strong sense of belonging and community identity, fostering positive and meaningful interactions, empowering residents with a sense of influence, and ensuring that their contributions lead to fulfilling and rewarding outcomes. Together, these factors create a sustainable cycle of engagement that benefits both residents and the broader innovation community.



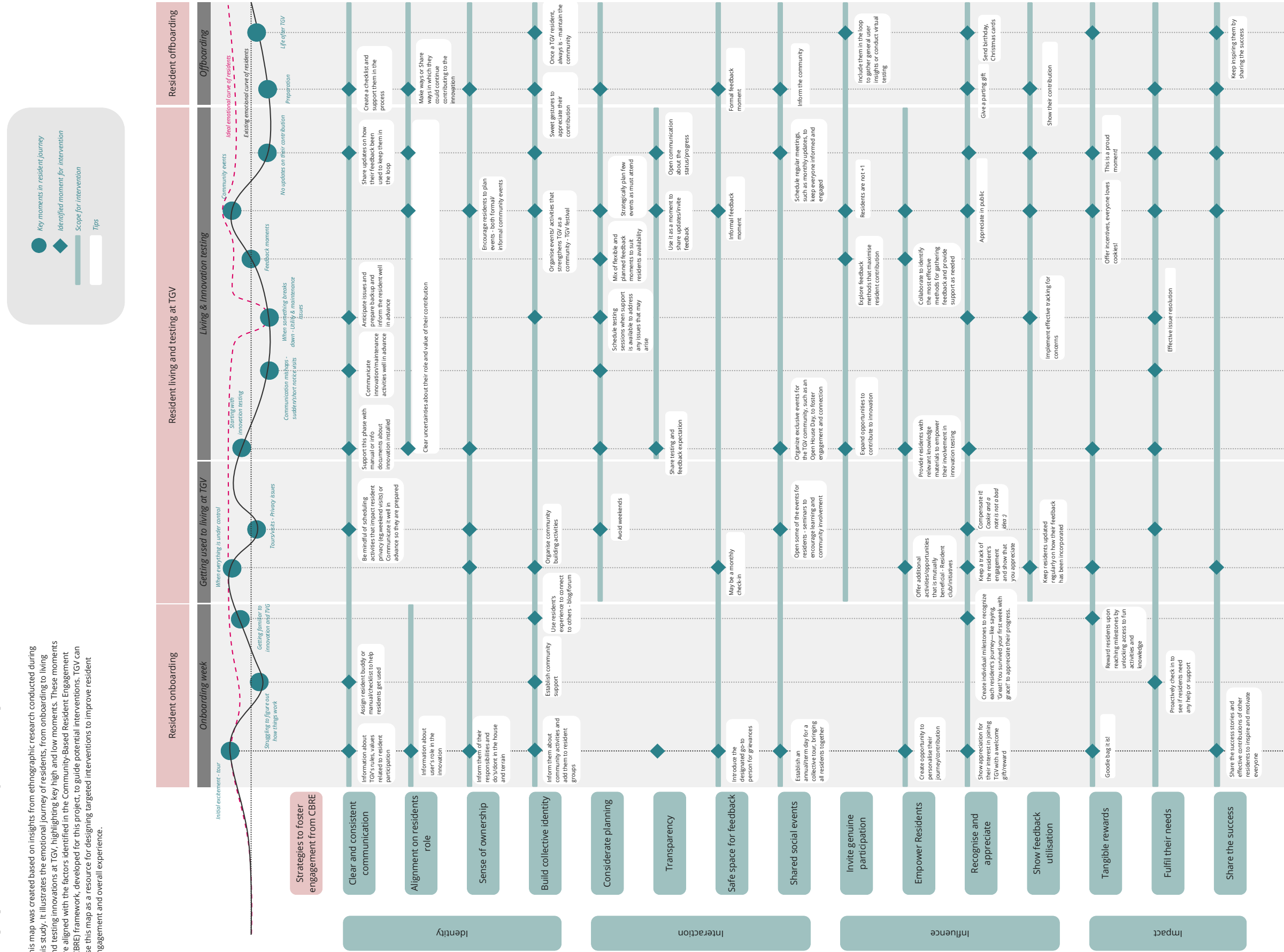
Factors, elements and how it influences eachother...

	Elements	Affect	Factors	Strategies
Fosters participation	Identity	Sense of belonging	Perception of resident's role Clear communication Ownership Collective identity	Clear communication: Providing clear, consistent information about TGV's innovation activities, goals, and values helps residents understand their role in the broader mission. Alignment on resident's role: Addressing uncertainties about residents' roles—both as tenants and contributors to innovation—ensures they feel part of the group and understand their value to TGV. Sense of ownership: Residents should feel a degree of ownership over their living space and the activities happening around them. Efforts should be made to clarify their influence in the innovation process and their ability to shape outcomes. Community rituals and symbols: Holding events, festivals, and rituals that resonate with the community can create symbols of belonging and shared purpose, reinforcing the idea that residents are part of a collective identity.
	Interaction	Sense of connection	Social relationship Transparency Trust Interaction quality and frequency	Considerate planning : Activities that affect residents' daily lives, such as maintenance or testing sessions, should be planned well in advance, with clear communication and consideration for their schedules. Transparency: Maintaining open communication and sharing relevant updates about innovation activities builds trust and ensures that residents are well-informed. Safe spaces for feedback: Creating opportunities for residents to share their thoughts, both formally and informally, in an environment where they feel respected and heard is crucial. Shared social events : Hosting regular social gatherings, such as community drinks or resident networking events, strengthens bonds and helps build a sense of community.
Fosters engagement	Influence	Sense of mattering	Recognition Participation Empowerment Feedback utilisation	Show that they matter; show that they add value. Invite genuine participation: Acknowledge their expertise and involve residents genuinely in activities. Empower Residents: Encourage residents to take up decision making in community related aspects (that doesn't affect professional work of TVG) through resident clubs, committees, or other platforms for input. Recognition: Acknowledge and celebrate the contributions that residents make to the innovation process, reinforcing their sense of influence and importance. Showcase feedback utilisation: Show residents how their feedback is being used by providing regular updates on changes made as a result of their input.
	Impact	Sense of fulfilment	Outcome Need fulfilment Rewards	Tangible rewards: Offering rewards such as access to exclusive knowledge, skill-building opportunities, or incentives can motivate residents to stay engaged. Fulfilment of needs: Ensure that residents' primary and secondary needs are met, from comfort and security to personal development and intellectual growth. Share the success: Provide residents with opportunities to see the impact of their contributions, whether through project updates or community-wide celebrations of milestones.

Now that you have a deeper understanding of resident experiences and insights from the framework, it's time to put that knowledge into action! Ready to start developing interventions to enhance resident experiences and boost their engagement? In the next section, you'll discover key moments where you can make a difference, a few inspiring ideas to spark your creativity, and practical tools to help you design solutions tailored perfectly to your context. Let's get started on making a positive impact!

Moments of Intervention
Opportunity map

This map was created based on insights from ethnographic research conducted during this study. It illustrates the emotional journey of residents, from onboarding to living and testing innovations at TGV, highlighting key highs and low moments. These moments are aligned with the factors identified in the Community-Based Resident Engagement (CBRE) framework, developed for this project, to guide potential interventions. TGV can use this map as a resource for designing targeted interventions to improve resident engagement and overall experience.

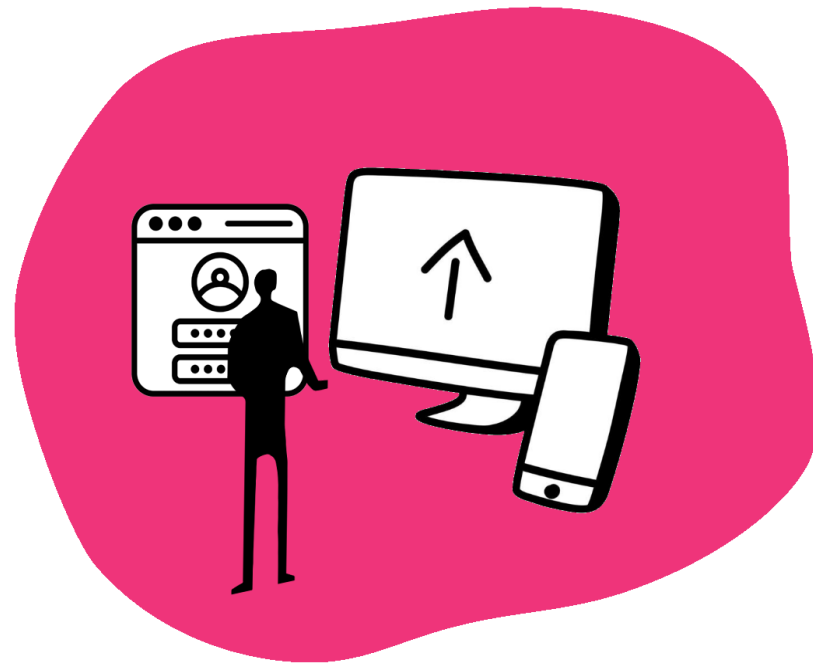


Find the intervention moment here...

How might we make it easier for residents to access and consume information about TGV and its innovations, while keeping them informed and streamlining communication to improve issue resolution?

Digital platform for residents

To simplify information and provide it in an engaging manner and streamline communication to improve issue tracking and resolution. This concept proposes a digital platform to deliver personalised information and streamlined communication to residents. The plan involves upgrading the existing TGV website to include user login, allowing residents to access tailored information and features that make their innovation testing process and communication more organised and efficient. This simplified version of the earlier virtual TGV concept (early concept 1) focuses on addressing residents' needs and enhancing the value this platform can offer. Additionally, the platform will host resources related to innovations, creating a comprehensive knowledge base that will benefit the field over time. Residents will be able to explore installations in other houses, participate in virtual testing, and provide feedback, increasing their engagement with the innovation process. The platform will track residents' involvement in innovation activities, projects, and feedback, recognizing their contributions.

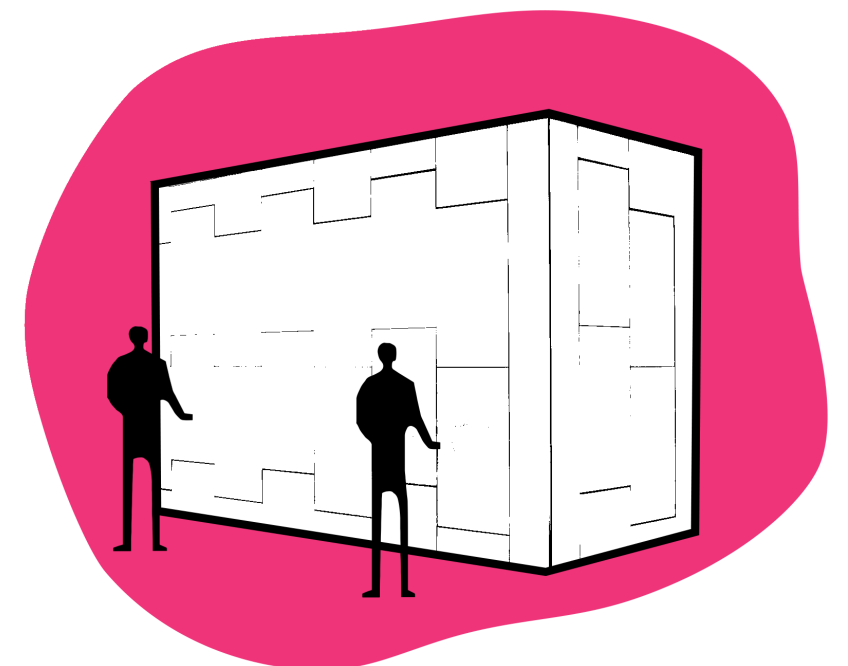


For inspiration

Interactive digital screen/wall that serves as a vibrant community hub

In addition to providing awareness of what's happening on the terrain, it also addresses the need for residents to have a space for interaction. The screen is accessible to everyone, with content tailored to individual users. Residents who sign in can choose to view updates and announcements either on the screen or privately on their phones via QR codes. It also offers virtual simulations of TGV's innovations, allowing visitors to explore these innovations like never before and provide feedback, helping innovators better demonstrate their work to guests.

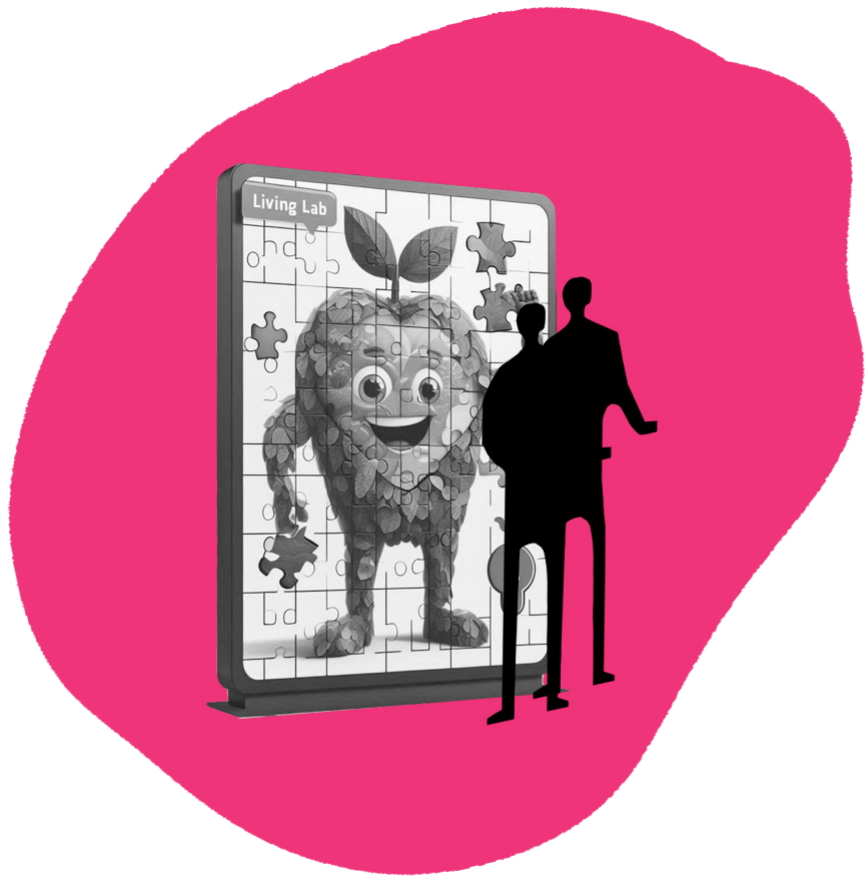
The screen is a natural gathering spot where residents can hang out, interact, and take part in spontaneous community activities. It supports virtual meetups, workshops, and social events, and can host live video streams, virtual reality experiences, or augmented reality interactions. For entertainment, the screen offers a variety of digital games and challenges, including quizzes, puzzles, and creative activities, which help encourage community participation and the screen can also be transformed into a community hub for movie nights, interactive storytelling, or live performances. It also keeps residents informed with real-time updates, emergency announcements, and celebratory messages like birthdays and achievements.



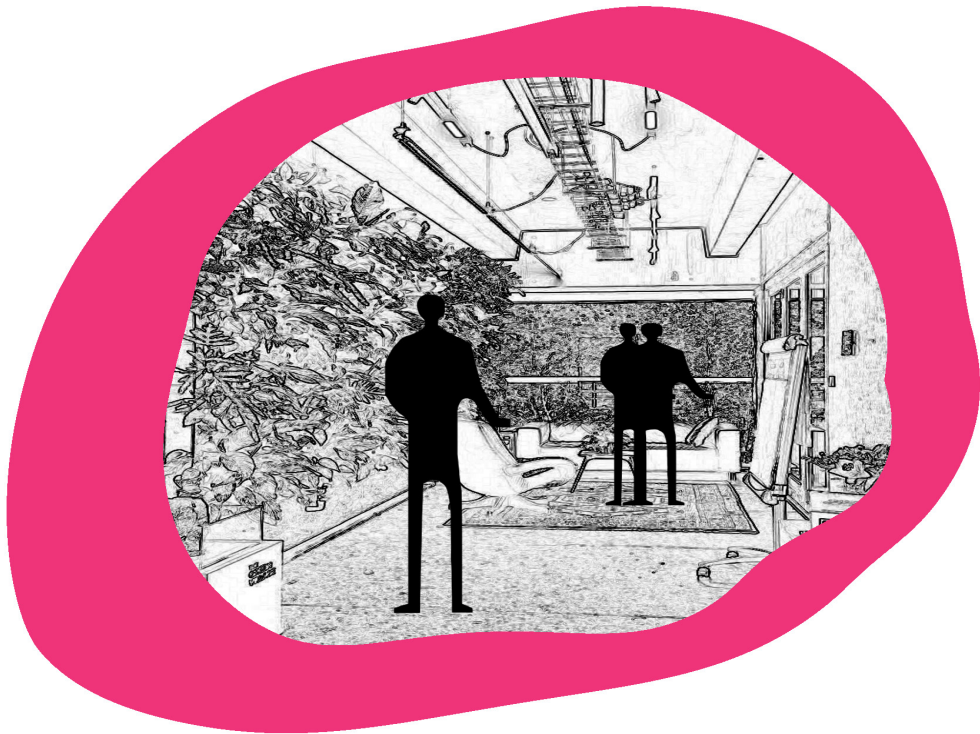
How can we foster stronger connections between residents and the human side of TGV, encouraging a deeper association with the community?

TGV Mascot

The idea is to humanize TGV by introducing a mascot—an engaging symbol that represents and unites the entire TGV community. A mascot can create a shared identity, build emotional connections, and promote a sense of collective ownership among residents, employees, and the organization. By serving as a relatable and tangible representation of the community, the mascot would reinforce the idea that everyone is part of the same "pack," encouraging deeper engagement, participation, and a stronger sense of belonging within TGV.



How can we help residents feel more at home and foster a sense of ownership within TGV, while also encouraging them to connect with the community beyond its role as a living lab?



Communal Space for Residents - Repurpose MOR

The goal is to create a multi-functional communal space for residents—a place where they can relax, socialise, play, and cook at their convenience. This idea emerged from initial feedback from residents who expressed a preference for casual interactions with their neighbours. Currently, the MOR building at TGV, which is temporarily used as an office, includes a kitchen, laundry, bathroom, and an outdoor patio. This facility is accessible to residents only after office hours on weekdays and during weekends. The proposal is to repurpose the MOR building into a fully accessible communal space for both residents and employees. By removing work-related activities from this area, it can be transformed into a versatile space that supports various activities, such as recreation, quiet reading, movie viewing, or even alternate workspaces for the residents. Residents should be able to use this space freely, without needing a specific reason, and engage in activities that suit their interests and needs.

Third spaces

The idea is to transform underused spaces into vibrant “third spaces” that promote community engagement and social interaction. While TGV already hosts various innovations across its terrain, these installations could be more actively utilized by the community. By introducing curated activities around these innovations, the spaces can evolve from passive locations into active hubs where residents can gather, interact, and build connections. This approach not only strengthens community bonds but also provides researchers with more opportunities to gather feedback on the innovation installations, enhancing both community involvement and the innovation process.

How can we empower residents and make the innovation process more collaborative?

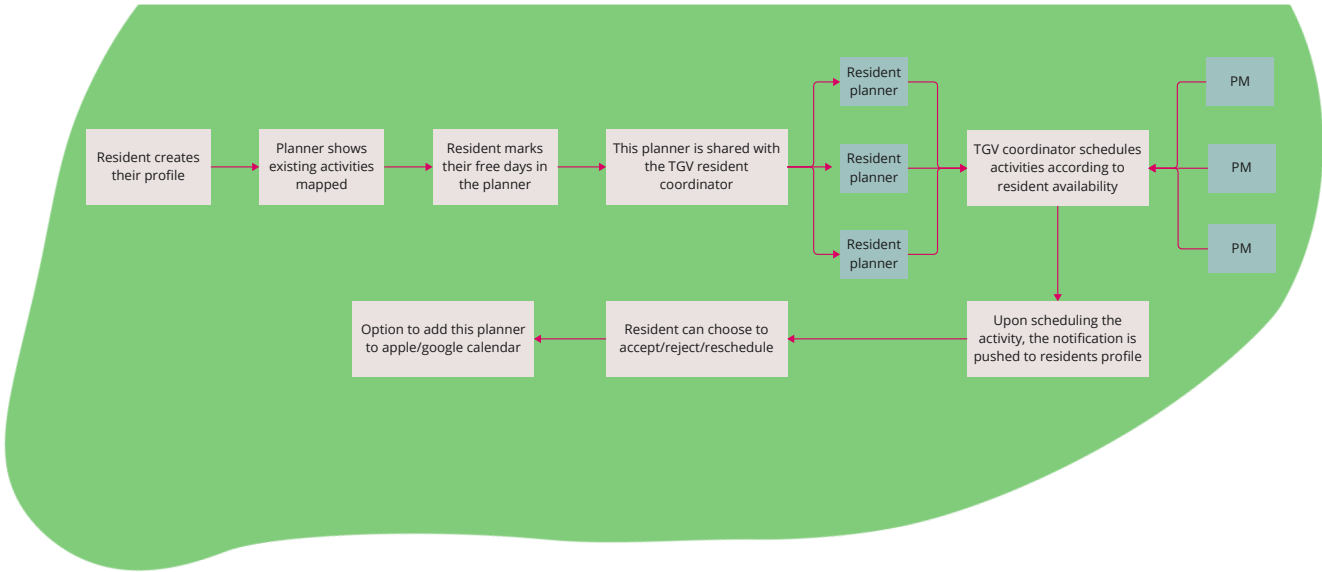
Adaptive Scheduling tool for enhanced collaboration and real time inputs

The idea is to involve residents in the planning and scheduling of innovation testing, feedback, and maintenance activities, making the process more collaborative. This approach ensures that residents are better prepared, informed, and have the flexibility to adjust activities to fit their schedules, similar to how one would manage tasks when owning or renting a home. While it may not be entirely possible to replicate this level of control in a living lab environment, involving residents in the planning process can foster a sense of ownership and lead to more positive outcomes.

This tool aims at improving communication and coordination between residents and project coordinators. Currently, project managers (PMs) individually reach out to residents to inform them of upcoming activities, which can often lead to confusion among residents due to the challenges of coordinating with multiple contacts. To address this, I propose the introduction of a new role: the Resident Coordinator. This position would serve as the single point of contact for residents, acting as their advocate and ensuring they are supported in living comfortably while contributing to the innovation process.

Through this tool, residents will receive notifications of all scheduled activities as requests, with the flexibility to re-schedule, accept, or reject certain optional activities. A timeline feature will keep residents informed of upcoming activities well in advance, helping them plan accordingly.

Each resident will have a personalised digital profile, featuring a planner where they can mark their available days in advance. This planner will be accessible to the TGV Resident Coordinator, who will use it to schedule activities that fit residents' availability. Furthermore, the planner can be integrated with Apple or Google Calendar, allowing for seamless synchronisation with residents' existing schedules. The tool could be available as an app, part of the platform, or as a community planner in the interactive wall.



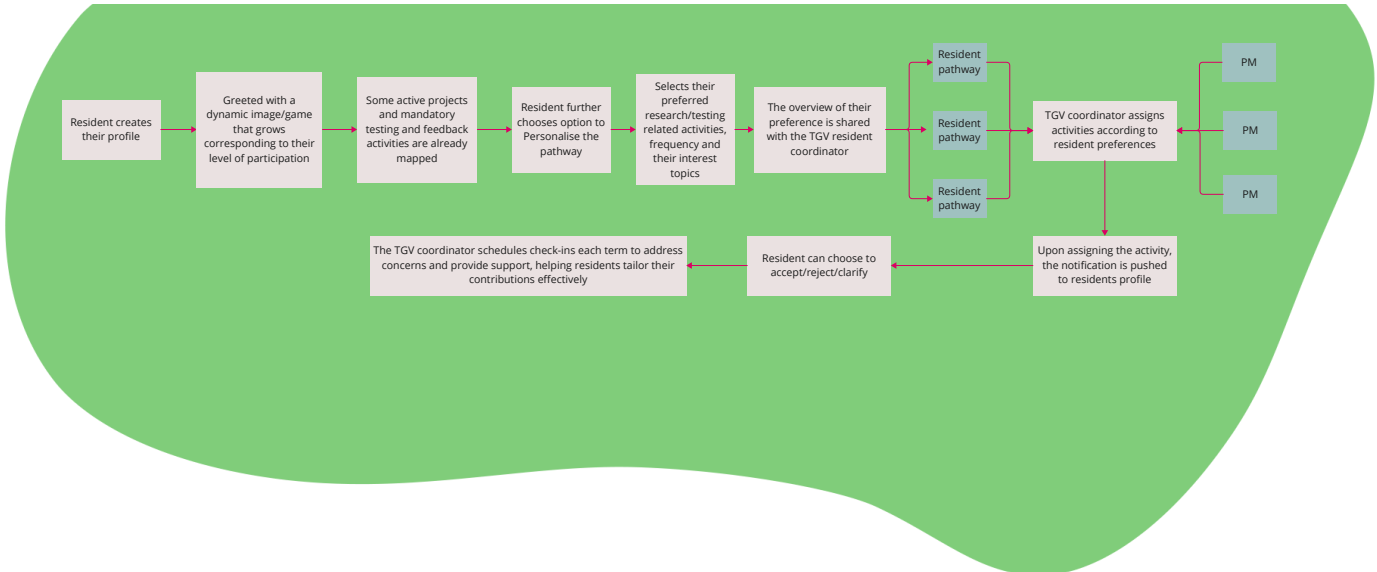
How the planner would work

Resident's pathway to innovation

The central idea of this concept is to shift the resident's role from a passive participant to an empowered contributor in the innovation ecosystem. By providing the necessary structure, resources, and autonomy, residents can optimise their contributions, leading to more effective and inclusive innovation processes within living labs. This idea is based on the role mechanism concept discussed in the literature. According to Herrmann et al. (2004), role mechanisms determine the development of the role of users. Users can become creative consumers and proactive user innovators in living labs through two main approaches: role taking and role making. Role taking refers to an actor adopting a predefined role, with tasks and responsibilities outlined by another party, known as the role sender. Role making describes how an actor interprets and modifies the expectations of others into specific actions and behaviours (Turner, 1988). In this process, the actor actively defines and shapes the role according to their own contributions and interpretations.

A central feature of this concept is the creation of a personalised plan for each resident, allowing them to set their own goals, access feedback, and track their progress. Residents will have the freedom to explore a wide range of activities, testing and feedback methods (such as interviews, co-creation sessions, focus groups, etc.), and choose their preferences. They can also specify how frequently they would like to be involved, allowing them to consider their personal commitments and plan accordingly. Additionally, they will have access to knowledge resources and support features that help them gain knowledge in relevant topics, enabling them to engage with the content more confidently and offer informed feedback.

By integrating this feature into the resident onboarding process, it ensures that residents understand their roles and expectations from the outset. Quarterly check-ins with the TGV resident coordinator will help align resident interests with ongoing innovation and testing demands, offering TGV an opportunity to support them in navigating this pathway, making it a more collaborative experience. The tool could be part of the platform, session design or a feature available in the interactive wall.



How the resident pathway to innovation would work

How can we help residents connect more deeply with TGV as a place ?

TGV ExploreAR an AR integrated experience tool that guides residents to experience TGV in new ways

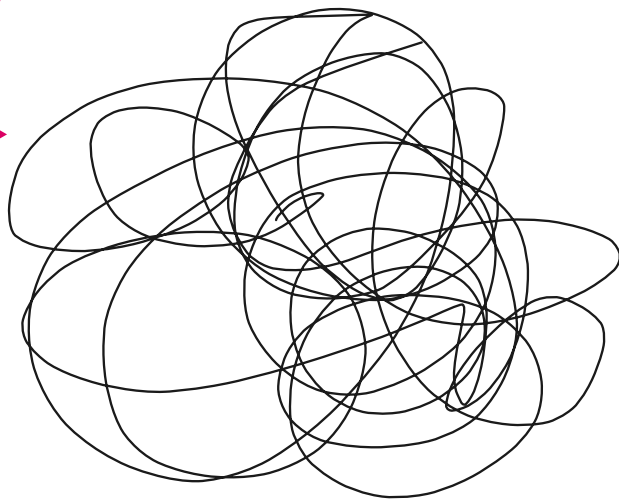
Another challenge intrinsic to the nature of the living lab is its multi-functionality—TGV serves as a living space, a workplace, a venue for tours and events, and a social hub. In juggling these diverse roles, TGV has unintentionally created an invisible barrier that leaves residents uncertain about whether they can freely access and use certain resources. This lack of clear permission makes residents feel hesitant to fully embrace the space as their own. This concept aims to empower residents to explore and experience TGV with confidence through the use of augmented reality (AR). TGV ExploreAR is an AR-integrated experience tool designed to guide residents in discovering TGV in new and engaging ways. The tool allows residents to choose from pre-set experiences based on their current mood or needs (such as "Camping at TGV," "I want to get some vitamin D," or "I am feeling social"). It then generates a digital path overlaid on the map of TGV/TU Delft that residents can follow, updating in real-time as they move and providing prompts about activities and explorations available at each spot.

This tool not only offers clear guidance on where to go and what can be done but also includes features that allow residents to add to existing trails or create new ones. The goal is to help residents experience TGV in fresh, exciting ways, fostering new associations and memories that, over time, will strengthen their sense of connection to TGV.



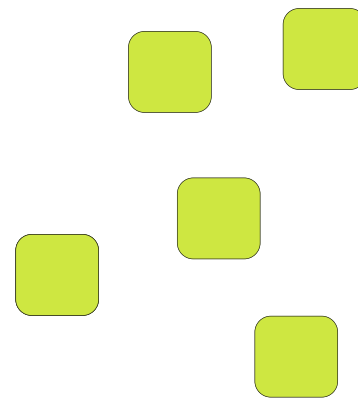
Quick Insight & Impact Templates

Helps to understand the problem and its impact



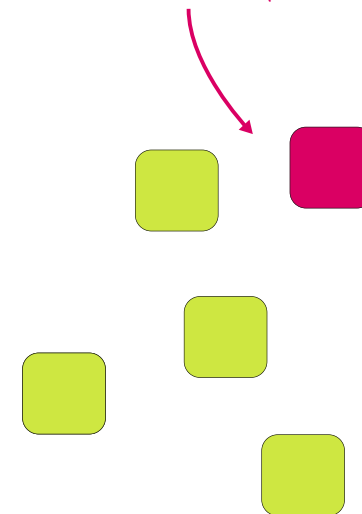
Problem identification

TP - 1



Idea generation

Evaluate the idea for maximum impact



Idea evaluation

TP - 2

Understanding the challenge with the help of the framework

1. Identify the challenge

What is the challenge? Write it down in a line or 2 and use the framework to get to the roots of the problem and how it could affect resident engagement.

Lets dive deeper!

In the following steps, we will dive deeper to understand the implications of the problem using the Resident engagement elements (the 4 I's: identity, interaction, influence, and impact) and from different perspectives, including those of the residents, stakeholders, and TVG. Afterward, we will reflect on these insights to grasp the significance of the issue and plan the next steps toward resolution.

Resident engagement elements 4I's

- Identity
- Interaction
- Influence
- Impact

Which element (Identity/interaction/influence/impact) do you believe is most impacted by the problem for residents?

Describe how it is affected in the box(es) to the right. You may come up with as many aspects and fill them up in the respective element boxes. Feel free to use post-its if helpful.

How does it influence other factors for the residents

Consider the aspects mentioned in the previous step. Use the framework to explore the implications for residents and how they are impacted by the problem. Identify the elements (identity, interaction, influence, and impact) that are most affected by the problem. If you discover new connections, map them accordingly.

Tip: Focus on one element at a time, and think from all possible perspectives of the residents

How does it affect the other stakeholders?

List all the stakeholders you believe will be impacted by the observed resident behavior or the identified challenge. Then, reflect on how the points mentioned in the previous step (identity, interaction, influence, and impact) affect these stakeholders. Each aspect could cause a different impact or a collective impact, but try to dissect and think deep

Stakeholder 1

Stakeholder 2

Stakeholder 3

3. Resulting impact on stakeholders

How do you (re)define the challenge?

Consider the insights gained from previous discussions and analyses. Reflect on the various perspectives of residents and stakeholders, along with the implications identified. Based on this reflection, articulate a clear and specific challenge statement that captures the core issue. This statement can represent a single challenge or multiple, more specific challenges. Be careful not to oversimplify the problem; doing so may require you to revisit step 1

How significant is this issue to address?

Reflect on the implications mentioned in the previous steps from both the residents' and stakeholders' perspectives. Based on this reflection, assess the significance of addressing the issue and categorize it as low, medium, or high.

4. Reframing the challenge

What would be a suitable measure to resolve the challenge?

Identify the quick logical directions that could address the problem, such as changes in processes, incentives, or workflows.

Note: Use these directions as a foundation to ideate further and develop suitable interventions that effectively tackle the identified challenges.

Who should be involved in addressing the challenge?

Consider the various stakeholders, residents, and team members who can contribute valuable insights, resources, and support. Identify individuals or groups whose participation is essential for ideating and implementing the interventions.

Note: Ensure a collaborative approach to problem-solving

Anything else to consider?

By the end of this activity, you should have a more clearly defined challenge, considering the perspectives of residents and stakeholders, and a set of directions to address it. You should also have identified who should be involved in the process. Based on this, engage in individual, group, or multi-stakeholder ideation sessions to generate well-rounded ideas for the challenge defined in this activity.



Evaluating the idea(s) with the help of the framework

1. Idea

What idea would you like to assess? Write down the important aspects/features of this idea and use the framework to evaluate its potential to foster resident engagement

Let's Evaluate the Ideal!
In the following steps, we will thoroughly evaluate the proposed idea by assessing its features, feasibility, and potential impacts. We will examine how the idea aligns with the needs of residents and stakeholders, as well as its capacity to deliver meaningful value across the four elements of the framework (the 4 I's: Identity, Interaction, Influence, and Impact), which are the building blocks of resident engagement. Through collaborative discussions, we aim to ensure that our decisions are well-informed and strategically aligned with the resident engagement framework, laying the groundwork for effective implementation.

Resident engagement elements 4I's

IdentityInteractionInfluenceImpact

Which element (Identity/Interaction/Influence/Impact) do you think this idea focuses on for residents?

Describe how it is affected in the box(es) to the right. You may come up with as many aspects and fill them up in the respective element boxes. Feel free to use post-its if helpful.

How does it influence other factors for the residents

Consider the aspects mentioned in the previous step. Use the arrows as guides to explore whether the identified aspect further impacts any of the other elements (Identity, Interaction, Influence, or Impact). If so, write it down in the respective box. If you discover new connections, map them accordingly.
Tip: Focus on one element at a time, and think from all possible perspectives of the residents

How does this solution add value to other stakeholders?

List all the stakeholders identified during the first activity (understanding the problem), and feel free to add new ones if necessary. Consider how the proposed solution may directly or indirectly (through its impact on residents as mentioned in the previous step) - adds value to each stakeholder. Consider the ways in which improving Identity, Interaction, Influence, and Impact for residents also benefits each stakeholder.

Stakeholder 1

Stakeholder 2

Stakeholder 3

Which features or elements of the idea would facilitate the value discussed above?

Identify the specific features or elements of your proposed solution that will help deliver the value to stakeholders. Consider how these components will enhance Identity, Interaction, Influence, or Impact for residents and, in turn, benefit the broader group of stakeholders.

Is the feature or element feasible?

Evaluate whether the identified feature or element of the solution is realistic and achievable. Consider factors such as resources, constraints, stakeholder resistance, lack of resources, timeline delays, or unforeseen dependencies. Evaluate how these risks could be addressed or mitigated. Consider potential strategies that mitigation strategies could be put in place to address them

What are the potential risks or challenges?

Consider any obstacles or issues that might arise during implementation. These could include technical limitations, budget constraints, stakeholder resistance, lack of resources, timeline delays, or unforeseen dependencies. Evaluate how these risks could be addressed or mitigated. Consider potential strategies that mitigation strategies could be put in place to address them

How will this feature/element be maintained or sustained over time?

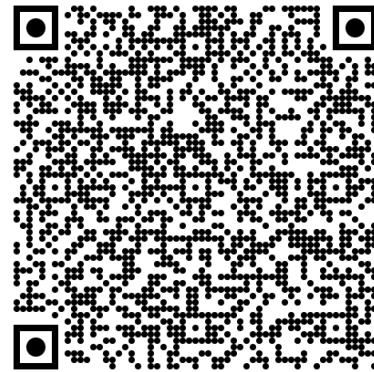
Consider the resources, personnel, budget, and processes needed to ensure the feature/element remains effective over time. Think about monitoring, updates, or partnerships that will be required to keep the feature effective and relevant in the long run.

What is your decision?

Based on the discussions and evaluations, determine whether this idea will be pursued moving forward



To learn more about the research, scan the QR code and refer to the graduation project.



Scan the QR code to access the actionable tools digitally.

***Let's work towards a sustainable future
together!***



