



DESIGN FOR CITY PLANNING

***Cultivating Planners' Interest
in Adopting Design Methods
in Planning Meetings***

YIN-JEN ANGELA WANG



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A thesis submitted to the School of Design, Carnegie Mellon University,
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YIN-JEN ANGELA WANG | Author

Candidate for Master of IxD 2019, Carnegie Mellon University

KRISTIN HUGHES | Primary Advisor

Associate Professor, School of Design, Carnegie Mellon University

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Abstract

This thesis project explores opportunities of bringing human-centered design methodologies to long-term city planning, a policymaking process with a framework that resembles the divergent-convergent double-diamond framework of design thinking but with executions that allow little ambiguity and iteration—key principles of human-centered design. In particular, the thesis investigates “meetings” as a particular context in which design methodologies can be introduced and utilized.

The thesis includes three core findings: (1) contextual factors that contributed to the success and failure of long-term city planning processes adopting non-conventional approaches; (2) pain points and elements of inefficiencies in planning meetings; and (3) design elements that attract and motivate city planners to adopt new (design) approaches. Together, the findings can inform designers or planners to better garner interest in human-centered design and to maximize success of applying design methods in planning meetings.

The thesis ultimately proposed a social experience that introduces these core findings through game play and post-game activities. The final product—“The Death and Life of Great Planning Meetings”—is a multi-player card game and facilitation tool designed for planners, designers, and anyone who has been involved in planning meetings to discover their institutional capacity for human-centered design.

Introduction

Public sector innovation has been under the spotlight as demands for new approaches arise over the past decade. Citizens are expecting more efficient, streamlined, and tech-enabled ways of interfacing with public services; businesses are building products that fundamentally change how people conceptualize transportation and housing; the environment is in dire need of solutions for climate change. Amongst all departments in the public sector, city planning, the strategic arm for long-term city growth, is under constant pressure to regulate and accommodate these potential new approaches that ultimately help meet community goals. In order to do so, city planning itself needs to innovate as well.

But what is public sector innovation? And what does it entail for the field of city planning? Public sector innovation, as defined by Bason (2018), is “the process of creating new ideas and turning them into value for society.” In the context of city planning, the process is writing and implementing policies. The fundamental power uncoupling between policy-making and implementation, however, limits city planning’s reach and causes the problematic gap in the policy cycle, making innovation all that much harder for city governments.

Rather than directly confronting the organizational structure, this thesis took a more pragmatic stance and explored how design could bring new capacities within this uncoupled structure. Specifically, the thesis looked into how planners may use design methods to better maintain policy intent in their planning (policymaking) effort. The thesis ultimately proposed a game-based experience to empower planners, helping them understand their planning contexts so they can adopt design methods with lower risk of failure. The final design is meant as a first step towards a full-scale adoption of a more human-centered, flexible, and resilient policy cycle.



Acknowledgment

I would like to first express my deepest appreciation to my advisor, Kristin, who has supported my passion and guided me throughout my graduate years. Thank you for being there for me when I needed it the most.

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Finally, to my family, my MDes cohort, my dearest friends, and Matt — thank you for your unconditional support throughout my journey.

This thesis document adopts Public Sans, an open-source typeface designed by Dan Williams for the US Web Design System. It is paired with Georgia.

PART 1

Design, Policy, and City Planning

CHAPTER I

Design for the Public Sector

1.1 DESIGN'S EVOLVING ROLE IN THE PUBLIC SECTOR

The definition, role, and utility of design in the public sector has evolved significantly in the past century and across regions. From the design of physical structures to design as an innovation methodology, design is no longer just an add-on but, for a growing number of municipalities, a discipline that is incorporated into the organizational work flow (UK Design Council, Danish Design Centre, Design Wales, & Aalto University, 2013). The very meaning of design, however, is often interpreted differently on both an individual and organizational level. Table 1-1 lists the different practices, in approximate order from traditional to emerging, that are commonly referenced as “design” in the public sector.

In the past decade, several global trends have triggered design's role in the public sector from producing graphical and tangible elements to producing products, services, and research using new frameworks such as design thinking.

Firstly, Kimbell and Bailey (2017) argued that the recent organizational trend of increased

flexibility (contemporary capitalism, decline of unions, etc.) and provisionality (project-based organizing and flat hierarchies) in the public sector have set the landscape within which design has become more visible (Lash & Urry, 1998 and Blotanski & Chiapello, 2005, as cited in Kimbell & Bailey, 2017).

Secondly, in light of consumer firms' success in using design-based approaches to rethink customer experiences, many local and regional governments have gained particular interest in design for public services and social innovation (Kimbell, 2016).

Last but not least, technology advancement and the consequential cultural shift has pushed governments to create new channels for engagement. One example is President Obama's Open Government Directive (OGD) in 2009, which resulted in a surge in web and communication design opportunities (Bason & Schneider, 2014) to improve public website accessibility (USASpending.org) and various data visualization initiatives (Smith & Maron,

2015). Technological developments and new organizational practices together, as described by Thrift, generated "spaces of anticipation" that are "a set of becomings which kept the

possible possible and thereby initiated a new style of doing business" (Kimbell & Bailey, 2017).

Table 1-1 : Design Practices in the Public Sector

Practices	Domains of Interest	Common Artifacts or Outputs
Urban Design	Management and creation of built environment, place-making, social equity and economic viability	Development plans & policies, zoning, site plans, etc.
Graphic & Communication Design	Visual representation of information, including instructions and policies	Pamphlets, posters, diagrams, flow charts, etc.
Product & Service Design	Implementation of existing policies through appropriate products and services	Products, services, interactions, etc.
Design Research	User research, participatory design, etc. as research methods	Findings and insights that support policy development
Design Thinking	Human-centered problem scoping and iterative approach to policy development	New policy development frameworks

1.2 DESIGN'S BENEFITS TO THE PUBLIC SECTOR

The public sector's interest in design has been further fueled by the growing publications that articulate design's benefits in public policies, services, and governance. The benefits can be broadly summarized in the following categories: purpose, process, and methods.

Purpose

Traditionally, a policy making or service creation effort is initiated in response to a defined problem or a predetermined order. A design approach challenges this norm by proposing to re-scope the problem or to inquire problems that are yet to take shape or that embeds any innovation potential.

For instance, HealthCare.gov, the online insurance marketplace, was built because the administration firmly believed that an insurance exchange platform was the solution to health care (Goldstein & Eilperin, 2013). The website would then undergo a painful path of technical maintenance to eventually make the vision come true, all at a hefty cost of citizens' trust (Meyer, 2015). Had it scoped out the institutional capacity and complexity in the

beginning, the policy implementation would have avoided much of the damage along the way.

Process

Arguments under this category challenge organizational and managerial shortcomings of governmental practices. In particular, design critiques the linearity and segmentation of existing processes and advocates for a more integrated, connected, and iterative process in which design is embedded throughout.

Methods

Method-based arguments, while limited in scope, are often the most tangible, accepted, and easy to digest for public sector employees. The overarching themes for design methods include people-centered inquiry, civic engagement and participation throughout the process, and the ability to make use of qualitative information.

Table 1-2: Comparison — Traditional v.s. Design Practices

Shortcomings of Traditional Practices	Strengths and Promises of Design-led Approaches
Purpose	
Many policy efforts focus on solving isolated problems at hand (firefighting), resulting in disjointed policy landscape.	Designers inquire the root causes and fundamental needs behind challenges at hand to reframe the policy goals.
Services and policy are too often designed for a notional average user in an average situation.	Design takes account of extremes, helping to ensure solutions cover a wide range of users and scenarios. Designing for extremes often leads to more innovative and inclusive solutions.
Policy investigation is most often deployed when the goals are to either optimize existing services or to manage risks.	Design-led approaches are deployed the goals are to innovate and mitigate risks and uncertainty.
Process	
There is separation between policy makers and policy implementers, causing incoherent experience for citizens.	Design connects the dots between policy design and delivery and considers them concurrently rather than sequentially.
The policy making process is highly structured, one-directional, linear, and top-down.	Design works simultaneously in several directions, neither top-down nor bottom-up but rather crisscrossing through an organizational system.
Siloed governmental structure makes it hard to gather relevant specialists from across departments and outside of the government.	Design offers effective ways to establish and facilitate multidisciplinary collaboration.
Citizen engagement is either lacking, ineffective, or poorly executed.	Design utilizes various research techniques to identify citizens' needs and consistently position citizens at the core of the process.
Methods	
Government-led pilots are often too large in scale, which can incur considerable risk and costs.	Design processes create low-cost, small-scale prototypes to test solutions and allow "smart failure".
Polymaking traditionally rely on abstract data drawn from the past.	Design processes are informed by quantitative data and inspired by qualitative data about citizens.
Using primarily written communications, including text and numbers, increases the risk of misinterpretation, overlooking important information, and disengagement.	Design processes utilize sketches and diagrams to make problems tangible and data visual. Visual elements help convey the relationships between interrelated elements.

Source: UK Design Council, 2013; Junginger, 2014; Junginger, 2017; Nesta, *Design for Europe*, & IDEO, 2017.

Public Innovation Labs

Various experimental units, name as “Public Innovation Labs” by Junginger (2017), are small initiatives within the government that seek to introduce ideas and concepts of design thinking and practices in to the government work. Labs across municipalities have varying degrees of executive power depending on their purpose and relative position to central government (McGann, Blomkamp, & Lewis, 2018). Across the spectrum, however, these labs generally focus on both citizen participation and efficiency within the government (Bason & Schneider, 2014). Other shared characteristics include significant autonomy in setting unique work methods, “safe space” for experimentation, and the status as “change agents” (Schuurman & Tönurist, 2017). As of May 2019, there are over 100 labs listed on the Government Innovation Lab Directory of Apolitical, a global learning network for governments (Apolitical, n.d.).

Funded Innovation Projects

The field of philanthropy has a long history of funding projects that have the potential to produce significant social returns (Kasper & Marcoux, 2014). In particular, more foundations in recent years have rethought their approach in funding innovation, warming up again to more transformative (high-risk, high impact) and experimental (iterative, fail-and-learn) projects (Kasper & Marcoux, 2014; Sataline, 2012). Many of these funded projects are free to adopt design research methods, even if the result may not be as clear and quantifiable — a preferred outcome in previous generations. Some foundations even partnered with design firms to provide design knowledge or design support to funded projects. Examples include Acumen and IDEO (Acumen, n.d.) and Robert Wood Johnson Foundation and Greater Good Studio (Raising Places, n.d.).

Lab • OPM

US Federal

Policy Lab

UK

SGMAP

France

MindLab (closed)

Denmark

New Urban Mechanics

Boston, MA

Laboratorio Gobierno

Chile

Raising Places

Robert Wood Johnson Foundation

100 Resilient Cities

Rockefeller Foundation

Design in Public Sector Programme

Design Council x Local Government Association

Pilot Programs

A pilot program is a common mechanism with which municipalities temporarily launch policies or alteration of public spaces to gather public feedback before committing to a permanent change. Pilot programs are less of a “prototype” than a “test” in that they often have rather complete concepts and simply lack the longitudinal data to verify their effect. Some pilot programs have the same content throughout its deployment; others have the content or details adjusted based on public feedback. Despite their limited level of flexibility, pilot programs demonstrate the public sector’s interest in experimentation and evaluative approach in policy making.

Design Consultancy

Municipalities may hire external (often non-profit) design organizations to bring in design knowledge. These design organizations support specific segments of a design process, including public outreach and participatory design. They may also be tasked to incorporate design approaches throughout the projects. Some design organizations, such as UK’s Design Council provide free or discounted design support to selected municipalities through external fundings.

Transportation

Micro-transit
Parking

Land Use

Parklet
Sunday Streets
Pop-up Shops
Accessory Dwelling
Unit

Design Council

UK

ThinkPlace

Global Locations

Center for Urban Pedagogy

Brooklyn, NY, USA

Greater Good Studio

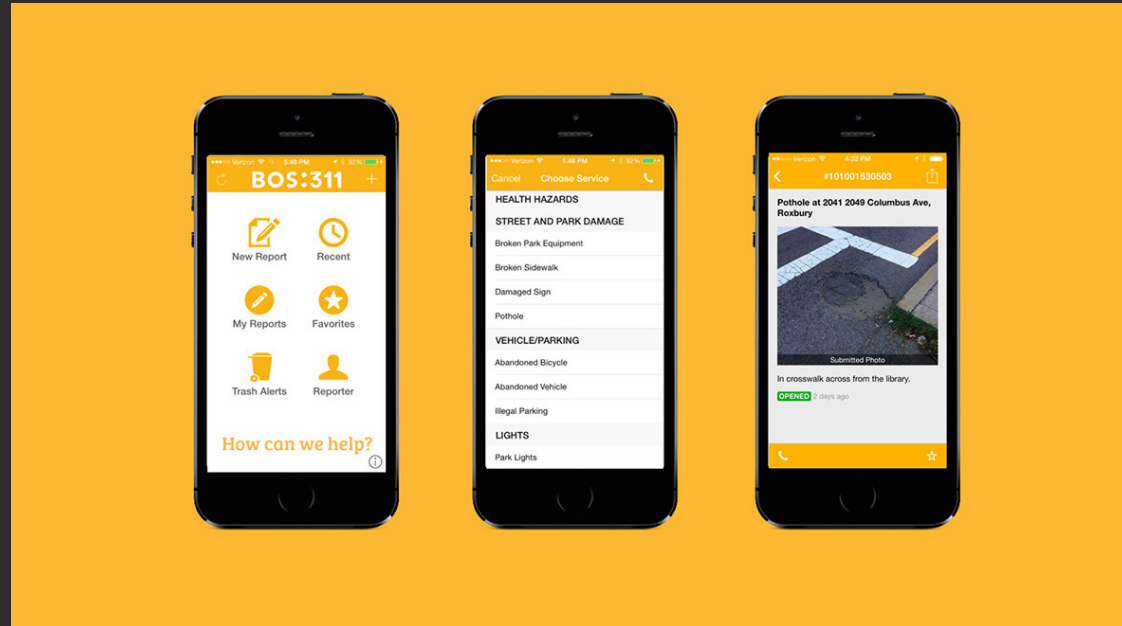
Chicago, USA

CivicMakers

San Francisco, USA

MAYOR'S OFFICE OF NEW URBAN MECHANICS

The Mayor's Office of New Urban Mechanics (MONUM) in Boston, MA was established in 2010 under Mayor Thomas M. Menino's civic research and design team. It is one of the first in-house innovation teams in city governments in the United States (New Urban Mechanics, n.d.). With a mission to “work across departments and communities to explore, experiment, and evaluate new approaches to government and civic life”, MONUM has built a diverse portfolio addressing civic engagement, service design, housing, transportation, and emerging technology. MONUM embraces both the theory and methodology of human-centered design (New Urban Mechanics, n.d.). It not only calls for “design with, not for [citizens]” but also only take on projects that have prototyping potential (New Urban Mechanics, n.d.). MONUM also takes special interest in technology, which is evident in many of its well-known projects including BOS:311 (formerly Citizens Connect), Street Bump, and Smart Parking.



Launched in 2009, the BOS:311 App (then Citizens Connect) is one of MONUM's first projects that explored the intersection of citizen engagement and technology. BOS:311 allows residents to call for requests and reports. The app has successfully engaged with a wider range of Bostonians, specifically the young and renter population (Boston: 311 APP).

[Image] [Photo] retrieved from <https://sebastianebarb.com/boston-311-branding-and-ad-campaign>

Summer Youth Bus!



Does your child need transportation to summer programs in Hudson?

The Hudson Summer Youth Bus will run every weekday, beginning Monday, July 16th and ending Friday, August 10th. **FREE for Youth, Grades K-12!**

The route begins in downtown Philmont, goes through Claverack, Stottville and Greenport and continues to Hudson, dropping youth off at summer programs at Oakdale Lake, the Youth Clubhouse, the Hudson Area Library and Kite's Nest. The bus will return from those locations in the afternoon, dropping off at the same stops as it picked up. If your child wants to ride the bus, fill out the registration form and permission slip, which can be found [online at tinyurl.com/hudson-youth-bus](http://tinyurl.com/hudson-youth-bus), or hand in the paper forms to the bus driver.

For questions regarding bus route and ridership, contact Michael Johnston Bus Co at 518-672-4901.

➡ **PHILMONT → CLAVERRACK → STOTTVILLE → GREENPORT → HUDSON**

8:15am—Philmont Car Wash
8:17am—Philmont Family Dollar
8:19am—Church & Prospect St
8:22am—Mellenville Post Office
8:28am—Fish-&-Game Rd & Shasta Dr
8:30am—Pleasant View Drive
8:34am—9H & 66 (Mobil Station)
8:40am—Stottville Trailer Park
8:41am—Stottville Post Office
8:46am—555 Joslen (Trinity Church)
8:52am—Delaware & Fairview Ave
8:56am—Parkwood & Fairview Ave
8:57am—Glenwood & Fairview Ave
9:02am—ADM Milling
9:07am—8th & Columbia
9:08am-9:15am—Oakdale Lake
9:12am-9:20am—Hudson Library
9:18am-9:25am—41 N 2nd Street
9:23am-9:30am—Kite's Nest

⬅ **HUDSON → GREENPORT → STOTTVILLE → CLAVERRACK → PHILMONT**

3:15pm—Kite's Nest
3:20pm—41 N 2nd Street
3:25pm—Hudson Library
3:30pm—Oakdale Lake
Return to bus stop listed above

Funded Innovation Project | Case Study

RAISING PLACES

Raising Places was a nine-month (2017-2018) innovation project in which six selected communities across the United States explored how they might build child-centered healthy communities. The project was created and facilitated by the Greater Good Studio, a mission-driven design consultancy in Chicago, IL, and funded by the Robert Wood Johnson Foundation. In the Raising Places process, self-selected community working groups had full ownership from the initial problem inquiry to the final prototyping and testing stages. The Greater Good Studio supported these working groups by introducing human-centered design methodologies and serving as facilitators throughout the process.

Through Raising Places, the working team in Hudson, NY identified transportation as a key barrier for children to access after-school programs and proposed a Summer Youth Bus. The new bus route provide free transportation to multiple summer program locations for youth in Kindergarten through 12th grade. (HudsonValley360, 2018)

[Image]. Retrieved from <https://www.facebook.com/kitesnest.hudson/photos/a.1717280781821817/2110292939187264/?type=3&theater>

SUNDAY STREETS & PLAY STREETS

Sunday Streets, launched in San Francisco, CA in 2008, is an initiative modeled after the Ciclovía (bicycle) movement from Bogotá, Colombia in which city streets are temporarily closed to vehicles to promote bicycle use in neighborhoods under-served for recreational resources (Chaudhuri & Zieff, 2015). Today, Sunday Streets stretches as long as 1.5 miles and feature local vendors, exhibitors, and events to activate neighborhoods across San Francisco (Said, 2019).

The overwhelming success of Sunday Streets inspired the creation of another pilot program “Play Streets”, a smaller-scale version of Sunday Streets that is tailored towards kids and about creating a safe space for them to play (Bialick, 2012). Most recently, Play Streets was launched in 2017 as a two-year pilot program with the intent of making it a permanent program in San Francisco (Play Streets, n.d.).



At Mission district's Sunday Streets, Valencia Street is closed to vehicles and open to pedestrians, bicyclist, scooters, and a wide range of vendors and activities.

Lurie, G. (2019). [Photo] Retrieved from <https://www.sfchronicle.com/bayarea/article/Sunday-Streets-turns-Valencia-into-1-5-mile-long-13677786.php#photo-17050947>



The Bayview neighborhood had their first Play Streets in 2017 on Jamestown Avenue.

San Francisco Planning Department. (2017). [Photo] Retrieved from <https://www.flickr.com/photos/sfplanning/35270151445/in/>

WHAT IS THE PROGRAM?

It's called the Certificate of No Harassment (or CONH for short).

It's different than other laws because it focuses on a common reason landlords harass tenants—to make more money—and makes it harder for them to do that.

Landlords who want to renovate or tear down all or part of a building will have to get a "Certificate of No Harassment" from the NYC Department of Housing Preservation and Development (DHP) that says they have not harassed their tenants. This means landlords are the ones who have to do the work of proving they haven't harassed tenants.

Without the Certificate, they can't get a building permit as easily. And the program makes it harder for bad landlords to sell their buildings for a big profit or make a lot of money from harassing tenants out.

If landlords worry that harassing tenants will hurt their profits, it won't be worth it to them anymore.

The Certificate of No Harassment is a 3-year pilot program. If it works, the City Council can make it a permanent law, and expand it to include more buildings and tenants. But the City needs to see that the program is working in order to do that.

AND IT CAN ONLY WORK IF TENANTS LIKE YOU REPORT HARASSMENT AND OTHER VIOLATIONS.

What counts as harassment?

"Harassment" can include a lot of different words or actions, and the legal definition was recently changed to include even more, and to make it easier for tenants to prove their case.

But tenants still need to provide information about what the landlord has done.

Some of the most common ways landlords and their management harass tenants include:



Taking your things out of your apartment

- They might say they have the right to do this if you are behind on rent.
- **Locking you out of your apartment**, taking off the door, or changing the locks.
- If your landlord changes locks and refuses to give you the new keys, call the police right away!

Threatening or intimidating you

- Threatening you or using force against you or your family.
- Shouting, bullying, or yelling at you, hiring someone to walk around the building with a baseball bat, or trying to scare you.
- Threatening you or your family based on your age, race, religion, immigration status, whether you have children, or any other identity.
- Threatening to call ICE, using a racial slur, sexually harassing a tenant, saying that they want to have a child-free building, to a tenant with a children.

Asking you for a passport, Green Card, or other documents that show your immigration status.

Making repeated, intimidating, or unwanted offers to buy you out of your lease.



Lying or misleading you

- Lying or misleading you about your tenancy status, rent stabilization status, the building's occupancy status, or construction permits and applications.
- Making false accusations and bringing you to court.



Making your home uncomfortable

- Stopping heat, hot water, gas, or electricity services to your apartment.
- Not fixing dangerous conditions in the building (like a broken step on stairs, mold in apartment, etc.).
- Repeatedly disturbing your comfort, peace, and quiet enjoyment of your apartment (including through construction at night or dirt or damage from construction).

What should you do if you're being harassed?

Keep track of any problems:

1. Call 311 to report any problems you're having with your landlord.
2. Call back many times until someone from the Department of Buildings (DOB) or DHP comes to see the problem.
3. The more tenants that call, the more important the issue will be to the city.
4. If city inspectors call or come, make sure they record all the violations in your apartment and building.



If your landlord or someone who works for them is harassing you, keep track of:

- Who is doing it.
- When.
- How they get in touch with you (phone, letter, visit, etc).
- What they say to you.

To prove harassment, you'll need specific details, so it's important to keep track of problems.

The CONH program makes it the landlord's job to prove they are not harassing tenants. But tenants need to report harassment and record their experiences so that it becomes part of the record DHP reviews in deciding whether or not a landlord can get a Certificate of No Harassment.

Reporting will also help get more buildings included on the list of properties that must meet the rules of this program.

IF YOU ARE BEING HARASSED, YOUR NEIGHBORS PROBABLY ARE TOO. THE MORE PEOPLE RECORDING AND REPORTING HARASSMENT, THE STRONGER YOUR CASE!

IS YOUR LANDLORD HARASSING YOU OR YOUR NEIGHBORS?

That's illegal in New York City.

But that hasn't stopped some landlords from doing it, since they can make lots of money when they force old tenants to move out and raise the rents on new tenants.

A new program, called **Certificate of No Harassment**, can change that by making it harder for landlords to make money from harassment. This guide will show you how the program works, and how you can use it to stop harassment and stay in your home.

"Is Your Landlord Harassing You or Your Neighbors?" is a poster that debunks the Certificate of No Harassment (CONH) policy in New York City with simple writing and engaging graphics. The poster was distributed to thousands of New York City tenants to help them understand how they can participate and report violations. (Center for Urban Pedagogy, n.d. b) This poster and many CUP products can be downloaded for free at <http://welcometocup.org/Store>.

[Image] adapted from http://welcometocup.org/file_columns/0000/1726/webready.pdf

Design Consultancy | Case Study

CENTER FOR URBAN PEDAGOGY

The Center for Urban Pedagogy (CUP) (n.d. a), founded in 1997, is a Brooklyn-based nonprofit organization that “uses the power of design and art to increase meaningful civic engagement”. It is best known for its effort in demystifying complex policy and planning issues through simple, accessible, visual explanations.

CUP approaches civic engagement through youth and community education. In youth education, CUP helps produce various curriculum for youth to understand different city operations. In the community education, CUP (n.d. a) works with designers and advocates to create products that explain complex policies or processes for specific audiences.

CHAPTER II

Design for Public Policy

2.1 DESIGN FOR PUBLIC POLICY V.S. PUBLIC SERVICES

Design for Public Policy is an emerging field within design studies that investigates design's utility in a particular governmental task: policy making and implementation. In discussing existing research within Design for Public Policy, Kimbell (2016) pointed out a recurring theme — “the idea that policy work is changing and needs to change, and that design brings new approaches to the making of policy.”

It can be challenging to separate the discussion of Design for Public Policy from Design for Public Services and organizational change. This is because most matters in government are related to the design of policies and their implementation (Junginger, 2017).

Kimbell and Bailey (2016) distinguished designing public policy from designing public services in the following passage:

‘[Designing public policy] can be understood as entailing a government’s¹ intent and its activities directed towards achieving specific outcomes. Policy-making involves mediating between resources in response to a situation deemed to be a public policy issue ... The ways government actors try to accomplish policy intent can include passing laws, publishing regulations, commissioning or running public services, and stimulating business or civil society to provide solutions (e.g. by providing funding or publishing data)—or doing nothing. In contrast, [public] services might result from—or failures in their design or delivery might lead to—public policy.’(Kimbell & Bailey, 2016)

[1] Although political parties are key actors in the policy ecosystem, [Kimbell and Bailey] focus here on staff in public administrations (i.e. public servants) accountable to ministers (i.e. politicians).



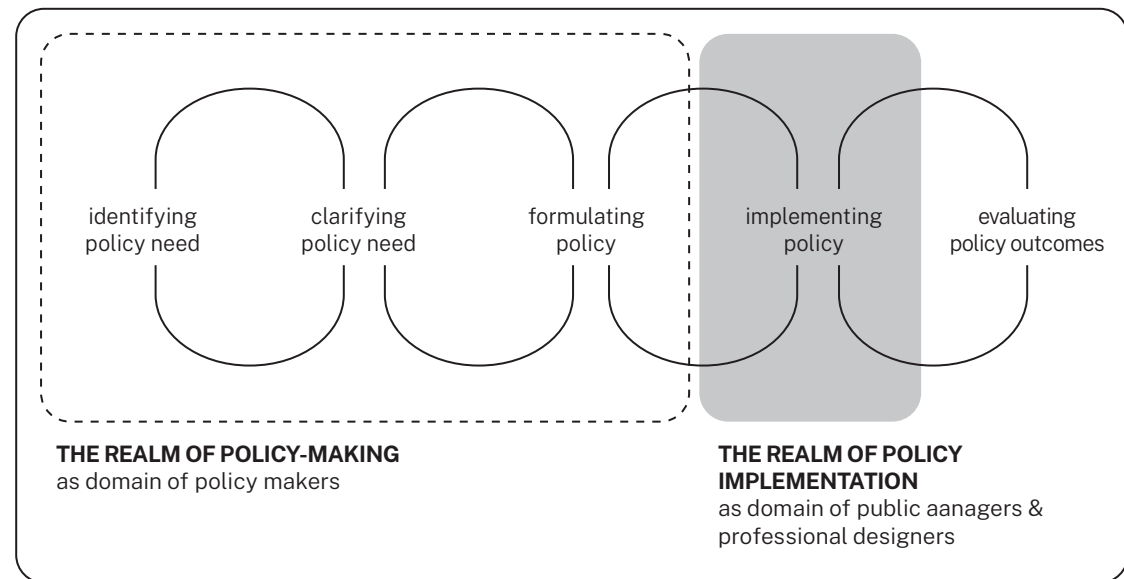
Kimbell and Bailey described four different methods to accomplish maintaining policy intent (while implementing policy), with running public services being one of them.

2.2 BRIDGING THE GAP IN THE POLICY CYCLE

Public services may not always be the optimal solution to the identified policy issues, and the success of a policy outcome lies in both its formation and its implementation. Junginger (2014) used the Howlette and Ramesh policy model, as shown in figure 2-2, to highlight the problematic separation of policy making and

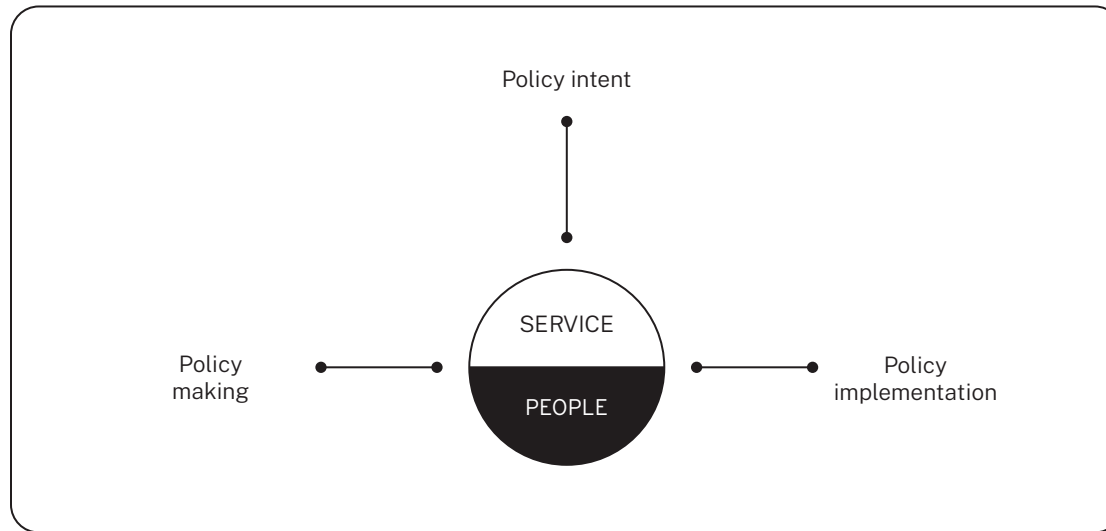
policy implementation in the traditional policy cycle. She (2014) argued that design has a role in the identification, framing or reframing of a policy problem and that design would be reduced as a problem-solving methodology if it is only utilized in the implementation stage.

Figure 2-2: Design in the Traditional Policy Cycle



[Image] adapted from Towards Policymaking as Designing: Policymaking Beyond Problem-solving and Decision-making, by S. Junginger, 2014. In C. Bason (Ed.), Design for Policy. USA: Ashgate Publishing Company.

Figure 2-3: Integration of Policy making, Policy Implementation, and Policy Intent



[Image] adapted from Transforming Public Services by Design: Re-orienting policies, organizations and services around people, by S., Junginger, 2014. New York, NY: Routledge.

In Junginger's book *Transform Public Service by Design*, she provided a framework for bridging the gap by centralizing public services. Rather than seeing public service as solely an outcome of policy implementation in the policy cycle, Junginger (2017) believed that it plays a crucial role in connecting policy making, policy implementation, and policy intent (citation). Figure 2-3 illustrates this new framework

of imagining the policy cycle. According to Junginger (2017), well-designed public services preserve the integrity of policy intent because "they are meaningful and usable to the people they intend to reach". The same figure also demonstrates that services are directly affected by any policy change, including in its early development stage. Junginger (2017) urged policy makers and managers to have

better awareness of services in the early stages of policy making and building capacity to develop services that maintain policy intent.

It is important to recall that, according to Kimbell and Bailey, public services are not the only way to realize policy intent. This will be more evident in Chapter 3 where it discusses public policy in the context of city planning. Nevertheless, Junginger's framework provides a human-centered view of public policy in which people and policy intent are the main drivers of desired policy outcome.

2.3 MAINTAINING POLICY INTENT

What is policy intent?

“Policy intent” is commonly understood as the purpose or intention of policymakers or the larger policy effort. Junginger (2017) described policy intent as “addressing human problems”:

‘People are where policies begin and end. Policies begin with people because policy intent seeks to address an issue, problem or situation that concerns people. Policies end with people because policy fulfillment relies on people’s compliance.’ (Junginger, 2017)

For the purpose of clarification, this thesis defines “policy intent” as the following:

- the intention of the minister (ex. elected politician, policy managers) who orders to establish a policy.
- the desired emotional response or shift in behavior of the population the policy intends to reach.

Maintaining policy intent

The maintenance of policy intent is one way to evaluate the success of policy, namely, “at the end, does the policy achieve the desired outcome?” Many policy cycles experience unintended or unexpected shift of policy intent due to miscommunication, misinterpretation, changing objectives, delays, or other obstacles along the policy cycle, resulting in the futile pursuit of policy intent.

While the notion of maintaining policy intent is not yet prevalent in existing literature, it is understood that when a policy cycle fails to maintain policy intent and misses its objectives, it often leads to unintended consequences (Junginger, 2017).

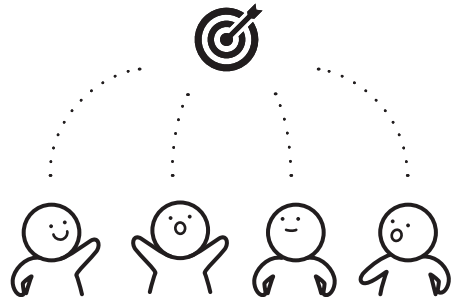
This thesis attempts to describe “maintaining policy intent” in four domains: clarify intent, follow through, inform all, and make it real. Figure 2-4 includes the definition of each domain.

It is also noteworthy that policy intent can change over the course of policy development upon mutual and conscious agreement amongst stakeholders. This thesis hopes to amend the overlooked and misunderstood change in intent that undermines trust, legitimacy, and effectiveness of the process.

Figure 2-4: Four Components of Maintaining Policy Intent

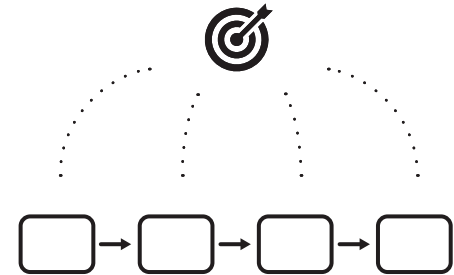
CLARIFY INTENT

Identifying the goals for a particular policy development process and clearly communicating it to all stakeholders involved.



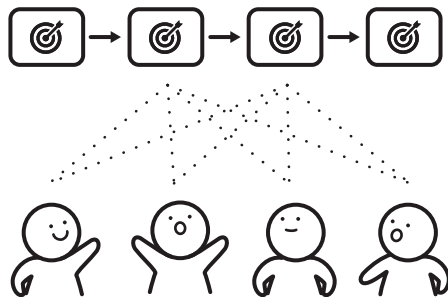
FOLLOW THROUGH

Ensuring that every step of the policy development process contributes to achieving the identified goals.



INFORM ALL

Keeping all stakeholders informed and involved in the process to verify and validate the intent.



MAKE IT REAL

Capturing the intent in the policy writing and realizing intent through appropriate platforms of policy implementation.



CHAPTER III

Design for Comprehensive Planning

3.1 CITY PLANNING AND COMPREHENSIVE PLANNING

City Planning

City planning, often referred to as urban planning, is a “technical and political process that concerns the welfare of people, control of the use of land, design of the urban environment including transportation and communication networks, and protection and enhancement of the natural environment” (McGill University, n.d.). Despite being interdisciplinary by nature, city planning is now a separate professional discipline in which city planners (urban planners) often work with architects, civil engineers, public administrators, and members of the public to achieve strategic, policy, and sustainability goals.

Comprehensive Planning

Comprehensive planning is a city planning process that emphasizes a comprehensive approach to achieve better functionalities of cities beyond aesthetics. In the United States, comprehensive planning goes under different names (ex. “Master Plan” in New Jersey and “General Plan” in California) and has varied practices and legal status from state to state (Godschalk & Anderson, 2012). Above the differences, comprehensive planning distinguish itself from other types of plans for its (Godschalk & Anderson, 2012):

- Geographic coverage of single political unit (town, city, county, etc.)
- Long-range perspective (typically two decades or more)
- Big-picture community vision
- Emphasis on policy guidance
- Integrated systems (physical, transportation, social, economic, financial)
- Legal standing, providing basis for zoning and capital improvements

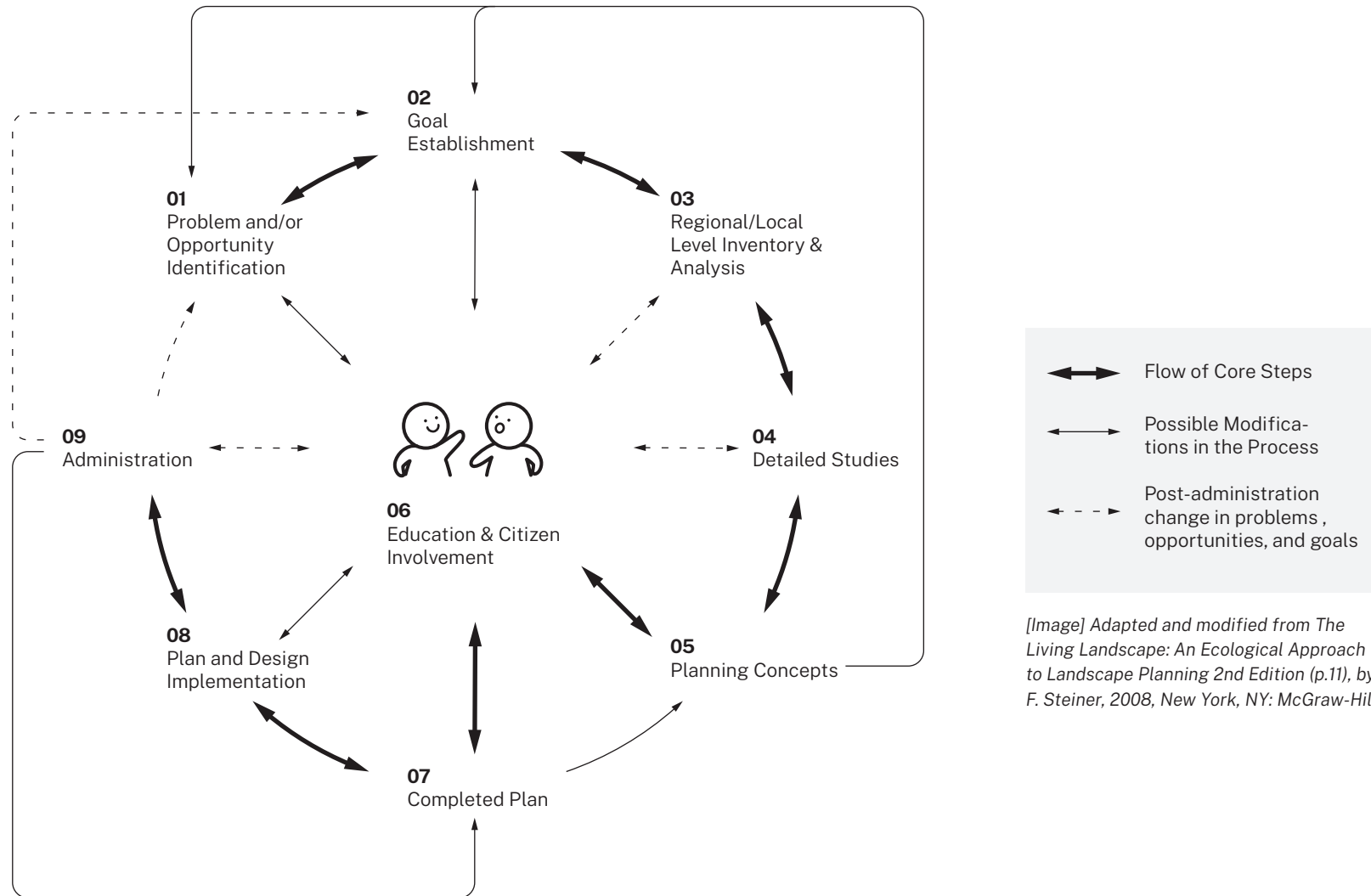
The comprehensive planning process is usually led by the city’s planning department and in collaboration with community groups, local and regional agencies, and sometimes external consultants. Significant community outreach and engagement effort is expected as part of the process to allow for public input and oversight throughout. Figure 3-1 illustrates a typical comprehensive planning model.

The outcome of a comprehensive planning process is a “comprehensive plan” that expresses community goals through public policies on land use, transportation, housing, utilities, recreation, and other traditional categories. Some policies provide foundations for development regulations, including zoning; others guide public capital investments, such as roadways, transit , parks, schools, and sewage systems (Godschalk & Anderson, 2012). These capital investments are carried out by departments within the city as well as local and regional agencies. Most modern plans establish

an implementation element where steps, timelines, benchmarks, or scoring systems are specified for these implementation agencies, though there is usually no penalty for agencies who fail to achieve the goals.

From the perspective of the planners and project managers who lead comprehensive planning, the planning effort is a policy making exercise by design, separated from policy implementation. Because that the accountability is weak, a lot of the policies remain unimplemented, forgotten, or simply outdated by the time the implementation agencies have the capacity to comply. This is the same gap in policy cycle described in section 2.2 and one of the biggest challenges for comprehensive planning.

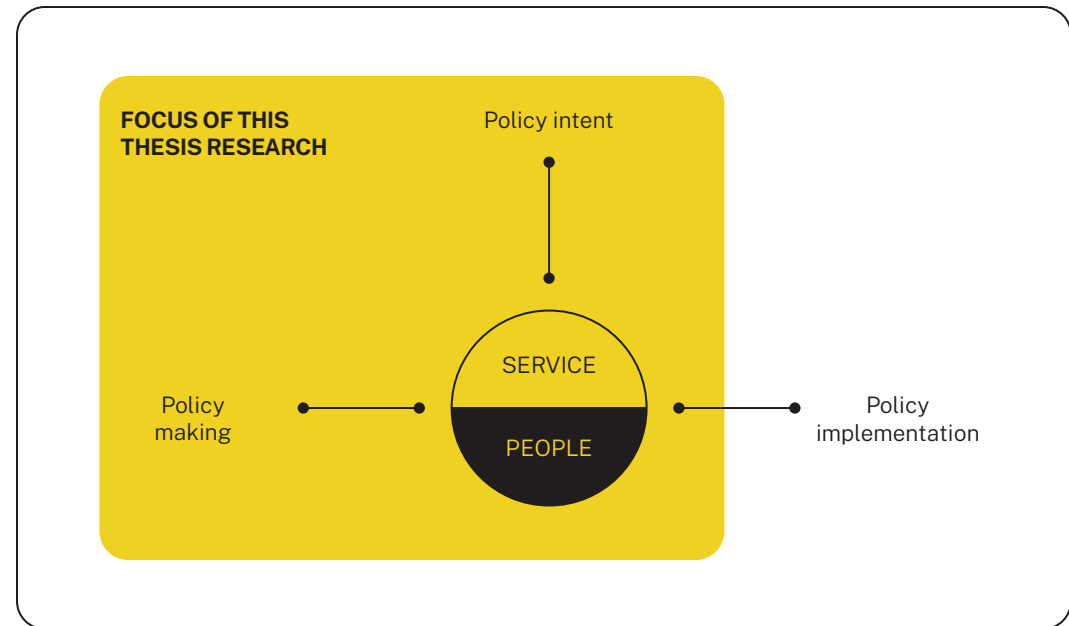
Figure 3-1: A Typical Comprehensive Planning Model



Research Scope & Focus

To fully close this gap, as proposed by Junginger (2017), it would require a reframing of the policy outcome not as written policies but as services and products. It would also require a radical redistribution of power and collaboration framework amongst policymakers and policy implementers, which is outside of the scope of this thesis. Instead, this thesis seeks design opportunities to strengthen the connection between policy making and policy intent in comprehensive planning (highlighted in figure 3-2) as a first step towards a fully integrated, human-centered policy development.

Figure 3-2: Focus Area of Thesis Research based on Junginger's Model



[Image] adapted and modified from Transforming Public Services by Design: Re-orienting policies, organizations and services around people, by S., Junginger, 2014. New York, NY: Routledge.

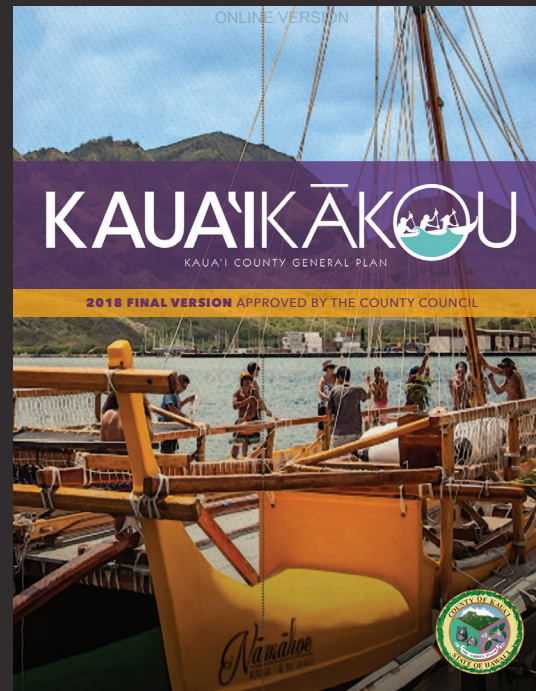
KAUA'I KĀKOU

Kaua'i Kākou, the General Plan of Kaua'i County, HI, is the winner of the National American Planning Association's Daniel Burnham Award for A Comprehensive Plan in 2019. It was recognized for its transparent and robust effort in involving residents at every phase of the planning process. The plan also features more streamlined policy statements that support social equity amongst Kaua'i's ethnically diverse community and the protection of Kaua'i's heritage resources (American Planning Association, 2019).

Kaua'i Kākou means “we’re all in this together” or “working together” in Hawaiian (American Planning Association, 2019). For more information of the plan, visit <http://plankauai.com/>.

Gather Information	Incorporate Input	Develop Policies	Guide Implementation
<ul style="list-style-type: none"> - Plans & policies - Best practices - Developments since 2000 GP - Policy issues and opportunities 	<ul style="list-style-type: none"> - Agency interviews - CAC policy discussion - Community input 	<ul style="list-style-type: none"> - Developed draft policies - Tested and refined policies with input 	<ul style="list-style-type: none"> - Actions - Policy maps - Prioritization - Performance measures & indicators

The policy development approach of Kaua'i Kākou.



Cover of Kaua'i Kākou



Citizens have various channels to participate and provide feedback throughout the planning process.

ONLINE VERSION

1.3 VISION AND GOALS

The vision sets the desired long range outcome through a series of statements organized by the following over-arching goals:

A Sustainable Island

Growing responsibility to meet the needs of current and future generations without depleting resources.

- Kaua'i is a sustainable island, rooted in principles of aloha and mālama 'āina, and remarkable in its thriving ecosystems.
- Kaua'i is a place where conservation and restoration of land and water resources provide the foundation of sustainable policies for land use, energy, infrastructure, society, and economy.

A Healthy and Resilient People

Increasing health, vitality, and resilience of communities through improving the natural, built, and social environment and responding to impacts from climate change.

- Kaua'i is a place with healthy people and vibrant community life, safe facilities for walking and biking, places to gather and socialize, and venues for arts and culture.
- Kaua'i is a resilient community that shares kuleana in planning for the future, proactively responding to and preparing for changes, and providing for the needs of people from kēiki to kūpuna.
- Kaua'i is a place that supports agriculture and a diversity of farming practices and produces food and other products that contribute to Kaua'i's self-sufficiency.

A Unique and Beautiful Place

Stewardship and protection of the natural, cultural, social, and built environment assets that are of value to the community.

- Kaua'i is a place of distinctive natural beauty that honors its Native Hawaiian heritage, values historic places, and is shaped by diverse languages and cultural traditions.
- Kaua'i is an island of unique communities that are united in a common vision and in care for their neighbors and 'āina.
- Kaua'i is a place where rural character and natural landscapes are preserved through compact, walkable communities separated by scenic and functional open spaces.
- Kaua'i is a place that welcomes visitors, providing adequate facilities and a variety of cultural and recreational opportunities while maintaining the principles of aloha and mālama 'āina.

An Equitable Place, with Opportunity for All

Fostering diverse and equitable communities with vibrant economies, access to jobs and housing, and a high quality of life.

- Kaua'i is an island of economic opportunity where businesses, cottage industries and entrepreneurs thrive, and where youth have broad access to education, enrichment, and economic opportunity.
- Kaua'i is a place where housing for all ages and income levels is integrated into the fabric of each community, and where people can live close to work and services.

12 KAUAI COUNTY GENERAL PLAN

ONLINE VERSION

(1) Visions & Goals

ONLINE VERSION

3. LANDMARKS AND SCENIC RESOURCES

Certain views and landmarks define Kaua'i's sense of place for residents and visitors alike. The majestic peaks of Waialeale and Kaula, the dramatic ruggedness of Waimea Canyon, and the lushness of the Alaka'i Swamp are examples of land formations that are inspiring and uplifting to experience. Preserving views of scenic landscapes is vital to sustaining Kaua'i's uniqueness and identity.

Objective: To preserve in portan landmarks and pict scenic resources.

3.1 Preserving Scenic Views and Landforms

Landforms and ocean views define our sense of space, particularly for the communities near them. For example, Nihoku (Crater Hill) is an important coastal landform near Kilauea Town, while Hāpu'u Ridge frames the Ulukou District and divides it from the South Kaua'i District. Landforms such as Kilauea Ridge and Kilauea Crater have similar framing qualities and help define and characterize nearby communities as distinct settlement areas.

Many landforms serve as landmarks and are prominent in Native Hawaiian history and 'ōlelo. Awareness of them is fundamental to understanding and appreciating Kaua'i's history. Preserving mountain and ocean views does not simply entail preventing them from being totally obscured, but also means not disrupting their integrity and "ritches" with structures or other features that detract from their beauty and continuity. Preservation of landmarks, scenic resources, and heritage places is perhaps the most important aspect of maintaining the historic essence of Kaua'i over time, regardless of population growth, development, and other changes that will occur.

The County's ability to preserve landmarks and scenic resources depends primarily on its zoning policies and abilities to acquire land for conservation. Since public funds to acquire land are limited, future preservation of landmarks, scenic resources, and heritage places must rely first and foremost on zoning and permitting regulations.

3.2 Maintaining the Integrity of Scenic Routes

Scenic views along roadways are abundant on Kaua'i. Kaua'i already has one Federally recognized scenic byway, which runs through Kōloa in South Kaua'i. Scenic byways do not just have scenic qualities, but are also recognized for their intrinsic archeological, cultural, historic, natural, and recreational features. Community Plans for each District provide an opportunity to identify scenic resources and make them worthy of recognition and protection.

3.3 Protecting Exceptional Trees

Exceptional trees and groves of trees are another resource important to preserving Kaua'i's rural character, intrinsic beauty, history, and culture. The County's Arborist Committee has designated 23 trees as "exceptional trees" on Kaua'i. The State's Exceptional Tree Act (Act 105) protects designated trees from improper trimming and unnecessary removal. Private property owners are provided a tax credit to offset the costs associated with tree maintenance.

A. PERMITTING AND CODE CHANGES

- Prepare amendments to the CZO, Special Management Area Rules, and the Subdivision Ordinance to provide specific criteria and guidelines for evaluating and protecting scenic views, view planes, and landmarks in the siting of new development.

B. PLANS AND STUDIES

- Identify key landmarks, exceptional trees, and scenic resources through Community Plans.
- Develop an inventory of scenic resources/views, view planes, visual resources, and key landmarks through joint collaboration of the Kaua'i Historic Preservation Review Commission and the Open Space Commission.

102 KAUAI COUNTY GENERAL PLAN

ONLINE VERSION

(3) Objectives & Action Items

ONLINE VERSION

GENERAL PLAN POLICIES

Nineteen policies articulate the County's path forward toward meeting the community's vision and goals of sustainability, unique character, resilience, and equity. The policies address the critical issues and opportunities identified through the community process. They are not listed in order of priority, as all are important. These policies were the subject of a community-wide survey that was completed by more than 1,000 respondents across Kaua'i, and indicated widespread agreement with the policy direction. Results of the survey are summarized in Appendix B.

POLICY #1: MANAGE GROWTH TO PRESERVE RURAL CHARACTER

Preserve Kaua'i's rural character by limiting the supply of developable land to an amount adequate for future needs. Prohibit development not adjacent to towns. Ensure new development occurs inside growth boundaries and is compact and walkable.

Rural character is what makes Kaua'i a unique and beautiful place valued by residents and visitors alike. However, this character is threatened by low density development occurring on agricultural lands that are non-adjacent to existing towns. This development pattern also increases traffic, another threat to Kaua'i's rural character. Because our population will grow, we need to manage growth in a way that is sustainable and preserves our character. By concentrating growth within or adjacent to existing towns, we designate where urban uses belong in order to better preserve agricultural lands and open space. Infill and compact growth can reduce traffic congestion by reducing the need for long trips in single occupancy vehicles, increasing walking and biking within towns, and improving access to transit.

This policy is implemented spatially through the Land Use Map in Chapter 5 (Urban Edge Boundaries and amount of new urban district allocated to districts) and through actions for Housing, Land Use, and the Economy.

Each policy statement is numbered and accompanied by a heading and icon. The icons are used in Chapter 5 to illustrate policy consistency.

10 KAUAI COUNTY GENERAL PLAN

ONLINE VERSION

(2) Policies

#	Label	Action	Lead Agency	Objective #
128	HR 3.A.1	Prepare amendments to the CZO, Special Management Area Rules, and the Subdivision Ordinance to provide specific criteria and guidelines for evaluating and protecting scenic views, view planes, and landmarks in the siting of new development.	Planning	32
127	HR 3.A.2	Consider regulatory tools such as zoning overlays or corridors to preserve views from roads or public places to the ocean, and to and from mauka to makai.	Planning	32
128	ES 1.A.1	Promote increased energy conservation and renewable energy production.	Mayor's Office	33
129	ES 1.A.2	Optimize the mix of energy crops that can provide fuel for power production on Kaua'i.	Mayor's Office	33
130	ES 1.A.3	Streamline and expedite planning and permitting processes involving renewable energy facilities.	Planning	33
131	ES 1.A.4	Require new buildings to incorporate economically feasible design and equipment for energy sustainability, including but not limited to: solar hot water capacity and proper insulation.	Public Works	33
132	ES 1.A.5	Conduct an audit of the County's development standards to identify regulations that are obstacles to or could be altered to better encourage or require green building practices.	Planning	33
133	ES 2.A.1	Promote higher density residential development near job centers and amenities, while strongly discouraging development that will require residents to commute via automobile to jobs in other areas of the island.	Planning	34
134	ES 2.A.2	Reduce the carbon footprint of both new and existing buildings and infrastructure by maximizing energy efficiency and minimizing the use of fossil fuel resources on the grid.	Planning	34
135	ES 2.A.3	Accelerate the transition to alternative, carbonfree fuels in the ground transportation sector with regulations and policies that support electric vehicle adoption and other alternative fuel infrastructure, and support electric groundkeeping and farming equipment/machinery.	Transportation Economic Development	34
136	ES 2.A.4	Require large new developments and infrastructure projects to include a project carbon footprint analysis estimating the anticipated change in emissions resultant from the proposed project and documenting the emissions reduction strategies deployed by the project to minimize its emissions.	Planning	34

APPENDIX B - ACTION MATRIX | APPENDICES 401

ONLINE VERSION

(4) Action Items & Lead Agency

Policy Structure of Kaua'i Kākou

Kaua'i Kākou's policy structure represents a typical modern comprehensive plan. The plan starts by introducing community visions and goals identified in public outreach. It then outlines the core policies to give more specificity and concrete directions for localized issues. In the case of Kaua'i Kākou, a set of objectives and action items ("actions") are then established based on these policies. The objectives and action items are organized by traditional planning topics such as land use, transportation, and historic preservation. Finally, the plan specifies the lead agency for each action item to facilitate enforcement and accountability. Other common implementation mechanisms include zoning ordinances, standards, design guidelines, and capital improvement plans.

[Pages] adapted from Kaua'i Kākou, Kaua'i County General Plan, 2018, retrieved from <http://plankauai.com/>

3.2 WHY DESIGN FOR COMPREHENSIVE PLANNING?

This thesis chooses comprehensive planning as a policy area of interest not only because that it is human-centered and community-oriented by design, but because that its process resembles that of a design process. Figure 3-3 illustrates comprehensive planning and design processes.

Similarities

The most significant similarity is the divergent-convergent steps in both the problem and solution scoping stages. Comprehensive planning, in capturing greater long-term community visions, provides space for open inquiry and thoughtful problem-framing. This is very different from other policy development where the process starts with a predetermined problem statement (skipping stage 1-4), often driven by quantitative data like crime rate or growth projection.

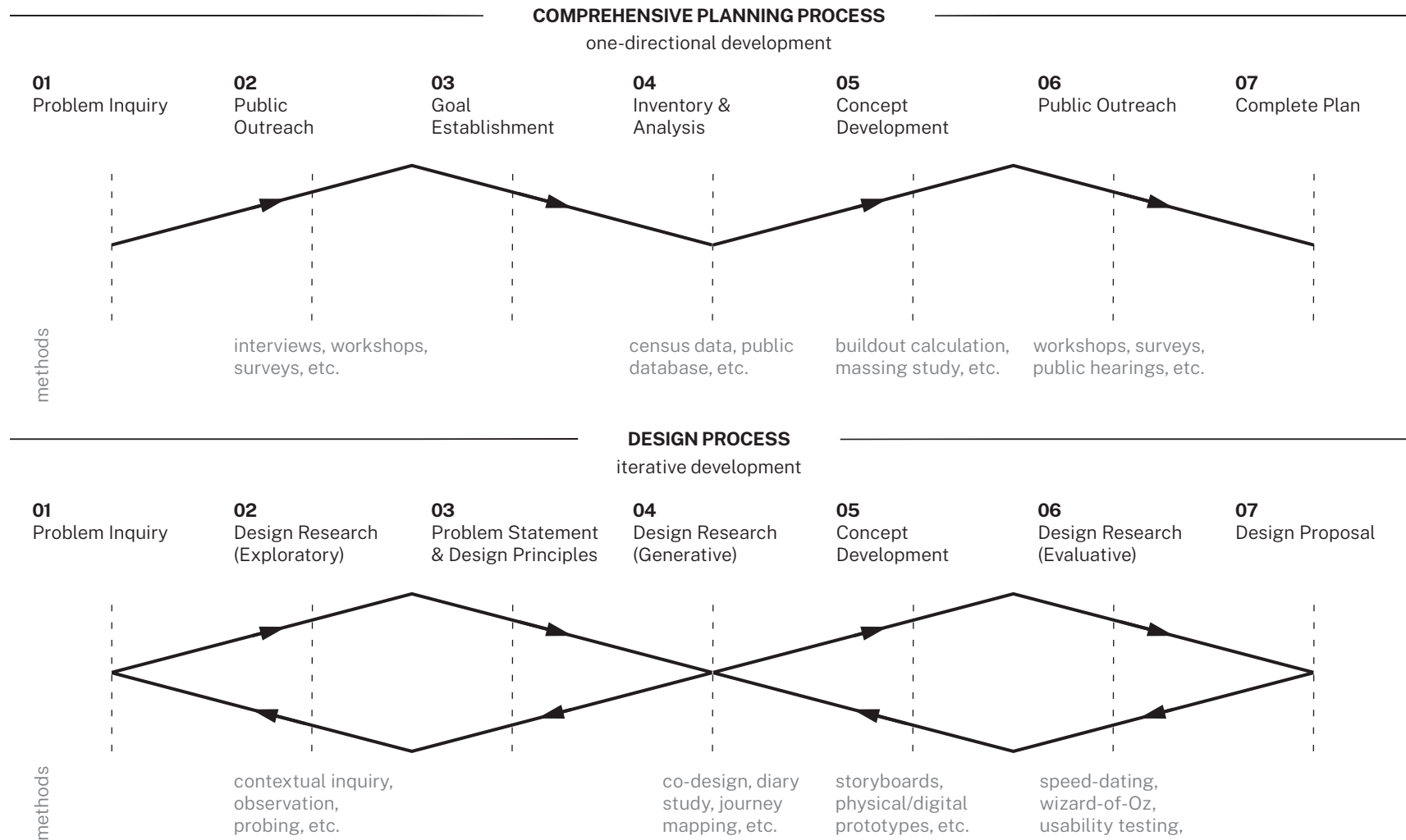
Another similarity is the creation of multiple design alternatives. In most comprehensive planning processes, planners first create different design proposals for land use, transportation, open space, and other public investments. They then seek feedback from members of the public and use the feedback to iterate on the design. Creating multiple design proposals is also required by law for certain jurisdictions. For instance, in California,

every comprehensive plan is required to have an Environmental Impact Report (EIR) which includes multiple design proposals and clear justification that the preferred proposal is the most appropriate considering the economic gain and environmental impact. Mandated or not, the formality of design iterations in comprehensive planning provides as a vantage point for design intervention.

Differences

As illustrated in figure 3-3, comprehensive planning and design processes are very different both in terms of their methods and their fundamental flexibility. The former's double-diamond framework is mostly one-directional, meaning that there isn't a lot of room for the "try-and-fail" loop design processes generally embrace. When it comes to methods, comprehensive planning remains a data-driven process where insights are expected to be quantifiable. This leads to the proliferation of surveys, dot-voting, growth projection, or computer simulation as common methods. On the other hand, design makes use of qualitative information and verifies design by observing quality of human interactions. The varied choice of method only shows the potential of what design methods may bring to comprehensive planning.

Figure 3-3: Comprehensive Planning v.s. Design Processes



CHAPTER IV

Research & Key Findings

4.1 HYPOTHESES & QUESTIONS

Chapter I to III provides the background information necessary to explore the potential of bringing design the comprehensive planning process. It led to the following hypotheses:

- Maintaining policy intent is a prominent challenge in comprehensive planning.
- The challenge of maintaining policy intent in comprehensive planning can be addressed by incorporating design into its process.

To verify the hypothesis, the following research questions were established:

- What are the most prominent challenges in comprehensive planning, and what pertains to maintaining policy intent?
- What are the strategies to overcome these challenges in comprehensive planning?
- What are the methods used in comprehensive planning and how are they related to maintaining policy intent?

4.2 RESEARCH METHODS

Online & Poster Survey

An online survey was distributed in September and October 2018. The survey was targeted for individuals who work for the public sector and have current or previous experience leading or supporting comprehensive planning projects. The survey asked participants to rate the difficulty of maintaining policy intent as well as methods they used in their comprehensive planning processes. A total of seven individual responses were received from planners.

A poster survey was launched at Rail-Volution, a transportation planning conference on Oct 21- 24, 2018 in Pittsburgh, PA. The poster survey included similar questions to those of the online survey. The survey was open to all conference participants who were expected to have experience in comprehensive planning processes. Approximately 60 individuals provided answers to all or some of the poster survey questions.

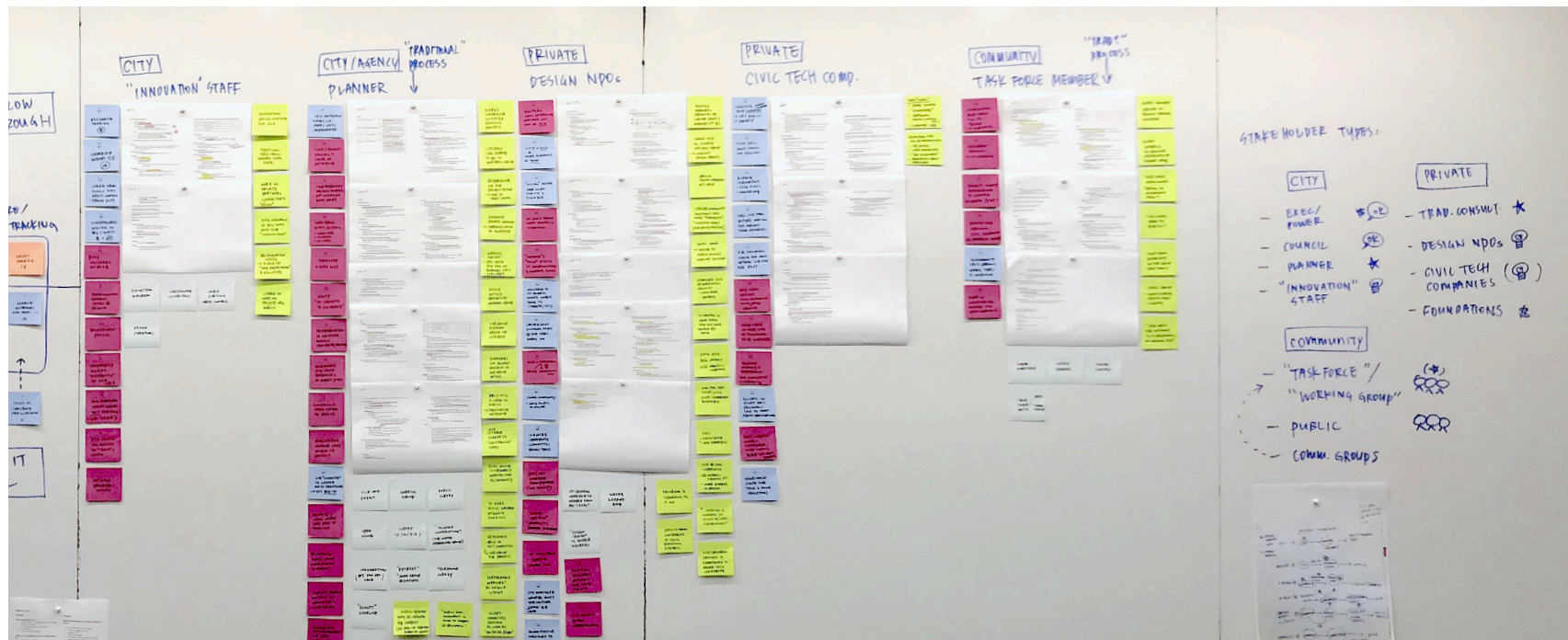


At Rail-Volution, conference participants interacted with the survey boards.

Phone Interviews & Case Studies

A total of 15 phone interviews were conducted between October and November 2018. Participants ranged from planners, project managers of cities' innovation units, civic designers, and committee members of comprehensive planning processes. The interviews were lightly scripted and divided into

three sections: participants' overall critiques of the comprehensive planning processes, their experiences in a specific planning project, and the methods used in said project. No individual case study but a list of collective findings was ultimately prepared so that participants' identities could be sufficiently protected.

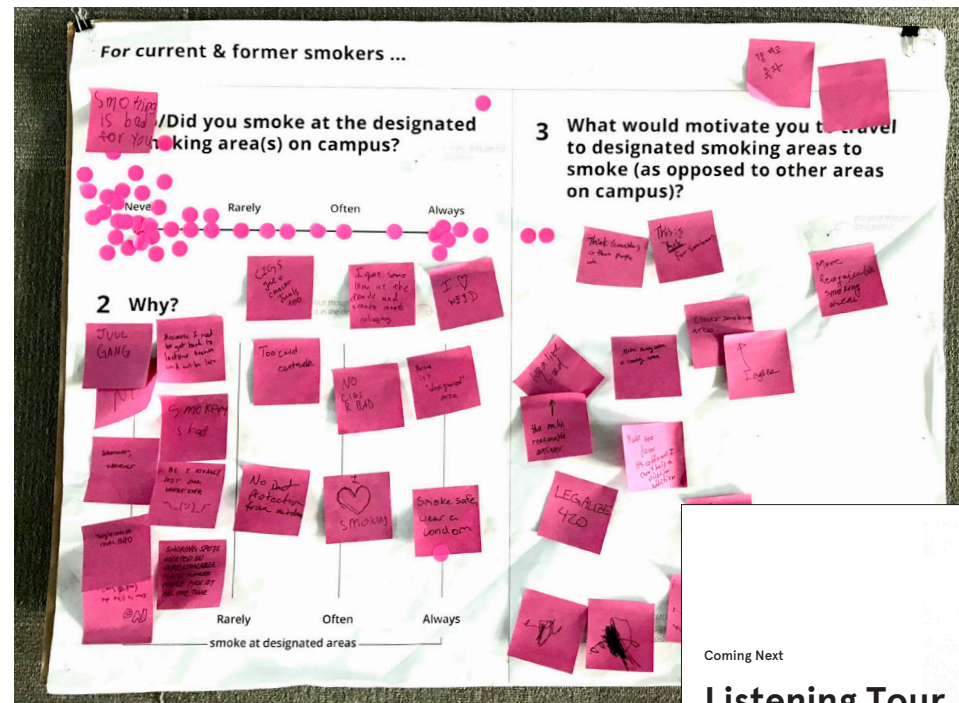


During the synthesis process, interview notes were printed out and key f categorized by professions.

Research Through Design

A research-through-design activity was conducted in November and December 2018 on the Carnegie Mellon University (CMU) campus to (1) verify hypotheses established from previous research and (2) generate new knowledge by serving as a designer in a policy context. In the month-long activity, the researcher (author) worked with the project manager of the Smoke Free Campus policy of CMU and assisted her in design research and problem inquiry.

More detailed documentation can be found in the Medium post: <https://medium.com/designing-for-maintaining-policy-intent-for-city/how-it-like-to-be-a-designer-for-policy-making-a-mini-project-cb3bb7772a82>.



A number of public engagement methods were implemented to understand the culture and root challenges of smoking on Carnegie Mellon University campus.

Coming Next

Listening Tour (free donuts!)

Time: Thursday Dec 6, 4pm-5pm
Location: UC black chair area

We want to hear from you - heavy smokers, social smokers, former smokers, and friends of smokers! Stop by, grab a donuts, and provide your thought and personal experiences of smoking on campus.



4.3 KEY FINDINGS

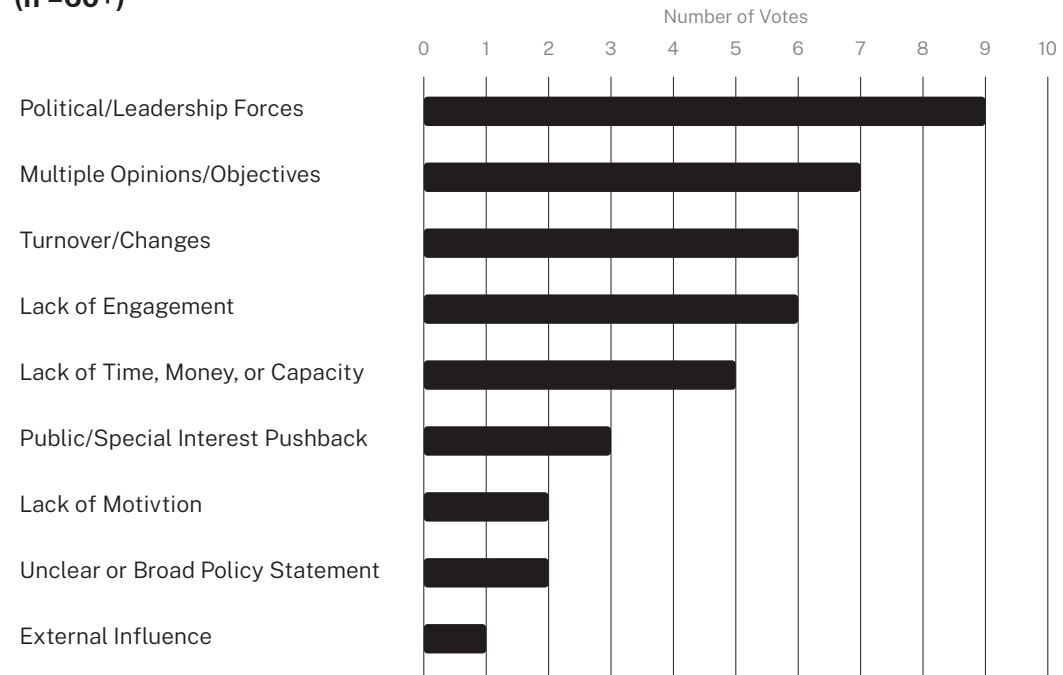
Finding 1

Challenges in comprehensive planning are rooted in the large number of individuals involved in the process — politics, consensus building, and engagement are top challenges.

The responses from the surveys covered a wide range of issues from individuals' capacity to interpersonal power dynamics to environmental justice. In politics, political will and turnovers set the baseline of how much a comprehensive planning process can achieve. Given the scale of these processes, building consensus while considering environmental justice remains unsolved an challenge for most planners and project managers. Lack of engagement is a common challenge for municipalities where the trust between the public and the government is low. Figure 4-1 shows participants' responses by categories from the survey.

Figure 4-1: Barriers in Comprehensive Planning Processes

What barriers have you and your team come across in maintaining policy intent?
(n¹=60+)



Note: [1] The poll was conducted in an "open house" style in which participants could provide their responses and/or upvote for as many items as they wish.

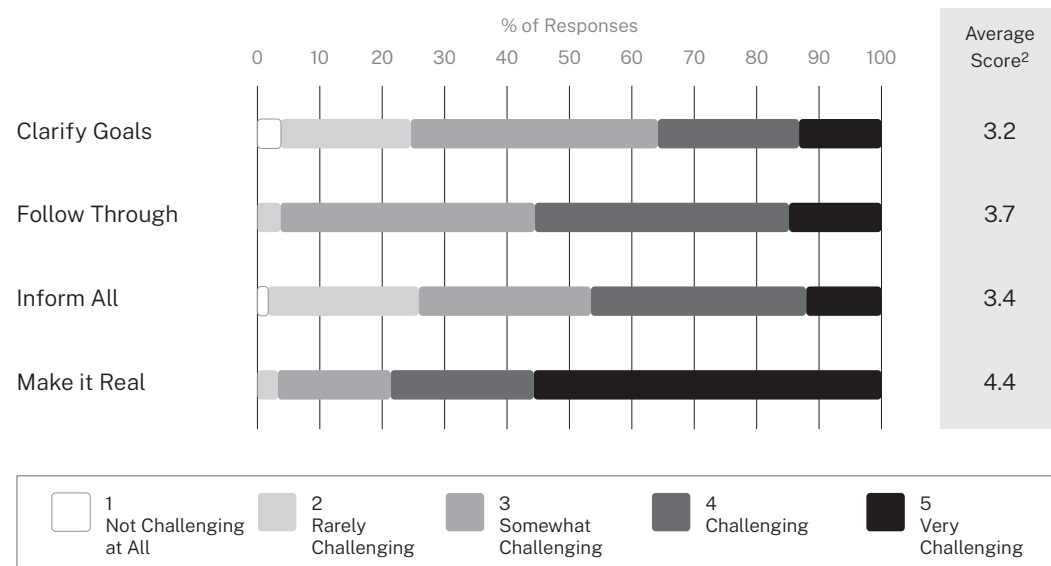
Finding 2

Specific to the challenge of maintaining policy intent, “Make it Real” led the poll but all components are acknowledged as interconnected.

While the surveys showed “make it real” as the most difficult component as seen in figure 4-2, anecdotal follow-up responses provided a more comprehensive reasoning. Firstly, “make it real” was the hardest partly because participants, mostly planners and project managers, were separated from policy implementation by design. Secondly, some participants pointed out that “clarifying goals” was something easy to do but hard to do well. Thirdly, participants explained that “make it real” would be easy if everything beforehand was done properly, which was often not the case. Finally, many participants found it difficult to conceptualize “policy intent” and confused it with the final goals and objectives as written in the comprehensive plans.

Figure 4-2: Level of Challenge for Four Components of Maintaining Policy Intent

In your planning work, how challenging is it to accomplish the following 4 components of maintaining policy intent? (n¹=60+)



Note: [1] The poll was conducted in an “open house” style in which participants were instructed to rate each component based on the given “challenge scale (1 to 5)”. [2] The Average Score is a weighed average based on the number of votes and the assigned value of each challenge scale category.

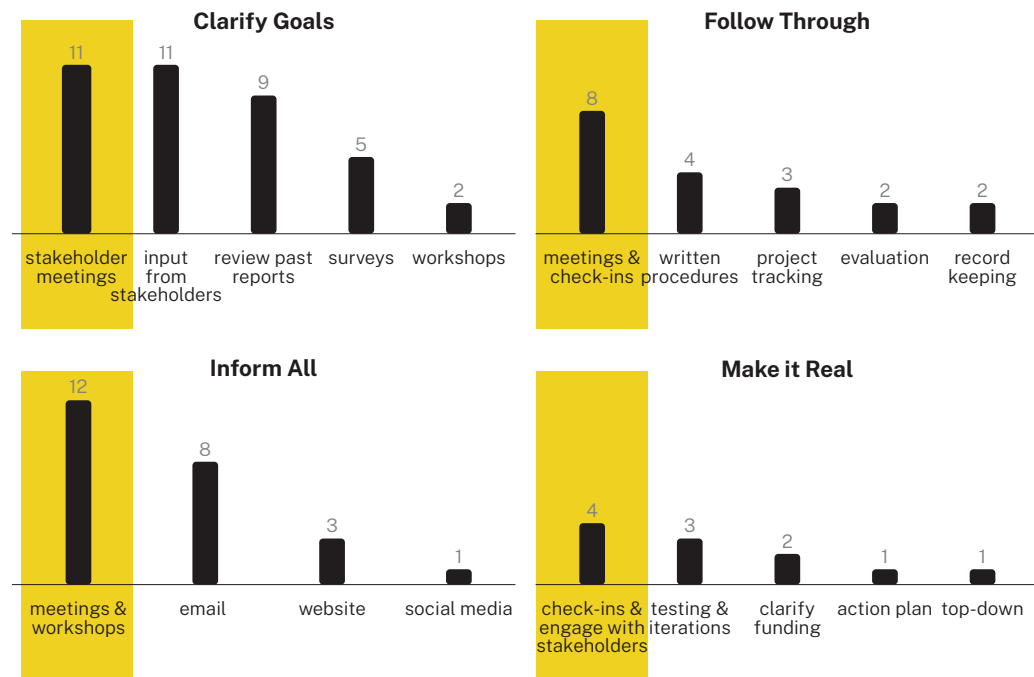
Finding 3

Amongst existing methods used in the comprehensive planning processes, “meetings” are the most popular method across stages. Measurements and checklists are considered viable strategies.

As shown in figure 4-3, meetings were the most mentioned method across all four categories of maintaining policy intent. It is noteworthy that while “meeting” can mean different things to different people (for example, some may consider stakeholder interviews or community workshops as meetings), most participants subscribed to the term when naming their methods. When asked about “strategies” in the overall comprehensive planning process to maintain policy intent, participants also called out itemized and quantifiable guides such as measurements, matrices, and checklists. This trend could be seen in the “follow up” and “make it real” categories.

Figure 4-3: Strategies Used to Maintain Policy Intent

In your planning work, what strategies, activities, or frameworks do you use to accomplish the following 4 components of maintaining policy intent? (n¹=60+)



Note: [1] The poll was conducted in an “open house” style in which participants could provide their responses and/or upvote for as many items as they wish.

Finding 4

Stage of distress, stakeholder capacity, roadblocks removal, and sufficient funding also determine a project's potential for innovation.

Findings from phone interviews and case studies, as shown in figure 4-4, illustrated the connections between common failures and the countering success factors. In addition to political influences and consensus building, distressed existing conditions pressure both project managers and leadership to give new approaches a shot. New approaches may also thrive when core stakeholders, including political leaders, project managers, and community champions have the capacity to participate. Thirdly, because new approaches often require special permission, stakeholders need to navigate procurement or other internal policies. Lastly, having sufficient funding ensures proper resources and establishes legitimacy of adopting new approaches.

Figure 4-5 summarizes the aforementioned contextual factors by stakeholders.

Figure 4-4: Failure & Success Factors of Trying New Methods



Figure 4-5: Necessary Contextual Factors for Trying New Methods in Comprehensive Planning

SITUATIONS	STAKEHOLDERS	LEADERS	PROJECT MANAGERS
<p>Hitting the rock bottom A stressed context, with “any solution is better than existing solutions” allow for new opportunities (ex. buy-in).</p>	<p>Credibility from outside Initiatives External organizations often enjoy the credibility and the “clean slate” that existing stakeholders don’t have.</p>	<p>Personal motivations to innovate Leaders’ strong personal motivations (ex. public appeal, leaving legacy) often lead to non-traditional approaches.</p>	<p>Ability to embrace complexity While evidence-based approaches have merit, they can fail to capture the complex human interactions and root causes of problems.</p>
<p>Human-centered problems Challenge is rooted in real lived experiences, as opposed to system-centered problems (ex. budget acquisition).</p>	<p>Multiple and unlinked layers & factors Design can help navigate issues that appear in many scales (policy, organization, lived experiences) and are not well linked.</p>	<p>Will to give sign-offs & permissions Discretionary power removes main financial and regulatory roadblocks to enable pilots and prototyping activities.</p>	<p>Focus on the vision, not the problem When the focus is on the lived experience, the design problem is explored and discovered, not given and executed.</p>
<p>Clear intent and desired outcome Having clear intent means that this project has the momentum necessary to initiate the exploration.</p>	<p>Unclear stakeholders & accountability When there isn’t a fixed set of stakeholders, there are less barriers to build a multi-disciplinary team.</p>	<p>Continuous and active engagement Leaders who are more involved in the process bring internal knowledge early on to help keep the project grounded and proposals more implementable.</p>	<p>Capacity to build horizontal alliances PMs with strong institutional knowledge and connections are capable of seeing and establishing unlikely connections.</p>
<p>Capacity to create small wins Whether a project is bootstrapped or well-funded, small wins build morale and confidence amongst the team.</p>			<p>Focus is on impact, not strategy Impact realizes the policy intent, while strategies merely codify the policy intent.</p>

Finding 5

By evaluating the contextual factors, designers can focus on leveraging promising assets to increase the success of new method deployment.

One purpose of the research-through design was to explore how the criteria list would inform the researcher's (author's) decision-making as a designer in the policy context. Figure 4-6 illustrated the researcher's first attempt in assessing the policy context using the criteria list. Over the course of the short research period (six weeks), the researcher found that (1) the list helped her stay focus on the opportunity areas and that (2) the list guided her to push the boundary in the most strategic areas, such as opportunity for additional funding.

Figure 4-6: Using a Checklist in “Research Through Design”

Criteria / Smoke-Less Policy			
Situations	Stakeholders	Leaders	Project managers
✓ Hitting the rock bottom	✗ Credibility from outside Initiatives	✗ Personal motivations to innovate	✓ Ability to embrace complexity
✓ Human-centered problems	✓ Multiple and unlinked layers & factors	✓ Will to give sign-offs and permissions	✗ Focus on the vision, not the problem
✓ Clear intent and desired outcome	✗ Unclear stakeholders & accountability	✗ Continuous and active engagement	✓ Capacity to build horizontal alliances
✗ Capacity to create small wins			✓ Focus is on impact, not strategy

✓

 Clear strength

✗

 Unclear

✗

 Clear weakness

4.4 DESIGN OPPORTUNITIES

The research findings helped defined new and more focused opportunity areas, which led to the following “how might we” statements:

- How might we support planners to inquire, define, and communicate policy intent to all stakeholders?
- How might we support decision-making in meetings to make sure everyone recognizes a unified interpretation of policy intent?
- How might we make use of the “criteria list” checklist to motivate planners to try new approaches in their comprehensive planning processes?

In Part 2 of my research, I explored all three statements in the context of “planning meetings” – the most prevalent comprehensive planning methods and contexts for collaboration.

The background is a solid yellow color. There are two thin white diagonal lines: one starts from the top-left corner and extends towards the center, and the other starts from the bottom-right corner and extends towards the center.

PART 2

Design Methods for Planning Meetings

CHAPTER V

Planning Meetings Overview

5.1 PLANNING MEETINGS

As introduced in Part I, “meeting” is the most common method used in maintaining policy intent or simply making progress in comprehensive planning processes. Under the category “meeting”, however, are many different types of gathering and discussion sessions. Figure 5-1 illustrates stakeholders in a typical comprehensive planning process. Table 5-1 lists the meeting goals, primary stakeholders and level of public participation by meeting type.

5.2 COMMON CHALLENGES IN PLANNING MEETINGS

The types of challenges faced in planning meetings are, for the most part, typical to any multi-stakeholder meetings: participation, organization, communication, facilitation, and more. Because of the multidisciplinary nature and large project scope of comprehensive planning processes, however, certain challenges are outstanding and difficult to solve. The following explains these challenges.

Figure 5-1: Common Stakeholders in Comprehensive Planning

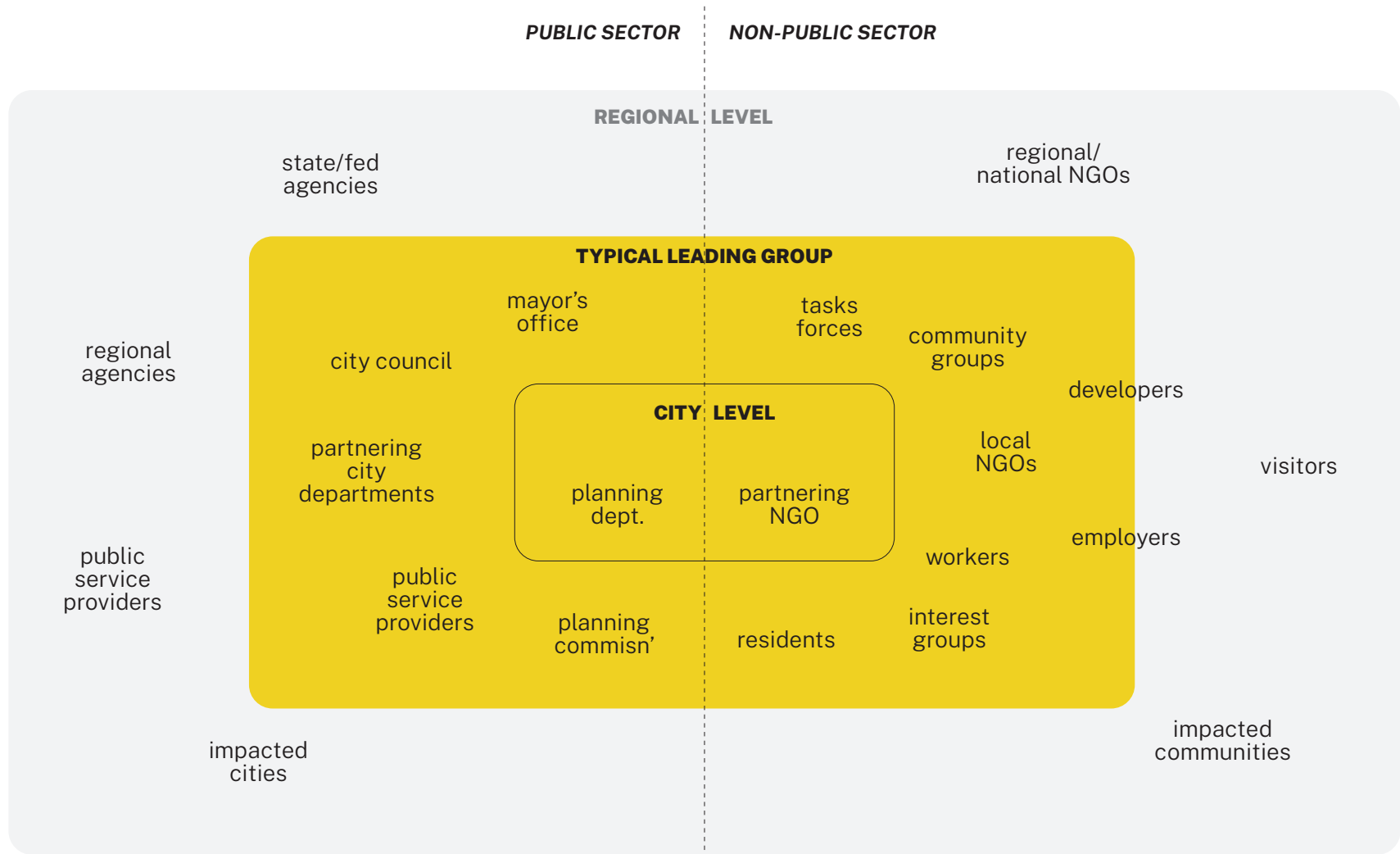


Table 5-1: Types of Planning Meetings

Type	Goal of Meeting	Primary Stakeholders	Public Participation	Typical Names
Council meetings	Planning team reports progress and/or seek approval from the advisory body.	Advisory body (city council, planning commission, advisory committee, etc.), core project team (project manager, consultants, etc.)	Meetings are open to the public; member of the public are given specific format and very limited time to voice their opinions.	Planning Commission meetings, City Council meetings, General Plan Advisory Group meetings, town halls, etc.
Committee/working group meetings	As a group, generate progress by ideating, discussion synthesizing, and/or making design and policy decisions.	Committee or working group, project manager, and relevant core team members (ex. consultants, agency members, experts, etc.)	Most meetings are open to the public. Formality of public input varies depending on bylaws or organizational culture.	Committee meetings, Subcommittee meetings, Working Group meetings, etc.
Public meetings /workshops	Engage with the public to learn about or get feedback from members of the public.	Core and extended project team, members of the public.	Extensive public participation through (typically) group activities.	Community workshops, community charrette, community meetings, etc.
Core team meetings	Project planning and coordination, brainstorm, discuss, and make decisions for components of the final plan.	Core team members (project manager, collaborating agencies, consultants, etc.)	Typically not open to the public.	Kick-off meetings, monthly/ bi-weekly meetings, etc.

Unprepared Participants + Infrequent Meetings = Low Productivity

A planning project consists of both paid and volunteer stakeholders. Many volunteering stakeholders, including working group members and community representatives, find little time outside of attending the monthly meetings to actually prepare for the meetings. This means that many meetings spend significant time delivering information, leaving insufficient time for discussion and decision-making. The information delivery component becomes even more necessary when meetings happen infrequently, resulting in a long list of status update.

In other cases, the core team is unable to provide preparation materials for the meeting participants ahead of time due to tight schedule or fear of immature reaction from specific stakeholders.

Various Versions of Communication Materials

Different stakeholders have different “tastes” when it comes to communication. Some experts prefer to see highly technical materials, while others (for instance, the general public)

have nearly no knowledge of the basic city planning concepts. The burden is on the project manager and the core team to create tailored materials for each meetings to yield meaningful discussion and feedback. There have been many creative solutions around public engagement and communication, mostly about utilizing various digital and visualization tools. Nevertheless, communication remains a tricky and often time consuming challenge for many municipalities.

Philosophical Differences with Power Discrepancies

A comprehensive planning process involves a lot of people—the core teams, the partnering institutions, the leadership, and anyone who lives and works in the region of interest. Diversity of opinions is therefore a fundamental challenge that can at best be navigated through facilitation, deliberation, or trust-building activities. On top of this challenge, politics and the resulting power dynamics further the divide when the leadership or power holders have already decided the outcome of a comprehensive planning process. Situations like this set an unhealthy context of planning meetings where stakeholders feel powerless.

Emotional Meetings

The lack of regular civic engagement opportunity, together with political and social tension amongst the community, turned many planning meetings into a space for rant and protest. It is very often to find single-issue public members or even committee members who would either hijack the meeting agenda or refuse to participate when the meeting goals do not match with their interest areas. Because many topics within comprehensive planning are interconnected (housing, transportation, environmental preservation, etc.), it becomes harder to focus the conversations. Trust and commitment amongst stakeholders is key to lower the impact of these emotional meetings.

CHAPTER VI

Design Methods for the Public Sector

6.1 DESIGN-INSPIRED TOOLKITS FOR THE PUBLIC SECTOR

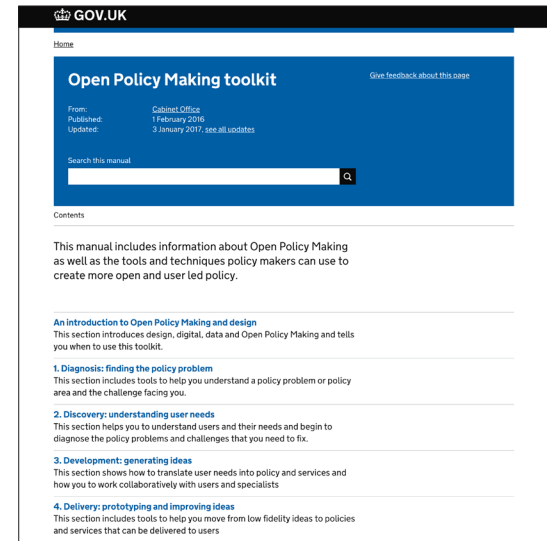
The rise of design in the social and public sector has led to the creation of many design resources that are prepared specifically for public sector employees. Amongst all types of resources, “toolkits” have gained popularity for their succinct, straightforward, and actionable materials. Table 6-1 shows a list of recently published toolkits.

Most toolkits organize the content by phases of a design project—exploratory, generative, and evaluative. Some toolkits include a brief introduction of design and its unique offerings to social and civic challenges; others simply include lean instructions and visual materials.

It is noteworthy that many of these toolkits are inspired by not just human-centered design but other new practices in business and management. Together, these toolkits introduce “innovation” by referencing human-centered, design-inspired tools and frameworks.

Table 6-1: List of Recent Toolkits

Name	Publish Date	Publisher
Civic Service Design Tools + Tactics Book	October 2017 (booklet v2)	NYC Mayor's Office for Economic Opportunity
Design For Public Services	January 2017 (book)	IDEO, Nesta, and Design for Europe
Development Impact & You	2014 (book)	Nesta
Digital Service Manual	N/A (live website)	GOV.UK
EAST: Four Simple Ways to Apply Behavioural Insights	July 2015 (book)	The Behavioural Insights Team
Legal Design Toolbox	N/A (live website)	Stanford Legal Design Lab
Open Policy Making Toolkit	N/A (live website)	GOV.UK
Policy Methods Toolbox	N/A (live website)	New Zealand Department of the Prime Minister and Cabinet
Public Sector Innovation Toolkit	N/A (live website)	Australian Government Public Sector Innovation
SILK Method Deck	N/A (live website)	Social Innovation Lab Kent



Toolkits came in various forms, including print-friendly PDFs (top) and websites (bottom).

6.2 DESIGN-INSPIRED METHODS FOR MAINTAINING POLICY INTENT

One of design's biggest strengths in cross-disciplinary application is its ability to inquire and scope problems. Table 6-2 summarizes methods and tools included in four of the toolkits from table 6-2. These toolkits were chosen for their clear intention to be used by public sector employees, quantity and diversity of tools included, and the reputation of authoring institutions. As seen in the table, the initial project stages (problem scoping and exploratory) have the most methods in both quantity and variety. Fewer methods are available in the generative and evaluative stages. Finally, a handful of project-management-like tools are suggested in the implementation stage.

Table 6-2: Methods & Tools in the Toolkits

Stage	Step	Method/Tool
Problem Scoping	What's the problem	"Explore challenge" (post-it + discussion) ¹² ; symptoms & causes mapping (post-it) ¹ ; change cards ² ; hope & fear cards ² ; SWOT analysis ³ ; causes diagram ³ ; business model canvas ³ ; learning loop ³ ;
	Core team building	Value mapping ³ ; stakeholder mapping ³⁴ ; building partnership map ³ ; kickoff meeting ¹ ; target group ³ ; assembling team ¹
	Converge	Challenge panels ² ; evidence planning ³ ; deliberative dialogue ²
	Summarize	Challenge brief ¹ ; opportunity/"how might we" ¹³ ; theory of change ³⁴
Exploratory	User/people research	interviews ¹²³⁴ ; create outreach plan ³ ; observations ¹²³⁴ ; question ladder ³
	Info research	Review evidence ⁴ ; analogous research ¹ ; open data ²
	Converge	Download learnings ¹²⁴ ; prioritize(dot-voting) ⁴
	Summarize	Identify insights ¹ ; storyworld ³ ; personas ³⁴ ; user journey mapping ²⁴
Generative/ Evaluative	Ideate	Concept brainstorm ¹ ; fast idea generator ³ ; improvement triggers ³ ; thinking hats ³ ; idea days/policy jams ²³ ; crowdsourcing ²
	Prototype	storytelling(words) ⁴ ; storyboarding ⁴ ; paper prototyping ¹²⁴ ; interactive prototype ¹⁴ ; experience map ³ ; Minimal viable product (MVP) ¹²
	Test	Roleplay ¹² ; wizard of Oz ¹² ; behavioral insights ²
	Pitch	Promise & potential map ³ ; capability quicksheet ¹ ; "pitch" ¹
Implementation	Implement	Critical task list ³ ; business plan ³ ; marketing mix ³ ; blueprint ³ ; scaling plan ³ ; business model canvas ³ ; learning loop ³ ; roadmap ¹ ; "measure & evaluate" ¹⁴

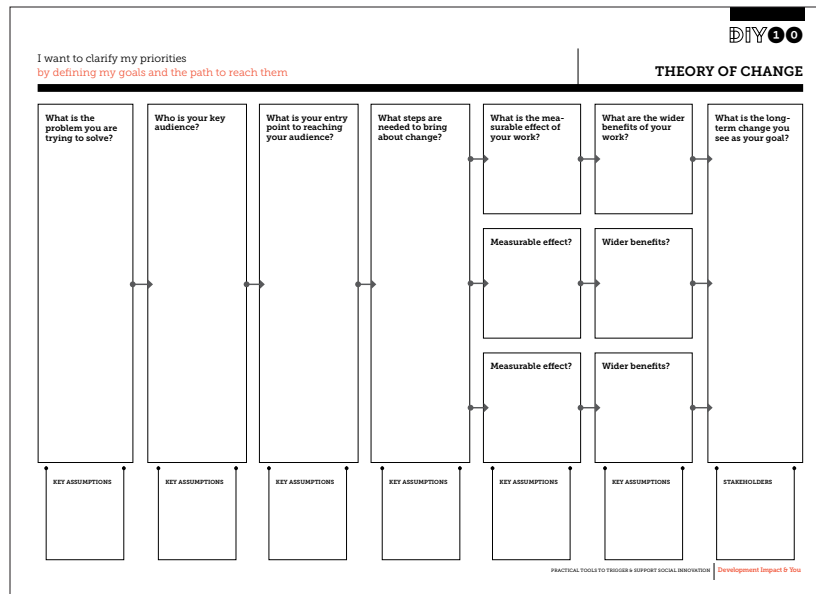
Source:

[1] *Designing for Public Services: a practical guide* (Nesta, Design for Europe, & IDEO, 2017)

[2] *Open Policy Making Toolkit* (UK.GOV, n.d. b)

[3] *Development Impact & You* (Nesta, n.d.)

[4] *Civic Service Design Tools + Tactics Book* (NYC Mayor's Office for Economic Opportunity, 2017)



“Worksheets” and other similar graphic-forward ways of describing a method are common across toolkits.

[Page] adapted from *Development Impact & You*, by Nesta, 2014.

Connect The Dots

Mapping the User Journey

⌚ **TIME** 1 hour to get started, then follow-up iterations
✎ **SUPPLIES** Pen and paper

Most New Yorkers interact with one or more government service fairly regularly, whether that's public schools, the Department of Sanitation, the Department of Social Services, or any of the other hundreds of City programs and resources. As government employees, we have one view of those services—and that's usually from the perspective of our own agency. But as New Yorkers, we have a totally different view of City services since we are interacting across several if not many programs and products all at once. This perspective—from the experience of the service user—is what this exercise reveals.

This tool is often called the user journey. Understanding the user journey helps us better design each of the steps within the service experience. The user journey can be highly customized or basic, but at minimum should consider what happens along five points (which are sometimes called The 5 E's): Entice, Enter, Engage, Exit, and Extend. You can do this for both services that already exist and new ones that you're creating.

Download your own journey map and see examples at nyc.gov/service-design

PRO TIP
It's important that you inform the journey through your research so as to capture the experience across stakeholders and users rather than rely on assumptions. It will also help you map where and when different stakeholders interact with each other.

New or Existing Service:

Entice = How do people hear about this and what gets them interested in checking it out further?

Enter = What's the experience like when they first enter (into a space, conversation, app, kiosk, website, etc.)?

Engage = What are all of the steps of engaging with the service? How will you keep them engaged and moving through the experience?

Exit = Once they are finished with that engagement, what does it feel like to leave that experience? How do they know they are finished?

Extend = How might they tell others about it, or best share their experience? What would you like them to be saying about that experience to others? Where/through which channels? Does the City follow up with the users?

23

NYC Civic Service Design Tools + Tactics

nyc.gov/service-design

24

In addition to graphics, many toolkits also include practical information such as “time”, “supply”, and “pro tip” to give reader more information on different methods' usability.

[Page] adapted from *Design For Public Services*, by IDEO, Nesta, and Design for Europe, 2017.

Methods for Maintaining Policy Intent

How do these methods help maintain policy intent if they were used in a public policy project? Figure 6-1 illustrates an initial attempt to sort these methods based on components of policy intent. This sorting exercise was challenged by the ambiguous and subjective correlation between policy intent and the main purposes for different design methods. For instance, can methods that help understand the context be categorized under “clarify intent”? Can methods supporting design iterations be categorized under “making it real”? While the sorting exercise did not eventually yield concrete insight, it demonstrated how difficult it could be to articulate design’s utility into the context of public policy.

Methods for Solving Meeting Challenges

Examining methods from the perspective of problem-solving provides a clearer picture of how they may relate to the context of meetings. As shown in table 6-3, design-inspired methods support different problem scenarios. It is noteworthy that in existing planning meetings, most of these problem scenarios are dealt with through a single traditional method – discussion. Section 8.2 explains in greater detail how this presents as an opportunity for innovation.

Figure 6-1: Sorting Methods by Categories of Maintaining Policy Intent

	Goal	clarifying goals	following through	informing all	making it real	others	"worksheet"
Design For Public Services (29)							
Exploring the challenge (put out issues & greater issues and then find pattern)	reframe challenge	x					
Creating a challenging brief	create brief	x					Y
Planning your project	timing/plan		x				Y
Assembling your team	create a team					teambuilding	
Team roles						teambuilding	
Setting up your foundations (kick-off mtg)	set up "home" of info (ex. calendar)					teambuilding	
Running workshops	bring ppl together					collect info (on exp	Y
Kickstarting your research (brainstorm on what to ask, how to ask)	identify gaps, key audiences	x					
Influencing forces (mapping causes)	identify underlying causes	x					
User interviews (& tips)		(x)				collect info (on exp	Y
- Recruiting interview participants	diverse group of ppl						
- Creating interview discussion guides	quality control						
Observations		(x)					
Analogous research	diff. context, help reframe	(x)					
Downloading your learnings	capture ideas from researchers			–			
Sharing stories				–			
Creating themes		(x)					
Identifying insights	identify insights (def. of insight!)					ideate on design	
Generating opportunities	create "how might we"					ideate on design	
Generating ideas						ideate on design	
Creating concepts						ideate on design	Y
Co-creating concepts						ideate on design	
Prototype (steps)	verify hypothesis, learning focused				(x)	iterating design	Y
- Paper Prototype							
- Roleplaying							
- Simulation							
- Wizard of Oz							
- Interactive prototype							
- Minimum viable product (MVP)							
- Randomized control trial (RCT)							
Creating a pitch	communicate propositions			x			
Capabilities quicksheet					(x)	understand feasibl	Y

Table 6-3: Design Methods for Meeting Challenges

Meeting Challenge	Method	Description
Misaligned Expectations People are on different pages in terms of what everyone's goals and desires are.	Hope & Fear Cards	Use photos to describe thoughts on a problem (metaphors for hopes and fears) to discover potential connections/conflicts.
	Value Mapping	Verbalize and compare the values most to least important for individuals in an organization.
No New Ideas People hold onto their ideas and have a hard time coming up with alternatives	Fast Idea Generator	Rethink an idea by applying different approaches and think outside of the box.
	Improvement Triggers	Evaluate a solution from different directions and find areas where the solution can be the most effective.
	Change Cards	Use prompts like "what if we have money?" "how would a child design it?" to reframe the challenge.
Decision Paralysis People have a difficult time making decisions amongst options	Promise and Potential Map	Use a 2x2 framework to visualize the change/improvement in terms of value proposition between existing and proposed solutions.
	Thinking Hats	Assign one perspective ("hat") to each person and collectively examine an idea from all possible perspectives.
	"Yes, if" Post-it Voting	Ask people to respond to each idea with "Yes", "Yes, if", or "No" plus a brief rationale to get collective responses.
Can't focus Conversation goes on tangents because there is no clear focus and visible pathway towards conclusion	Theory of Change	Articulate the path between existing problems and expected change in concrete steps and highlight assumptions.
	SWOT Analysis	Map out internal (strength/weakness) and external (opportunities/threats) factors that assist or hinder the path to success.
Lack of empathy Discussion gets too technical and removed from the human experiences	Storyboarding	Describe a solution by visualizing the user journey and emotional experiences in order to identify potential inconsistencies.
	Storyworld	Highlight the most relevant insights of stakeholders and create stories people can easily relate to.
	Journey Mapping	Visualize user's emotion flow through different steps of a journey to understand specific challenges and opportunities.

CHAPTER IV

Research & Key Findings

7.1 HYPOTHESES & QUESTIONS

Chapter 5 and 6 provide the information necessary to explore the potential of bringing design methods to planning meetings. The information led to the following hypotheses:

- The quality of planning meetings indicates a comprehensive planning process' ability to maintain policy intent.
- Design methods can help address challenges in planning meetings.

To verify the hypotheses, the following research questions were established:

- What are the most prominent challenges in planning meetings and how do they relate to maintaining policy intent?
- What are the existing capacity of planning meetings to introduce new practices?
- What would motivate stakeholders to learn about and implement design methods in their meetings?

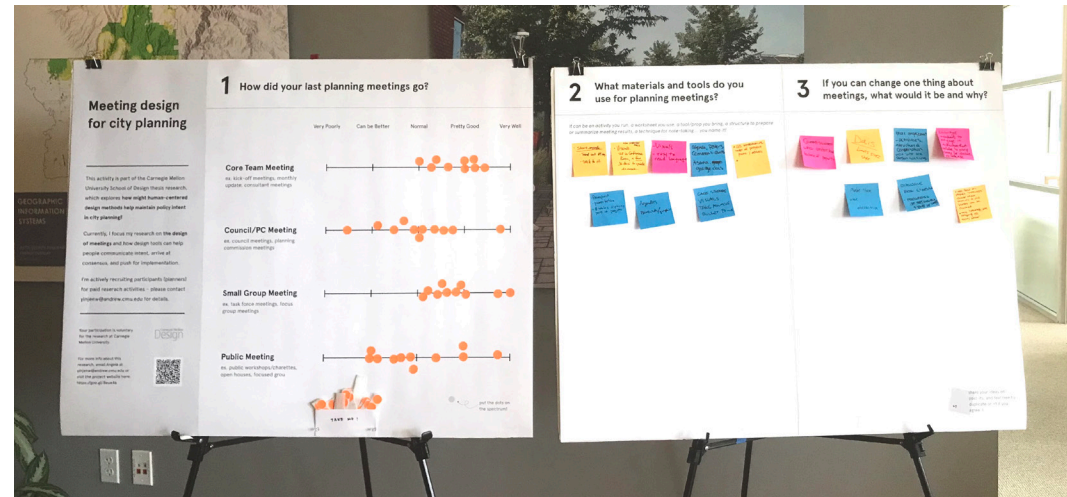
7.2 RESEARCH METHODS

Poster Survey

A poster survey was launched in a planner professional group gatherings. The goal of the survey was to get initial reactions of different meeting types from planners and to learn more about the tools and methods they used in their meetings. Approximately 20 people engaged with the survey in varying capacities.

Fly-on-the-wall Observation and Interviews

The goal of the observation and interviews was to better understand the context and the points of view of various meeting participants. Between January and February 2019, the researcher (author) observed four different types of planning meetings. Two of the meetings were followed up with 15-min interviews with individual meeting participants. Some of the meetings were open to the public. Private meetings were observed with the approval from all meeting participants. All documentation were anonymized so that neither the planning projects nor the individual participants could be readily recognized by others.



How would you describe this meeting? (1: left, 5: right)

- Not Engaging <> Engaging 5
- Disagreeing <> Agreeing 5 (generally agree with the premise, the nuances)
- Inefficient <> Efficient 3 ("this past meeting not as efficient")
- Rough <> Smooth 4 (going back to comment have to interrupt people)
- Inactive <> Active 5
- Unsuccessful <> Successful 5 (2 resolutions we worked on and passed)

[After the meeting]

Do you believe the group achieved the intent of this meeting?

Yes. we pass resolution

What do you think you did well in the meeting? Why?

My job to facilitate and open conversation, while i attempted to do that -- the comm. Project items. There is different opinions -- we arrived at a good resolution. I helped to make sure there isn't a narrow/single focus

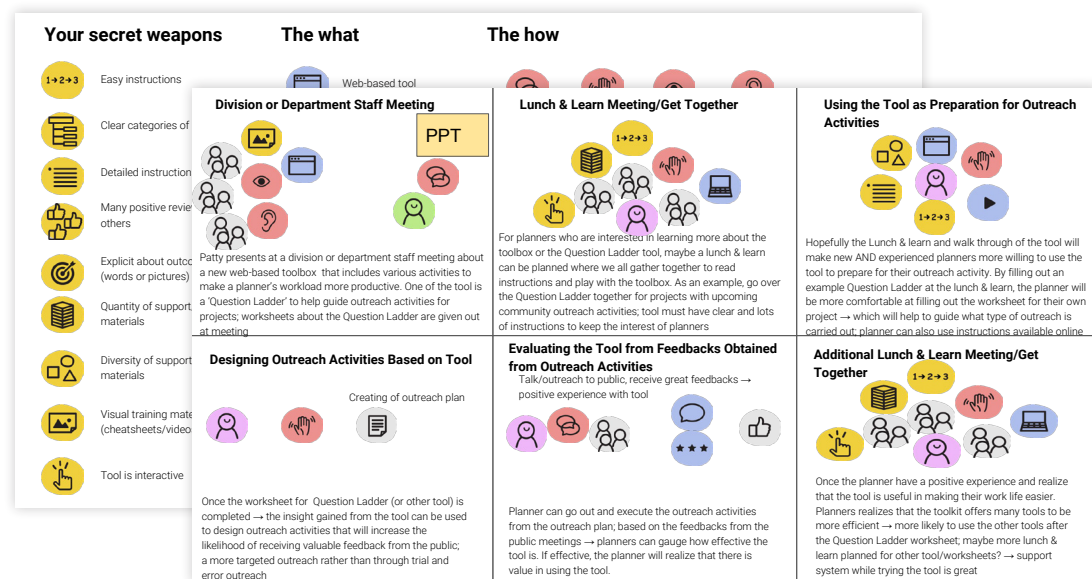
Top: poster survey. Bottom: notes for post-observation interviews.

Diary Study

The goals of the diary study were to (1) understand planners' response to existing design toolkits, (2) identify design opportunities to increase method adoption, and (3) guide planners to design an ideal user journey using a series of design methods. A 7-day diary study was launched in February 2019 with five participants who worked as city planners at the time of the study. Each day, participants received a Google Slide document in which they filled out the daily work log (same format everyday) and completed a design research activity (different everyday). Some design research activities included speak-aloud, which was accomplished through video calls with screen-share.

Table 6-1: Diary Study Activities

Day	Daily Activities
1	Answer questions (survey) about barriers & Attitudes
2	Skim through 2 existing toolkits and fill out a short survey.
3	Skim through 2 existing toolkits and fill out a short survey.
4	Build an ideal journey (multiple-choice format journey mapping).
5	Try out a tool from the toolkits in day 2 and 3; document the experience (journey mapping).
6	Brainstorm (analogous inspiration) in non-planning context to address problems from day 5.
7	Based on the common positive traits from the day 6 brainstorming, build an ideal journey (storyboarding) from discovering to using a tool.



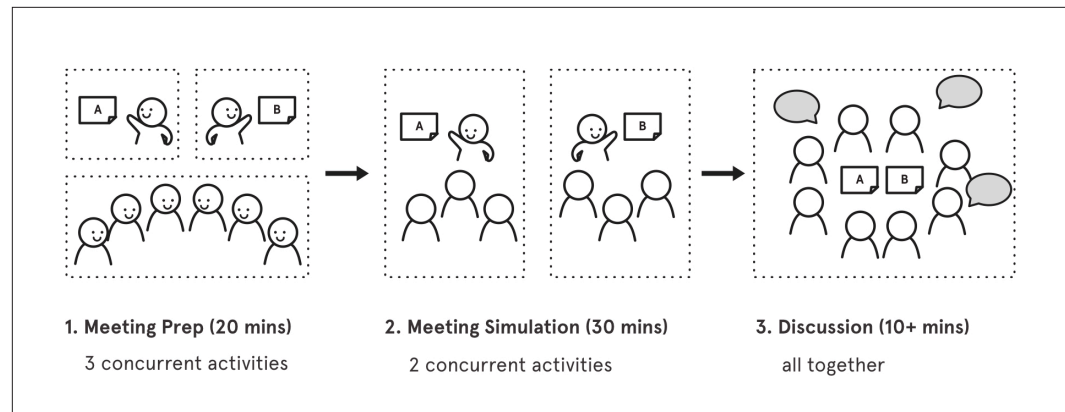
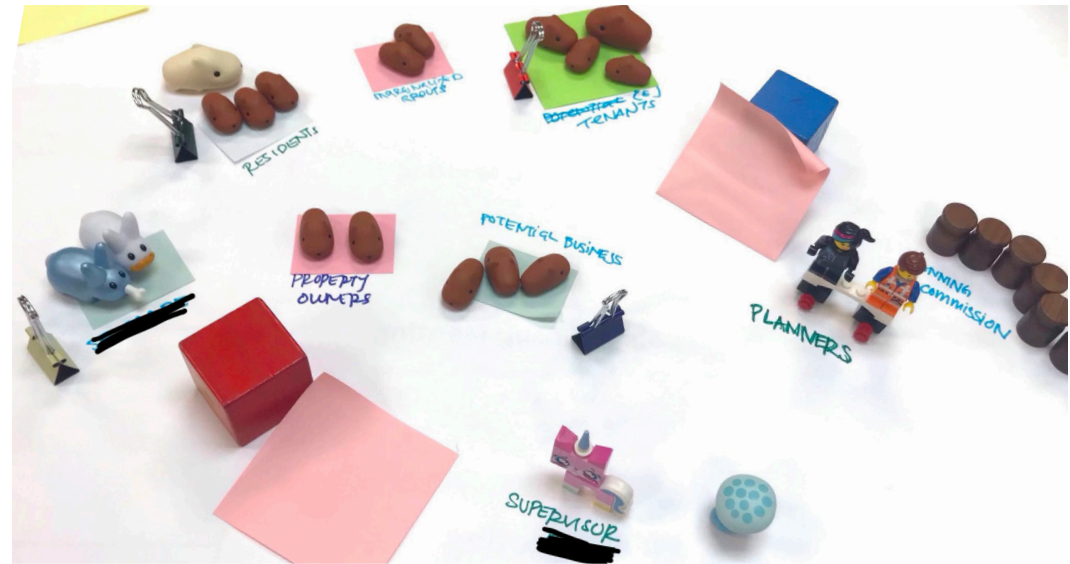
In day 7, participants created storyboards based on the 'secret weapons (lessons learned from the analogous inspiration exercise in day 6)' and the methods they identify in day 5.

Co-design Workshop

The goal for the co-design workshop was to get planners to ideate on how they would use design methods in their planning meetings. This generative exercise was meant both as a prototyping activity (prototype a meeting) and as a means to build creative confidence. The co-design workshop took place in a city planning department with over 12 planners participating in the activities.

A/B Testing and Role Play

In March 2019, an A/B testing and role play activity took place in a planning department. The goal for this research activity was to verify research findings through prototypes and simulated meeting experiences. In the activity, two planners read through different instructions of the same design method (the item of A/B testing) and then executed the method in two separate simulated planning meetings. The rest of the meeting participants role played as typical planning meeting participants.



Top: participants of the co-design workshop prototyped how a question ladder tool (pink post-its) can be used in a public meeting.

Bottom: the A/B testing procedure.

7.3 KEY FINDINGS

Finding 1

In planning meetings, quality of human interaction are almost as important as tangible outcome, while having a tangible outcome is the ultimate definition of meeting success.

When asked to describe successful and failing meetings, most planners first called out the quality of interactions before describing the outcome. In the interviews, meeting participants also credited individuals' behaviors when describing how satisfied they were with the meetings. However, if a meeting successfully reached certain milestones, such as passing a resolution or arriving at a decision, planners would categorize the meeting as successful even if there were tensions amongst meeting participants. Reversely, a meeting without a tangible outcome (ex. public workshops) could be described as successful if good human interactions (ex. good attendance, friendly conversations, etc.) were observed.

Successful meetings

Successful meetings are **well-organized**, **engaging**, **fun**, and the information is readily **accessible** ...

Engagement is what makes a meeting successful, engagements from all participants allows the meeting to have a great dialogue ...

Successful meetings are those that have a **clear purpose**, are **interactive** and **engaging**, and result in either **achieving a desired outcome** or in **clear action steps** ...

Unsuccessful meetings

[Unsuccessful meetings have] poor **participation**, poor **attendance**, or no **exchange** of information from all ...

Unsuccessful meetings are either **boring**, **redundant**, **directionless**, and/or the content is **difficult to** understand.

[Unsuccessful meetings] getting **off track**, **grandstanding** on tangentially related/unrelated topics, **conflating** issues, **misinformation** circulated prior to the meeting ...

Quotes from interviews

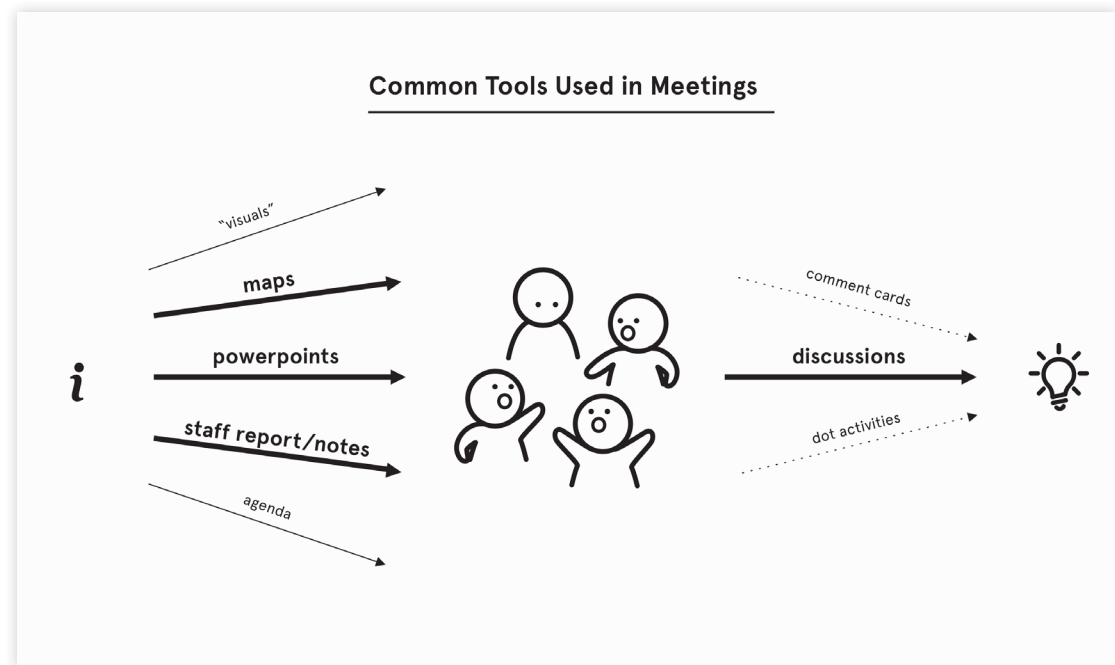
poorly organized	unwillingness to listen	no engagement	no accountability
unclear objectives	talking at one another	boring	distrust
poorly explained objectives	grandstanding	redundant content	low morale
low attendance	conflated issues	digression	no action items
hard-to-understand info	no consensus	stuck with one issue	unclear next steps

Keywords from interviews

Finding 2

Existing tools support information delivery but do not shape the consequential discussions.

According to surveys and observations, the most common tools used in planning meetings were maps, powerpoints, staff reports, visuals—they helped clarify information presented but they didn't shape how people discussed upon the information to move forward with the intent. With the exception of few public meetings, almost no activity, other than “discussion (talking)”, were employed to shape the meeting discussion. This finding was encouraging because most design methods and tools were designed to shape discussions, indicating their potential to address planning meeting problems.



Finding 3

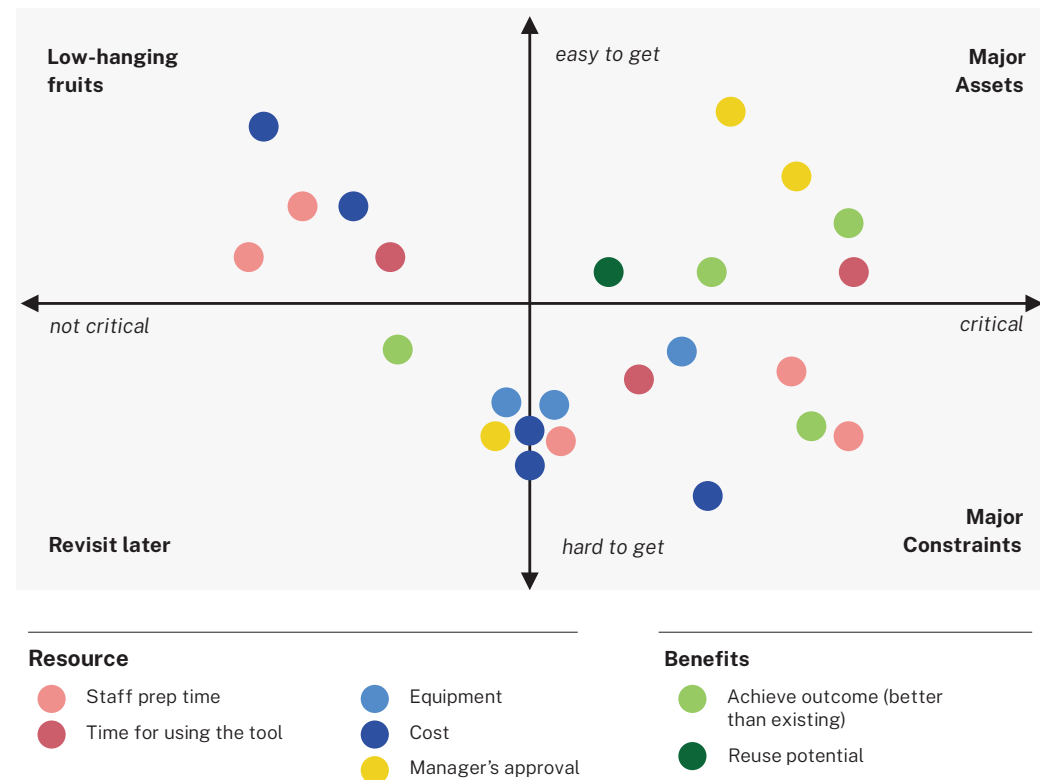
Resource and benefits are two big concerns for trying new methods.

When asked to list and rank the criteria for applying new methods, diary study participants (planners) listed resources (time, cost, etc.) and benefits (outcome) as two universal factors. All participants from the diary study were very sensitive to demanding additional time from leaders and volunteering stakeholders. They were also sensitive to the extra admin time required to implement these tools. Cost was another critical item for that, especially in the public sector, every purchase needed to be justified. Last but not least, guarantee of success was critical because it can persuade management and reduce perceived risks.

Figure 7-1 showed the result of a mapping exercise where participants placed the factors in a 2x2 chart to show relative importance. The lack of pattern reflected the diversity of participants' institutional capacity.

Figure 7-1: Factors of Trying New Methods

What factors do you consider when answering the question “how willing are you to try out/introduce new tools or methods to your meetings”?¹ (n=5)



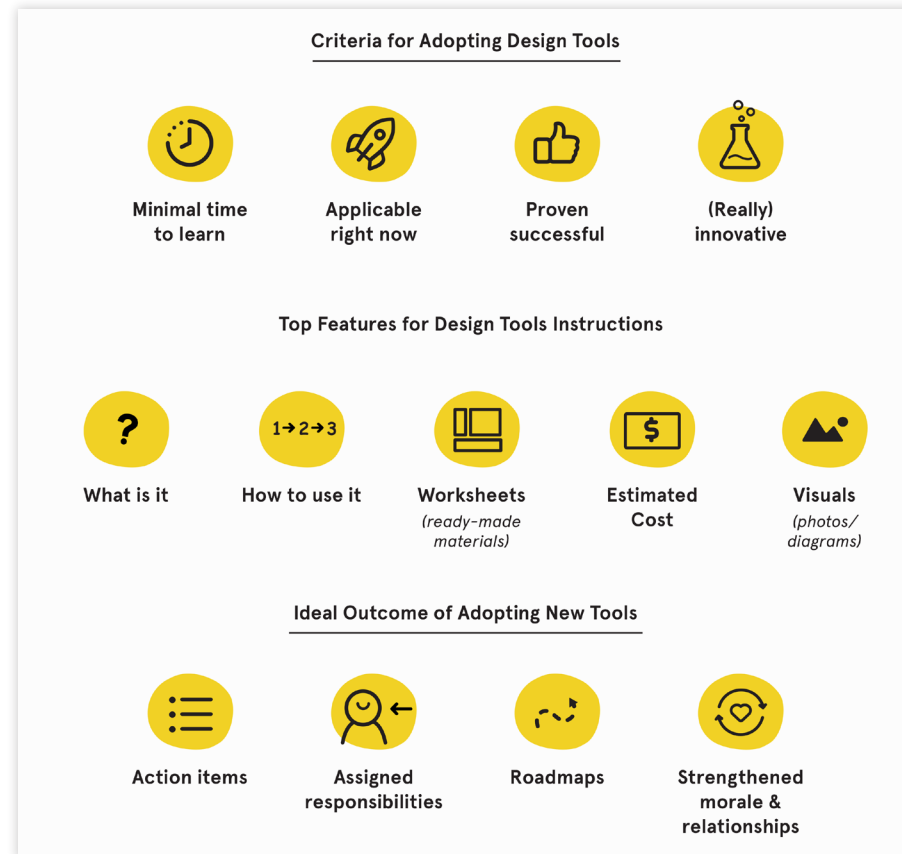
Note: [1] After answering this question, participants were asked to position these factors along the x- and y- axes.

Finding 4

Design methods and toolkits can incorporate specific features to increase chances of adoption by planners, but planners also need to know them first.

Participants from the diary study and co-design workshops were a self-selected group who were interested in the intersection of design and city planning. However, most of them did not know the existence of design toolkits (as listed in table 6-1). Once introduced to the toolkits, participants were able to clarify their preferences of toolkit features, goals, and communication tactics. Overall, there was a universal preference towards skimmable content and instant applicability, yet individuals had varied definition of glancability and preference towards over-simplified content. The preferences and subsequent design principles were summarized in figure 7-2.

Figure 7-2: Design Principles for Designing Toolkits for Planners



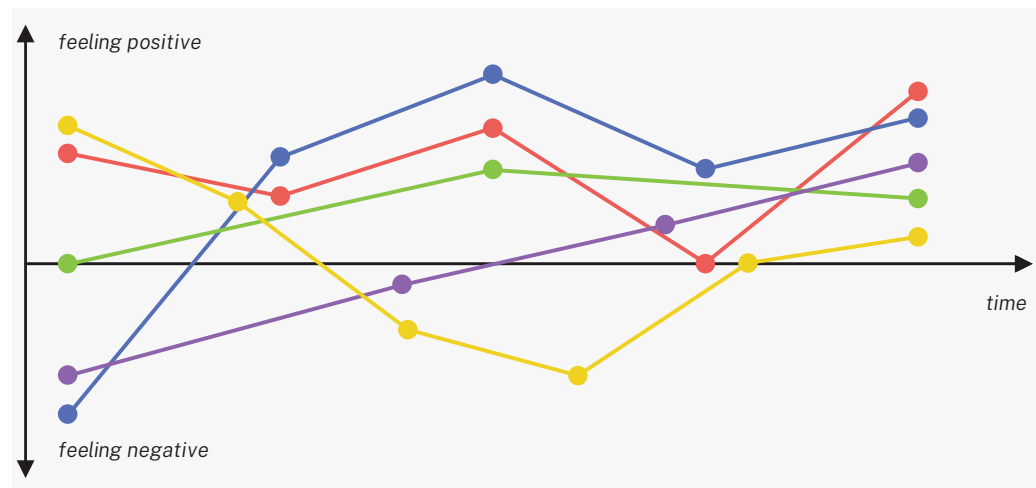
Finding 5

The initial drop in confidence when trying new methods is universal for planners. Nevertheless, their overall experience remains universally positive.

In the diary study, planners were tasked to try a method of their choice and document their experiences. Figure 7-3 shows their self-documented user journey. As shown in figure 7-3, most participants initially experienced a low point or dip in confidence — feeling scared, confused, unsure, and doubtful. Later in the journey, all participants regained their confidence and all reported to become “more willing to try” after the experience. This finding shed light on a specific problem space (the initial dip in confidence) upon which a design proposal could be established within the scale of this thesis work.

Figure 7-3: “Trying New Tools” Journey Maps

Please use lines and dots to plot your experience [of trying a tool of your choice in one of the toolkits]. (n=5)



Participant

Comment at “low points”



“Reading the instruction is kind of scary ... can I accomplish this?”



“I have no idea what to expect.”



“Why am I doing this?”



“Overwhelmed in the beginning. Not sure how to apply this tool.”



“Not sure what X means.” “Don’t have answers for Y.”

Finding 6

Contextual factors trump toolkit design as the determining factors for implementation.

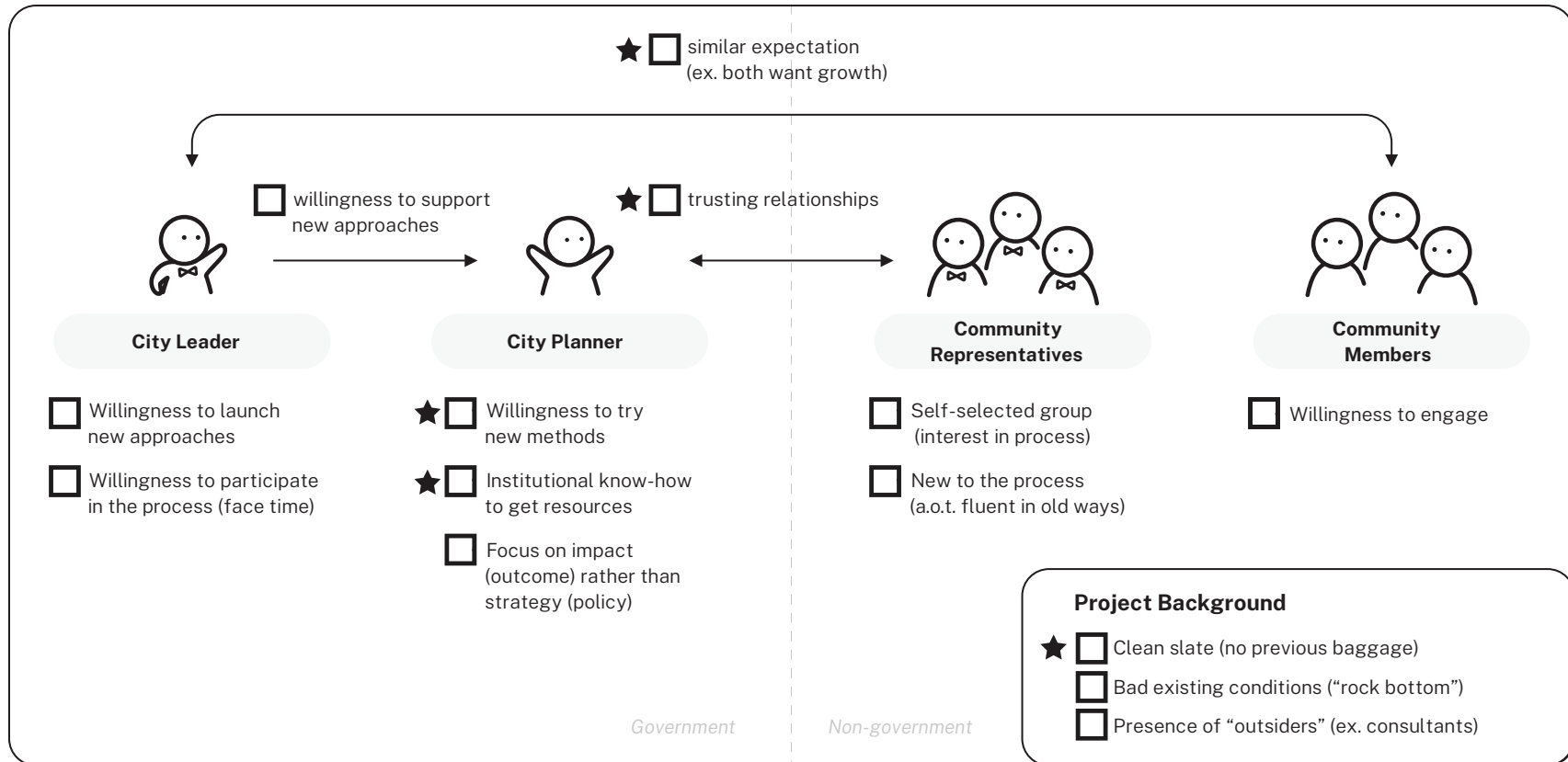
The A/B testing was set up to verify whether, by including preferable toolkit design features, planners would have greater confidence and success in implementing the final tools. What turned out was that the planner with the preferable toolkit design encountered a much more hostile “planning group”, which resulted in poorer method implementation than his/her counterpart. In the post-activity debrief, participants also pointed out their institutional challenges being the top reason why they had difficulty making progress in planning meetings. Some even pointed out that their community had distrusted the government and simply wasn’t “ready for these meetings, even though they are required by law to happen.” While the sample size for the A/B testing was small, it showed the importance of considering contextual factors in design method implementation.

Finding 7

A simulated setting provided room for experimentation, debrief, and authentic interactions.

In the original research design, the role play component only existed to enable A/B testing. Nevertheless, the role play activity turned out to be the most engaging element of the research and led to a productive discussion amongst research participants on institutional challenges. Considering how restrictive and regulated many conversations in planning meetings were, the role play activity provided a unique platform for participants to unload their frustrations and have authentic interactions. This setting has the potential to build trust amongst participants—a much needed yet complex process for many comprehensive planning processes.

Figure 7-4: Contextual Factors for Successfully Introducing New Methods in Planning Processes



Contextual Factors Update

In addition to the aforementioned findings, Part 2 research also discovered additional information to update the “Criteria List” as mentioned in section 4.3. Compared with its last iteration (figure 4-5), figure 7-4 outlines the necessary factors of people, between people, and of the project itself.

While the thesis research did not conclude whether certain factors outweighed others, Bason’s innovation capacity pyramid may provide a way to start exploring the relative importance (though he did not explicitly establish an argument). In the pyramid, as shown in figure 7-5, Bason (2018) positioned structural, institutional, and political conditions at the top and the day-to-day people and culture at the bottom.

Figure 7-5: The Innovation Capacity Pyramid



Adapted and modified from Leading Public Sector Innovation 2nd Edition (p.28), by C. Bason, 2018, Chicago, IL: The University of Chicago Press.

7.4 DESIGN OPPORTUNITIES

The research thus far has collected two main pieces of knowledge (1) the contextual factors necessary for new approaches to be effective and (2) the communication features necessary to spark planner's interest. The research has not discovered, however, the key piece for method adoption — context-specific success guarantee. Establishing such guarantee would require a large body of evidence-based research within comprehensive planning — which currently doesn't exist. Because of this gap in knowledge, it was difficult to further iterate on the design toolkit that'd yield significant improvement from the existing ones.

The research did suggest another design opportunity — spreading the learned knowledge through a social and non-didactic experience. As mentioned in finding 7, people's behaviors and attitudes could change when a space was created to simply build understanding, as opposed to instruct and give critiques. Instead of creating a design toolkit that attracts those who are determined to learn, can the learning experience be more nuanced and open for interpretation, therefore attracting a wider range of audience? What if the primary goal is not method adoption but generating authentic interactions?

With this mindset, the final “how might we” statement for this thesis was established:

How might we empower city planners to evaluate their contexts and choose design methods for their meeting problems in a non-didactic way?

Part 3 includes design exploration and iterations under this statement as well as a thorough documentation of the final proposal.

The background is a solid yellow color. There are two thin white diagonal lines: one starting from the top left and extending towards the center, and another starting from the bottom right and extending towards the center.

PART 3

Design Iterations & Final Design



CHAPTER VIII.

Design Iterations



8.1 OVERVIEW

Multiple design iterations were made under the final “how might we” statement as listed in section 7.4. Research methods used in the iteration stages included paper prototyping, speed-dating, and play testing.

In general, the early iterations concerned the accurate manifestation of previous research findings, while the later iterations helped make the final product more captivating for the targeted audience.

8.2 DESIGN ITERATIONS

1. Early Ideation

The first set of prototypes included storyboard concepts and product sketches. The ideas ranged from digital project management tools to professional education materials to social games. After a round of speed-dating with planners, two were chosen for their practicality and ease of engagement.

2. Jenga Game & Matching Card Game

Two ideas were prototyped and play tested with planners. The first one was a Jenga game with unevenly weighted blocks that demonstrated how certain contextual factors contributed to the success of certain methods in a problem space. The testing showed that while players were captivated by the game, they lost track of the additional game rules within a few rounds. At the end, they did not pick up the game objectives and learnings.

The second one was a card game that taught players the correct matches between a problem and a potential solution. The testing showed that players were engaged but the technical content made it less of a playful experience. While neither game was perfect, the latter showed more potential for further development.



Top: two planners play-testing the matching card game.

Right: the modified Jenga game and the accompanying worksheet.



3. A “Gloom-like” Role lay Game

This iteration was developed from the matching card game prototype and with significant inspiration from another existing card game “Atlas Gloom”. Atlas Gloom, first created by Keith Baker in 2004, is a role play card game in which players control the fate of different families with the goal of having their families died the most miserable way possible. The game’s story-building quality and unique game mechanics to manipulate the characters inspired this prototype iteration.

In this prototype, the game combined the storytelling/character building component with the original problem/solution matching game. Players could only solve problems if their characters have the minimum required positive traits combined.

The game was play-tested with non-planners to get feedback of the basic game mechanics. The feedback was overwhelming positive, showing potential to develop further.



Game prototypes made from the transparent play cards of Atlas Gloom. These are the “story cards” played on top of character cards to alter their positive traits (positivity, knowledge, availability, and openness; shown as colored squares on the cards).

4. Role Play Game v.2

The next iteration of the role play card game solidified most of the game rules in the final design. This iteration not only attempted to create a coherent visual system but also made the “problem-solving” component more prominent and flushed out. Along with the cards were the first version of rule book and post-game activity design. The game was play tested with another two groups of planners. Both groups provided useful feedback on the content, rules, and feature improvements of the post-game activity.

While the card design was well-received, manufacturing and printing on transparent pieces became a big issue when producing high-fidelity prototypes. The transparent card element was eventually dropped in the final design.



A desktop snapshot of the post-game activities. In this post-game activity, players were asked to discuss different cards and moments during the game and how they related to their daily work.

CHAPTER IX / FINAL PROPOSAL

The Death & Life of Great Planning Meetings

9.1 GAME OVERVIEW

The Death and Life of Great Planning Meetings (the Game) is a card game and facilitation tool for planners, community organizers, committee members, or anyone who has been to a planning meetings. The Game's ultimate goal is to **empower players to evaluate their planning contexts and discover design methods for their meeting problems**. The game is designed for 2 to 4 players and takes about 20 minutes to play per round.

The Game include the following components:

- The Rulebook and play cards to play the game,
- The Handbook that outlines the game objectives, instructions of post-game activities, and play scenarios to maximize learning opportunities, and
- The Method Book that details the design methods referenced in its game and how to use them in real life.



The full set of the Game. From left to right, top to down: the Rulebook, the Handbook, the Method Book, the box (packaging), the Character Cards, the Problem Cards, the Wild Cards, the Method Cards, and the Story Cards.



9.2 GAME DESIGN

Game Goal

In *The Death and Life of Great Planning Meetings*, players are in charge of running meetings for different community planning groups. Along the journey, players come across various problems that stop their meetings from moving forward.

The players' goal in this game is simple: make their own planning group be the first to solve 3 meeting problems. Players do so by building up good traits of individual group members so that their groups are open to innovative solutions when problems arise. Meanwhile, players can also make other players' group members miserable and therefore incapable of solving their problems.

As players go on finding and solving the meeting problems, they will narrate the series of fortunate (and not-so-fortunate) events that set the groups up for successes and failures.

Play Card Design

There are five types of play cards: Character Card, Problem Card, Story Card, Method Card, and Wild Card. Figure 9-1 explains the function of each card and the game set up. A number of design considerations help set the tone of the Game. Firstly, the characters are animal based. This not only avoids players feeling targeted (ex. similar name or demographics) but also makes the stories more engaging and relevant (ex. Senior snail — always late to meetings). Secondly, the tone of the Story Cards is casual and meant to be “funny”. The content includes a diverse scenarios from realistic (ex. delivery packages stolen on the porch), cheeky (ex. ate a burrito bowl made by a robot), to wholesome (ex. bus driver ran a red light to get him/her to a job interview on time). Some of the Story Cards also include planning jargons like *bulbout* (extended sidewalk) and *NIMBY* (“not-in-my-back-yard”, people who against growth only in their immediate neighborhood) to draw connection to the planning context.

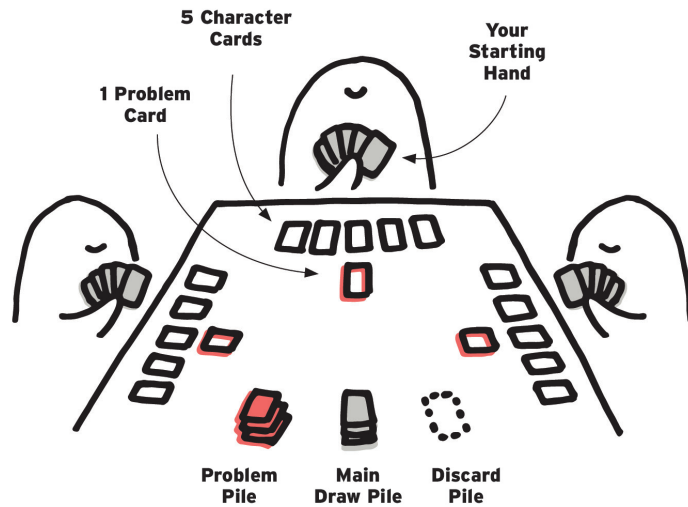
Play Instructions & Rules

Figure 9-2 and 9-3 show the play instructions and rules as shown in the Rulebook. The rulebook design adopts a hand-drawn illustration style to reinforce the casual, light-hearted tone of the game.

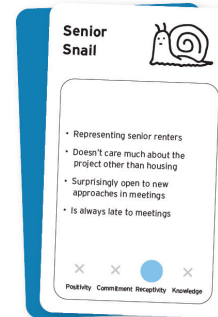
Figure 9-1: Game Setup (as shown in the Rulebook)

SETUP

Follow the instructions to set up the game. Once you are done, simply pick a person to start.



Character Card



Each player takes 5 Character Cards from the same city/town.

Problem Card

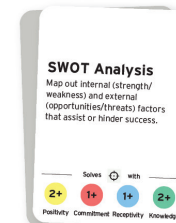


Each player takes 1 Problem Card from the shuffled **Problem Pile**.

Story Card



Method Card



Wild Card



Shuffle these cards to form the **Main Draw Pile**.
Each player takes 5 cards from the Main Draw Pile as the **Starting Hand**.

Figure 9-2: Play Instructions (as shown in the Rulebook)

TAKING YOUR TURN

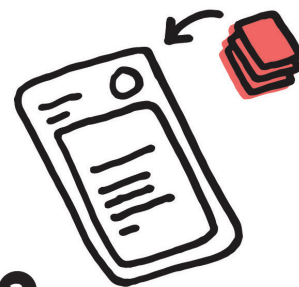
When it's your turn, play in the following order. After your turn, the person to your left start his/her turn.



1

Tell Stories

Play up to 2 Story Cards on top of yours or others' Character Cards.



2

Discover Problems

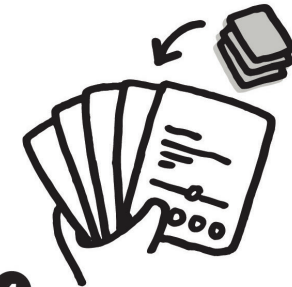
Draw up to 3 Problem Cards and place them face up next to your Character Cards.



3

Solve Problems!

Play a Method Card for every Problem Card that has matching icons and then put both cards aside. Repeat if applicable.



4

Draw Back Up

Draw back up to 5 cards in your hand from the Main Draw Pile to end your turn.



Play Wild Cards!

Wild Cards are unpredictable, so play as many of them at anytime during your turn as long as you follow the instructions on the cards.



or Discard 2 Methods

Instead of solving problems in step 3, you can choose to discard any 2 Method Cards to the Discard Pile face up.

Figure 9-3: Game Rules (as shown in the Rulebook)

HOW TO WIN

Be the first to solve 3 Problems!

When you have 3 matching pairs of Problem and Method cards, you win and the game ends.



Have the most solved Problems when the Main Draw Pile depletes

At the end of the day, you've gone much farther than other players so why not celebrate your accomplishment?



HOW TO LOSE

Have 3 or more unsolved Problem Cards at the end of your turn

With so many unsolved problems, your planning group is simply too dysfunctional to exist.

After you lose, you become a spectator and the game goes on.



ADDITIONAL RULES & TIPS

Multiple Story Cards on 1 Character Card

Yes, you can play as many Story Cards on the same Character Card as you want throughout the game.



Having 3+ Problem Cards during your turn

Feel free to draw more Problem Cards even if you have some already. Remember, you are out of the game if you have 3 or more Problem Cards at the end of your turn.



2 of the same Problem Cards

It simply means double the trouble. You'll have to solve them with separate Method Cards.



Can you play the Method Card?

You can only play the Method Card if your group collectively has the minimum positive traits as specified on the Method Card. Don't cheat!



Multiple Wild Cards on 1 card

You can play multiple Wild Cards on one Card. However, unlike Story Cards where the effects are canceled out, rules for Wild Cards add up!





Neighbor Newfoundland

- Born and raised in Forestville
- Currently part-timing as a receptionist in a local hotel
- Very kind and gentle to everyone
- Hopes to go to college one day

Knowledge

Plan Parr

Was used by a
homeless person on
his/her way
home from the gym

Positivity Commitment Receptivity Knowledge

Chairman Cottontail



Found out his/her
house has lead paint

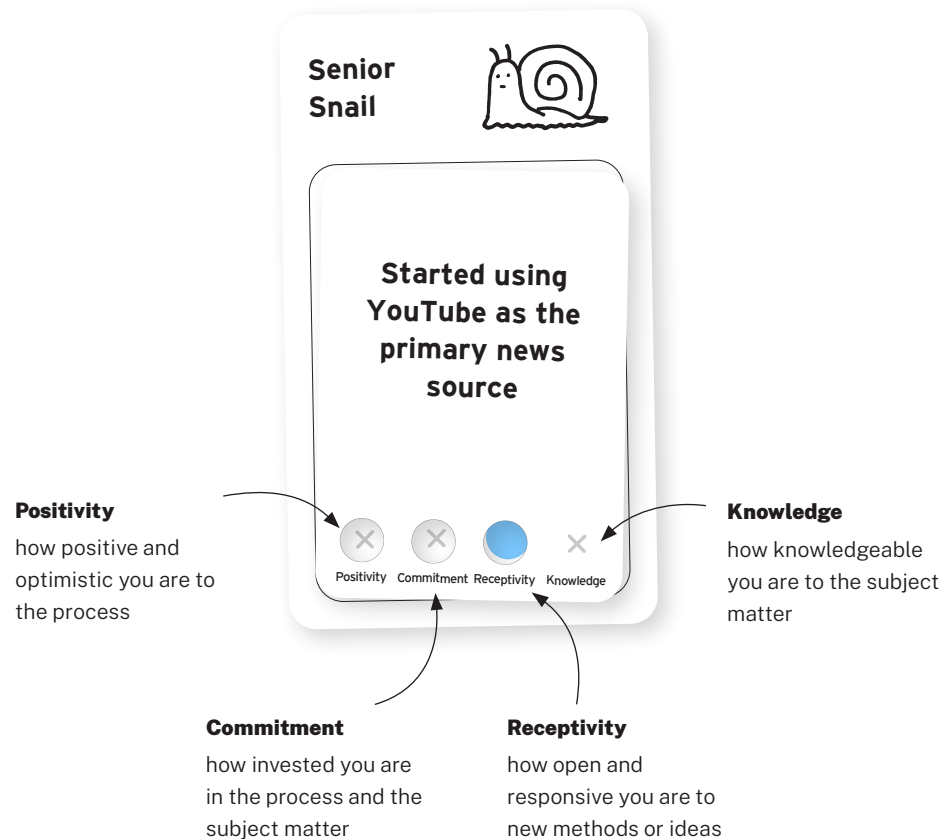
9.3 GAME OBJECTIVES

The Death and Life of Great Planning Meetings is a social card game whose content and game mechanics are designed to reflect the various barriers, criteria, and opportunities in comprehensive planning projects and their meetings. Amongst the mechanics are four game objectives for players to pick up either on their own or through post-game activities.

Objective 1

Group members' personal traits and background impact their ability to effectively contribute in meetings.

People are dynamic, meaning that their attitudes and capability to contribute can change during the stretch of a long planning process. In particular, the four traits on the card — receptivity, knowledge, commitment, and positivity — have close relation to whether a group would and can find success in adopting new methods in their meetings.



Objective 2

Some methods demand more positive personality and traits of each group member to be successfully adopted.

One primary barriers for trying new methods, according to many planners, is not knowing the specific contexts in which a method can be used successfully. Every city is different and so is every planning group. Therefore, planners often hesitate to introduce a method or tool unless it is tried and true.

In light of this hesitation, the Method Cards explicitly spell out the use parameters by core personal traits for the purpose of evoking discussions on the idea of “readiness” when a group adopts new methods. The quantitative values of these parameters are designed based on the experiences of few civic designers and should be treated as largely arbitrary.

SWOT Analysis

Map out internal (strength/weakness) and external (opportunities/threats) factors that assist or hinder success.



Theory of Change

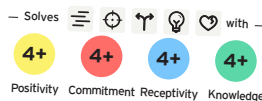
Articulate the path between existing problems and expected change in concrete steps and highlight assumptions.



Both methods solve the “can’t focus” (same icon) problem but how are they different?

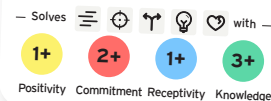
Talking

The most traditional form of meetings to talk about people’s feelings and arrive at some agreement.



Facilitation Experts

Hiring an external expert facilitator to hold a fair conversation.



Both methods can be used in a wide range of problems but what makes one requiring more positive traits than the other?

Objective 3

Contextual factors can also significantly impact the likelihood and success of adopting new methods.

Beyond personal traits of the individual group member, external factors such as the historical relationship between the city and community, severity and urgency of existing conditions (ex. natural disasters), and political support can all impact the ability for anyone to introduce new design methods.



Objective 4

Meeting organizers' willingness to address problems and take risks is a key factor to their planning groups' success.

For many planners, adopting new approaches in planning processes requires them to be open and vulnerable to the shortcomings of their existing approaches. In addition, it requires these planners to take risks and introduce new methods that may or may not lead to a more positive outcome.

In the game, players face similar risk-taking options as they are given the choice to draw multiple Problem Cards during their turn. The players may have a better idea of what problems they are working with when they draw more Problem Cards, but they can lose the game or get stuck if they draw too many and can't solve them. Players may find their game play strategy reflecting their risk-taking propensity at work.



In what circumstances will you want draw a 3rd card during your turn? Why?

9.4 PLAY SCENARIOS

While the Game can be played in almost any context with any type of audience, it was originally designed with the following four play scenarios in mind. These scenarios facilitate necessary conversations about the context and method used in comprehensive planning processes. These play scenarios are also outlined in the Handbook.

Scenario 1

New Planner On-boarding

Because the game encompasses many contextual factors in its game mechanics, it serves as a good conversation starter with which experienced planners can bring up tacit knowledge to young planners. The game also provides opportunity for players to share their experiences and learn more about one another during or after playing the game.

Scenario 3

Department-wide Retreat

Similar to Scenario 1: New Planner On-boarding, the game serves as a conversation starter to exchange organizational knowledge. When applied in a larger scale and across various experience levels, the game and post-game activities may help everyone in the organization discover root causes and opportunities to break down silos.

Scenario 2

New Planning Group Ice Breakers

Ice breaker activities are relatively common to have when a new planning group. This game, along with the post-game activities, set the group up for a deeper conversation about crisis mitigation strategies in future meetings.

Scenario 4

Community Engagement & Education about Planning

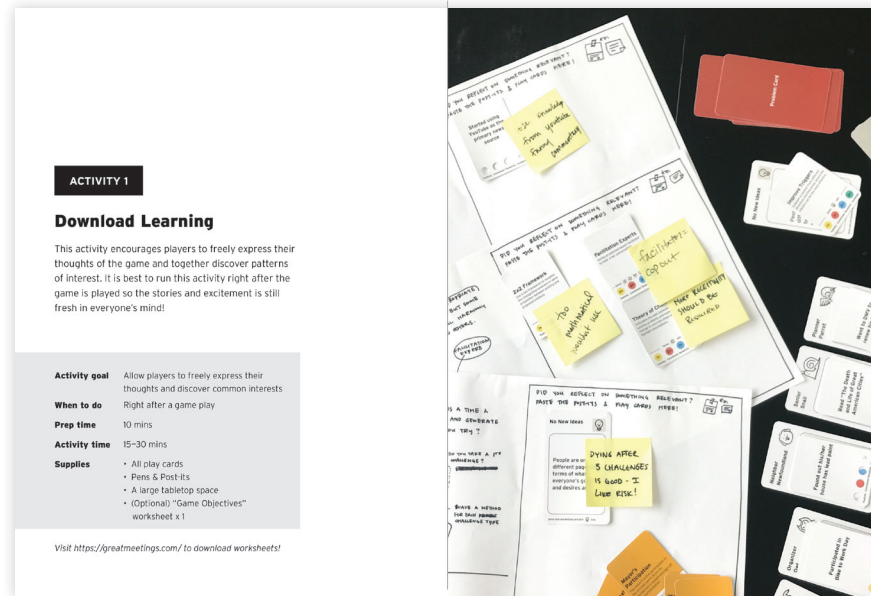
This game can serve as an entry for members of the public learn about different challenges involved in a comprehensive planning process. The game also creates moments for players to build empathy to different characters in the meetings, allowing them to experience city planning from the perspective of human experiences.

9.5 POST-GAME ACTIVITIES

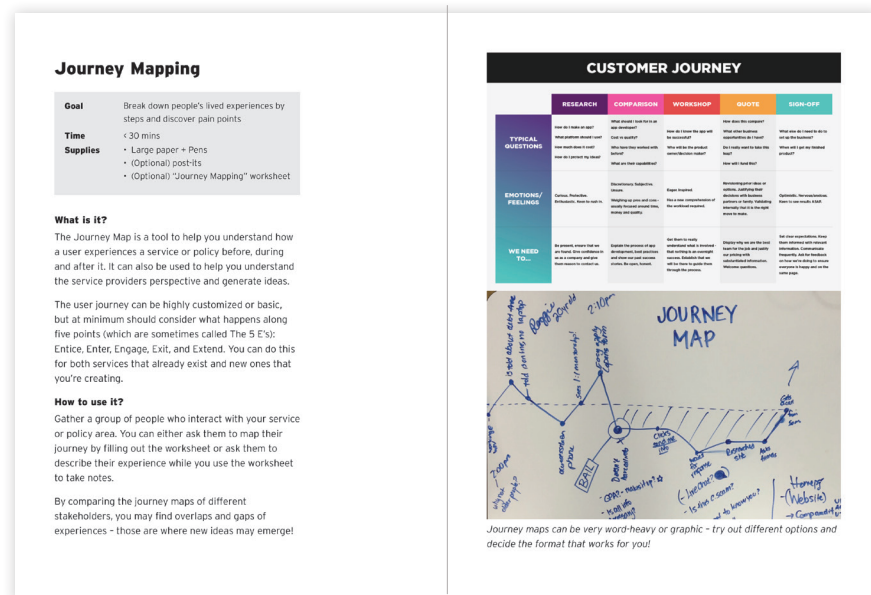
Post-game activities are critical to introducing players to the game objectives or strengthen their memories of the objectives. The Handbook provides step-by-step instructions as well as links to worksheets for planners or any game hosts who wish to run the activities. At the time of the thesis completion, three activities were designed and one was tested.

9.6 METHOD BOOK

The Method Book is a supplementary material for players who wish to learn more about the methods that appeared in the Game. The Method Book is simply an aggregate of existing design toolkits. The content is designed based of research findings in Part II to reflect planners' interests. At the time of the thesis completion, the Method Book has not been fully developed or tested.



Example of a post-game activity in the Handbook.



Example of a method in the Method Book.



Discussion

One of the biggest challenges throughout this thesis research was explaining design to city planners — what it is, how it is relevant to planning, and why it is worth trying. The process of articulating design's benefits has taught me two important lessons: (1) to tell stories through personalized connections and (2) to allow flexible interpretations of design.

In storytelling, it is key for designers to create unique stories for each planner to draw connections between his or her version of civic engagement and human-centered design. In some cases, designers can quickly identify the connections and then introduce relevant information compatible with planners' world view. In other cases, designers need to debunk planners' stereotypes of design (ex. "It's all about the post-its.") prior to design advocacy. When the connection is personal, authentic, and relevant to planners' professional motivations (ex. sustainability, equity, or smart living), they will more likely accept an alternative methodology that is different from what they have spent years practicing.

In making these authentic connections, designers sometimes have to let-go of design lingo, embracing more flexible interpretations of design when appropriate. The term "human-centered design" or "design thinking" can be intimidating for any non-designer who may have a hard time grasping their meanings. On the other hand, "civic engagement", "facilitation", and "project management" are familiar terms that all have a piece of design and should share the stage with design education. This flexibility in terminology also manifests the way designers define their roles and specialties when entering city planning. More and more civic designers offer facilitation, deliberation, and civic engagement services to city governments with the purpose of embedding human-centered practices within these established categories. By speaking the same language with planners or even wearing familiar titles, designers build confidence, validation, and trust necessary for more engaging dialogue.

All the findings ultimately informed the purpose and voice of the final design of this thesis. For one, the entire game package avoids the term “design” throughout; instead, it refers to these design-inspired tools as “methods”, “new methods”, and “new approaches”. Secondly, its content includes familiar scenarios (ex. Story Cards) to trigger players’ experiences before introducing new but relevant information (ex. Method Cards). Last but not least, the game introduces the concept of “readiness” as a concrete game rule (each method has a corresponding mix of “minimum personal traits” to “solve a problem”) while allowing the rest of the storyline be metaphorical so that conversations about the legitimacy of these arbitrary thresholds can be made.



Conclusions

The overarching goal for this thesis research is to understand how Design for Policy as an emerging field can inform new practices in city planning. Part I outlined past and present academic literature in design, policy, and city planning. The literature review compared design and comprehensive planning processes, highlighting design's opportunity of innovating on the methodology level. The following exploratory design research not only provided a practical picture of today's comprehensive planning practices but suggested a list of contextual factors that may determine the success of bringing in new approaches in comprehensive planning processes.

Part II focused on investigating design opportunities surrounding design methods and planning meetings. After an analysis of existing toolkits and a series of generative research sessions with planners, the research arrived at a list of design principles and best practices for design methods. The research also shed light on the issue of design methods not having enough data to back its legitimacy, yet pointed to an opportunity for simulation-based experience in which planners and stakeholders may envision the benefits of design methods.

Based on all the research, Part III distilled all findings into the final design—a card game and facilitation guide, with which players are empowered to learn and potentially use the design methods best suited for their planning context and challenges. The design went through multiple iterations and has received positive feedback from city planners, who see great potential for this game to be played in multiple contexts in their work. The promising design development suggest new pathways for design to be integrated in city planning.

Future Work

The immediate next step for this research is to share *The Death and Life of Great Planning Meeting* with municipalities and stakeholders. While it is designed as a game, the Game can also be served as a cultural probe.

Who plays the game? What part of the game package is being used the most? What is the short- and long-term impact of this game, if any? – Many questions can be asked beyond the immediate data points (ex. % of municipalities implementing design methods) to better inform the overlapping domain of design and comprehensive planning. These answers will be critical to determine future iterations of the design and how it may support both disciplines to grow and integrate.

Reference

- Acumen. (n.d.). *Introduction to Human-Centered Design*. Retrieved from <https://www.plusacumen.org/courses/introduction-human-centered-design>
- American Planning Association. (2019). *Daniel Burnham Award for A Comprehensive Plan: Kaua'i County General Plan, Kaua'i Kākou*. Retrieved from <https://www.planning.org/awards/2019/kauai/>
- Apolitical. (n.d.). *Mapped: The innovation labs transforming government — and how to get in touch*. Retrieved from <https://apolitical.co/government-innovation-lab-directory/>
- Australian Government Public Sector Innovation .(n.d.). *Public Sector Innovation Toolkit*. Retrieved from <https://innovation.govspace.gov.au/tools>
- Bason, C. (2018). *Leading Public Sector Innovation 2nd Edition*. Chicago, IL: The University of Chicago Press.
- Bason, C., & Schneider, A. (2014). *Public Design in Global Perspective: Empirical Trends*. In Bason, C. (Ed.), *Design for Policy*. USA: Ashgate Publishing Company.
- Bialick, A. (2012, November 26). *Sunday Streets to Expand With Neighborhood-Oriented 'Play Streets for All'*. STREETSBLOGSF. Retrieved from <https://sf.streetsblog.org/2012/11/26/sunday-streets-to-expand-with-neighborhood-oriented-play-streets-for-all/>
- Boltanski, L., & Chiapello, E. (2005). *The New Spirit of Capitalism*. London, UK: Verso.
- BOS:311 APP. (n.d.). Retrieved from <https://www.boston.gov/departments/new-urban-mechanics/bos311-app>

- Chaudhuri, A., & Zieff, S. G. (2015). *Do open streets initiatives impact local businesses? The case of Sunday Streets in San Francisco, California*. Journal of Transport & Health, Volume 2, Issue 4, DOI: 10.1016/j.jth.2015.07.001, p. 529-539
- Center for Urban Pedagogy. (n.d. a). *About CUP*. Retrieved from <http://welcometocup.org/About>
- Center for Urban Pedagogy. (n.d. b). *Is Your Landlord Harassing You or Your Neighbors?*. Retrieved from <http://welcometocup.org/Projects/EnvisioningDevelopment/CertificateOfNoHarassment>
- Department of the Prime Minister and Cabinet. (n.d.). *Policy Method Toolbox*. Retrieved from <https://dpmc.govt.nz/our-programmes/policy-project/policy-methods-toolbox-0>
- Godschalk, D. R., & Anderson, W. R. (2012). *Sustaining Places: The Role of the Comprehensive Plan*. Chicago, IL: American Planning Association.
- Goldstein, A., & Eilperin, J. (2013, November 2). *HealthCare.gov: How political fear was pitted against technical needs*. Washington Post. Retrieved from https://www.washingtonpost.com/politics/challenges-have-dogged-obamas-health-plan-since-2010/2013/11/02/453fba42-426b-11e3-a624-41d661b0bb78_story.html?utm_term=.fedf91b8ded4
- Hagan, M. & Stanford Legal Design Lab. (n.d.). *Legal Design Toolbox*. Retrieved from <http://www.legaltechdesign.com/LegalDesignToolbox/>
- HudsonValley360. (2018, July 19). *Columbia County partners with youth organizations to launch new bus route*. Retrieved from <https://www.hudsonvalley360.com/article/columbia-county-partners-youth-organizations-launch-new-bus-route>
- Junginger, S. (2014). *Towards Policymaking as Designing: Policymaking Beyond Problem-solving and Decision-making*. In Bason, C. (Ed.), *Design for Policy*. USA: Ashgate Publishing Company.
- Junginger, S. (2017). *Transforming Public Services by Design: Re-orienting policies, organizations and services around people*. New York, NY: Routledge.
- Kasper, G., & Marcoux, J. (2014). *The Re-Emerging Art of Funding Innovation*. Stanford Social Innovation Review. Retrieved from https://ssir.org/articles/entry/the_re_emerging_art_of_funding_innovation

- Kimbell, L. (2016). *Design in the Time of Policy Problems*. Proceedings of DRS 2016, Design Research Society 50th Anniversary Conference. Brighton, UK, 27–30 June 2016.
- Kimbell, L. & Bailey, J. (2017). *Prototyping and the new spirit of policy-making*. CoDesign, 13:3, 214-226, DOI: 10.1080/15710882.2017.1355003
- Lash, S., & Urry, J. (1988). *The End of Organized Capitalism*. Cambridge, UK: Polity Press.
- McGann, M., Blomkamp, E., & Lewis, J. M. (2018). *The rise of public sector innovation labs: experiments in design thinking for policy*. Springer Science+Business Media, LLC, DOI: 10.1007/s11077-018-9315-7
- McGill University. (n.d.). *About urban planning*. Retrieved from <https://mcgill.ca/urbanplanning/planning>
- Meyer, R. (2015, July 9). *The Secret Startup That Saved the Worst Website in America*. The Atlantic. Retrieved from <https://www.theatlantic.com/technology/archive/2015/07/the-secret-startup-saved-healthcare-gov-the-worst-website-in-america/397784/>
- Nesta. (n.d.). *Development Impact & You*. Retrieved from <https://diytoolkit.org/media/DIY-Toolkit-Full-Download-A4-Size.pdf>
- Nesta, Design for Europe, & IDEO. (2017). *Designing for Public Services: a practical guide*. Retrieved from <https://www.nesta.org.uk/toolkit/designing-for-public-services-a-practical-guide/>
- New Urban Mechanics. (n.d.). Retrieved from <https://www.boston.gov/departments/new-urban-mechanics>
- NYC Mayor's Office for Economic Opportunity. (2017). *Civic Service Design Tools + Tactics Book*. Retrieved from https://www1.nyc.gov/assets/servicedesign/downloads/book/CSD_Book_PDF_20170928.pdf
- Play Streets. (n.d.). *How it works*. Retrieved from <https://sfplaystreets.org/>
- Raising Places. (n.d.). Retrieved from <https://raisingplaces.org/>

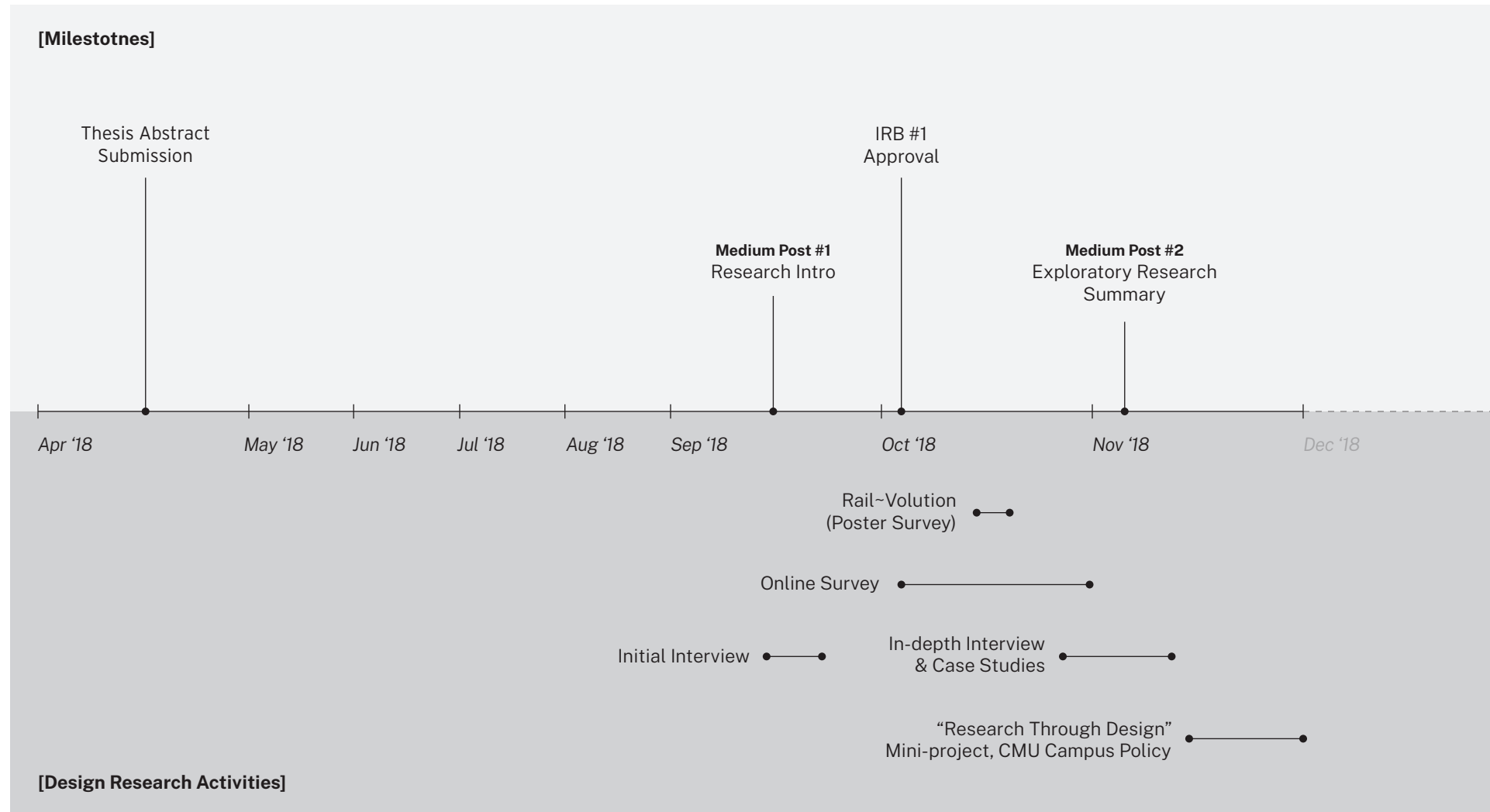
- Said, C. (2019, March 10). *Sunday Streets turns Valencia into 1.5-mile-long block party*. San Francisco Chronicle. Retrieved from <https://www.sfchronicle.com/bayarea/article/Sunday-Streets-turns-Valencia-into-1-5-mile-long-13677786.php>
- Sataline, S. (2012). *Community Foundations Seek Winning Ideas That Are Fresh and Bold*. The Chronicle of Philanthropy. Retrieved from <https://www.philanthropy.com/article/Foundations-Support-Risky/157059>
- Schuurman, D., & Tönurist, P. (2017). *Innovation in the public sector: Exploring the characteristics and potential of living labs and innovation labs*. Technology Innovation Management Review, 7(1), 7–14.
- Smith, M., & Maron, M. (May 28, 2015). *Citizen Cartographers Unite: Report from the First White House Mapathon*. Retrieved from <https://obamawhitehouse.archives.gov/blog/2015/05/28/citizen-cartographers-unite-report-first-white-house-mapathon>
- Social Innovation Lab Kent. (n.d.). *SILK Method Deck*. Retrieved from <https://socialinnovation.typepad.com/silk/silk-method-deck.html>
- Steiner, F. (2008). *The Living Landscape: An Ecological Approach to Landscape Planning 2nd Edition*. New York, NY: McGraw-Hill.
- The Behavioural Insights Team. (2017). *EAST: Four Simple Ways to Apply Behavioural Insights*. Retrieved from <https://www.bi.team/publications/east-four-simple-ways-to-apply-behavioural-insights/>
- Thrift, N. (2005). *Knowing Capitalism*. London: Sage.
- USASpending.org. (n.d.). Retrieved from <https://beta.usaspending.gov/>
- UK.GOV. (n.d. a). *Digital Service Manual*. Retrieved from <https://www.gov.uk/service-manual>
- UK.GOV. (n.d. b). *Open Policy Making Toolkit*. Retrieved from <https://www.gov.uk/guidance/open-policy-making-toolkit>
- UK Design Council, Danish Design Centre, Design Wales, & Aalto University (2013). *Design for Public Good*. London, UK: Design Council.

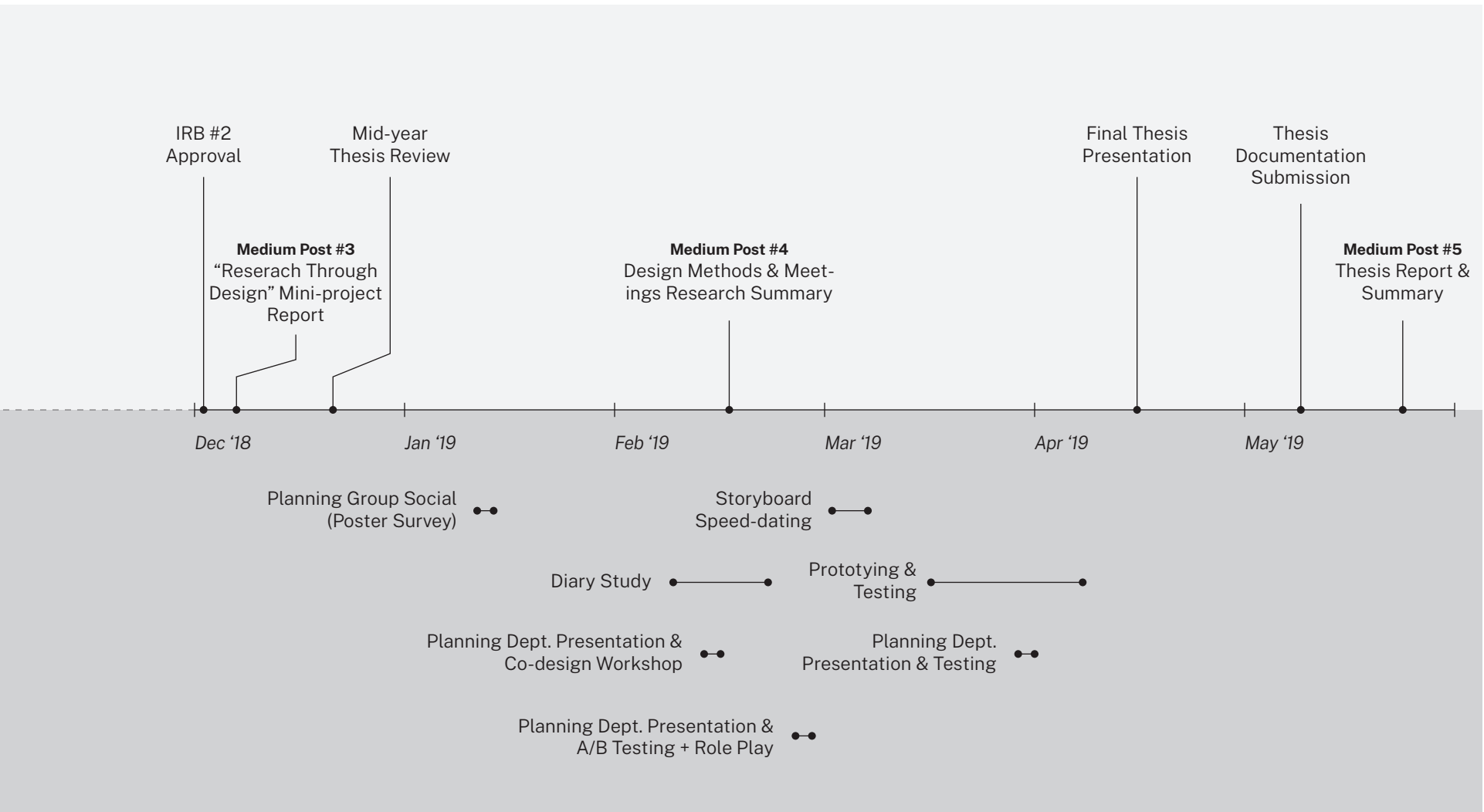
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Appendix

Appendix 1: Thesis Project Timeline





Appendix 2: Medium Post Imagery

During the thesis research process, multiple Medium entries were published to make public the research process. All medium posts can be found here:

<https://medium.com/designing-for-maintaining-policy-intent-for-city>

Four elements of maintaining policy intent:



Clarify Goals

Identifying the goals for a particular policymaking process



Follow Through

Ensuring that every step of the process contributes to achieving the identified goals



Inform All

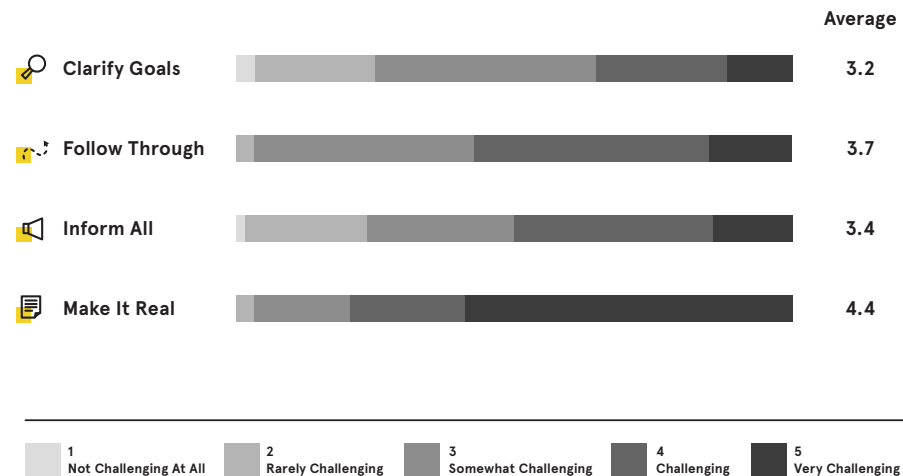
Keeping all stakeholders informed and involved in the process



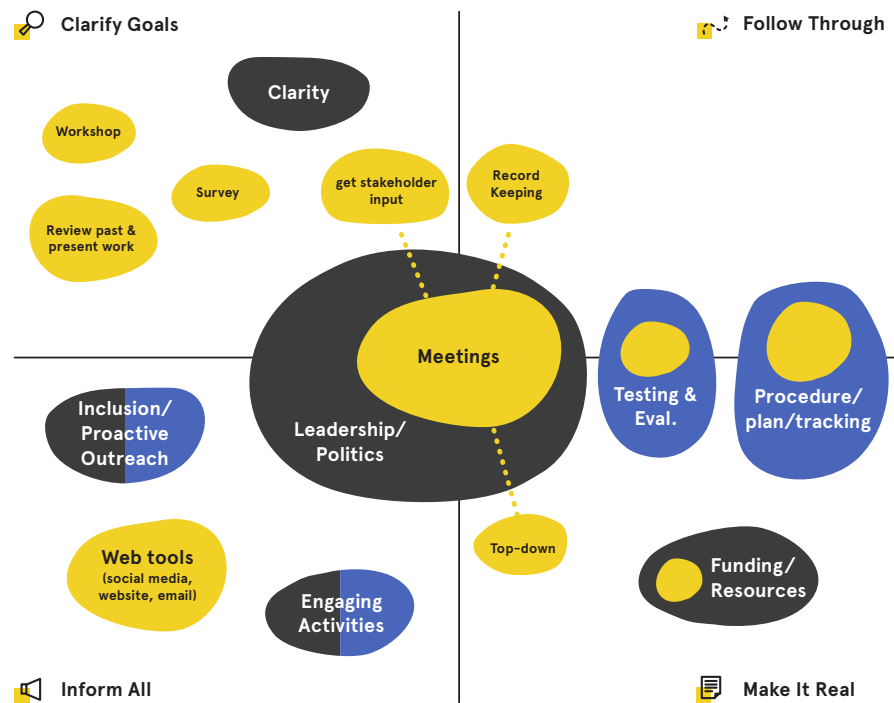
Make It Real

Realizing the policy intent in the policywriting and implementation phase

In your planning work, how challenging is it to accomplish the following 4 components of maintaining policy intent?

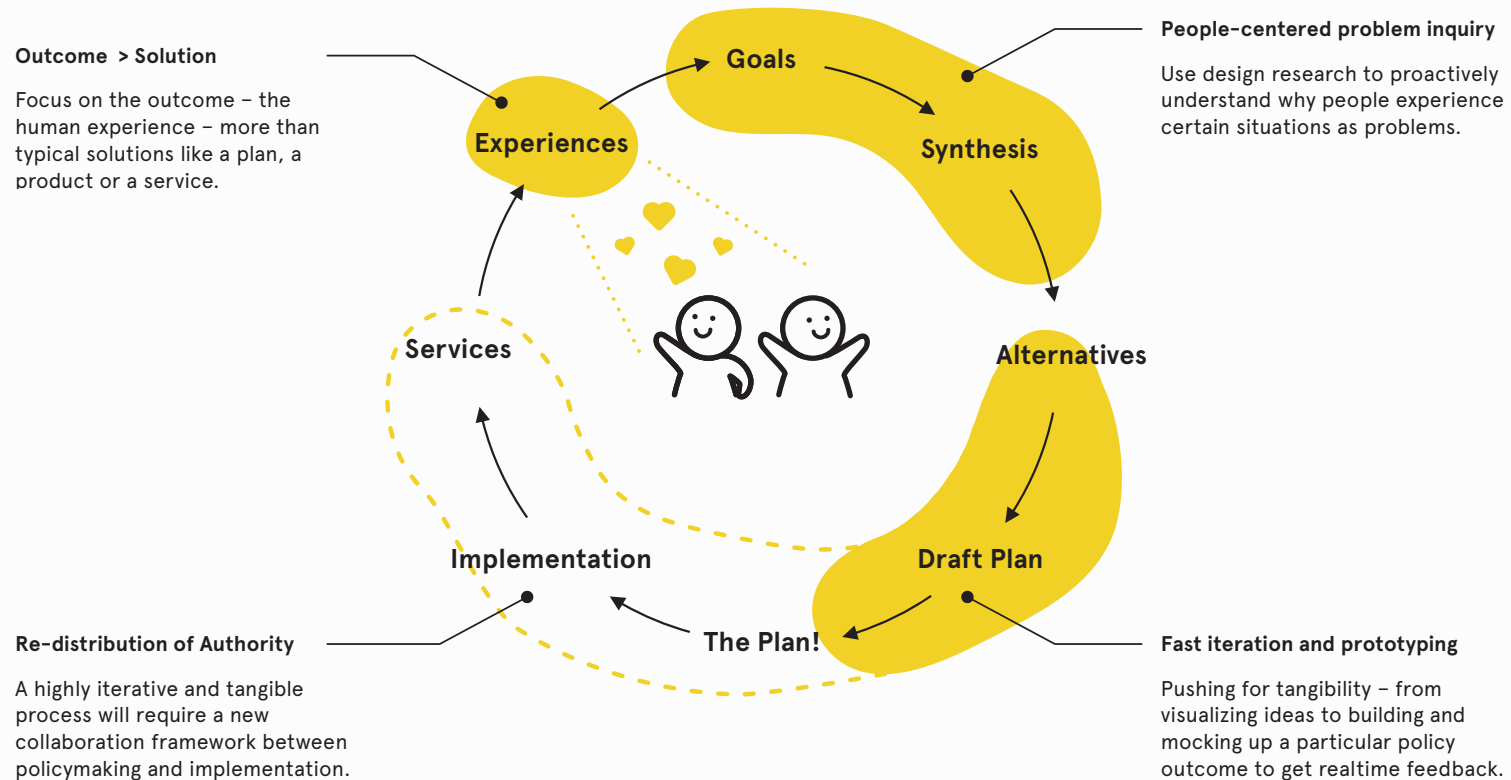


What strategies, activities, or frameworks do you use?
 What barriers have you come across?
 What strategies have worked for you?



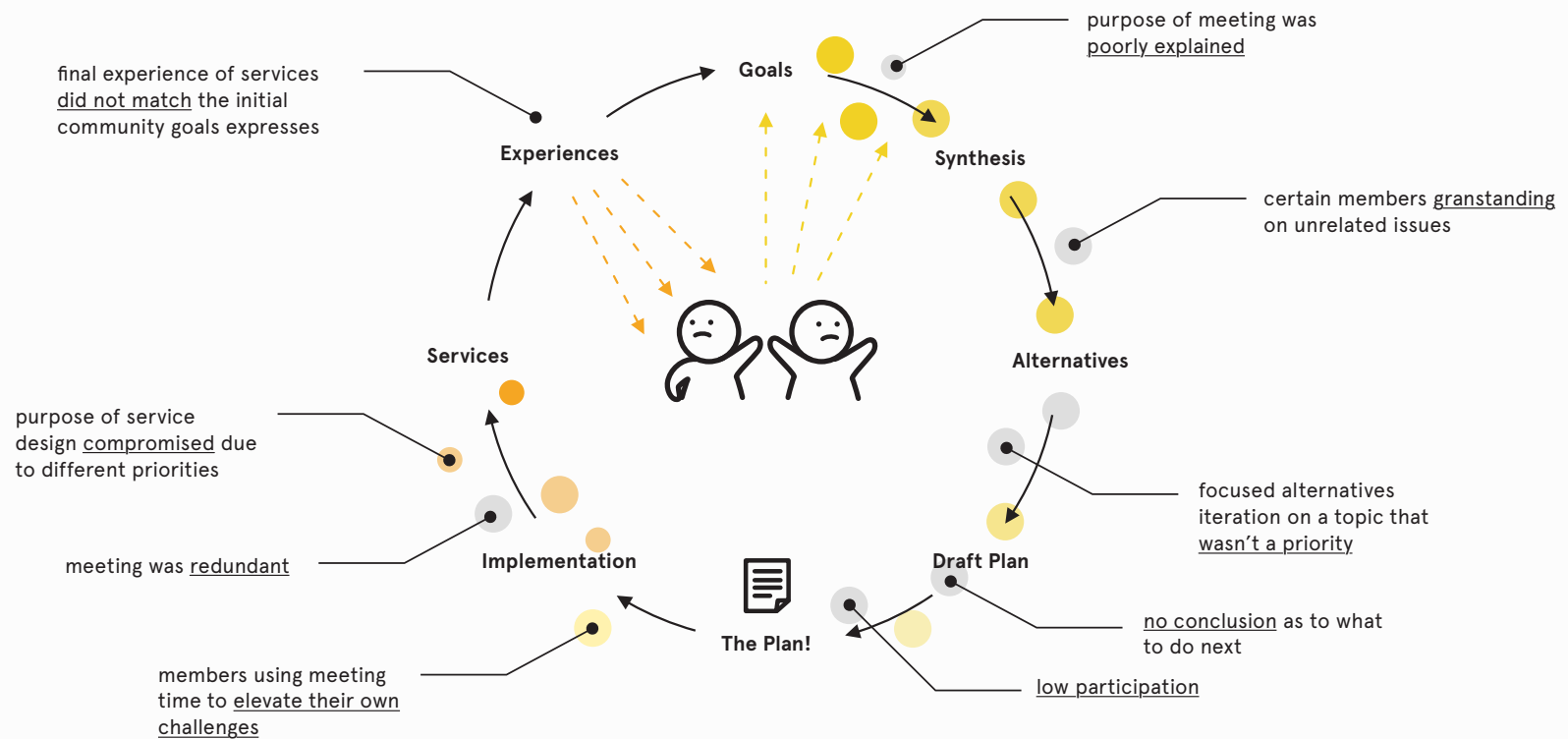
Appendix 2: Medium Post Imagery (cont.)

Benefits of Bringing Design Methods in Policymaking & Implementation

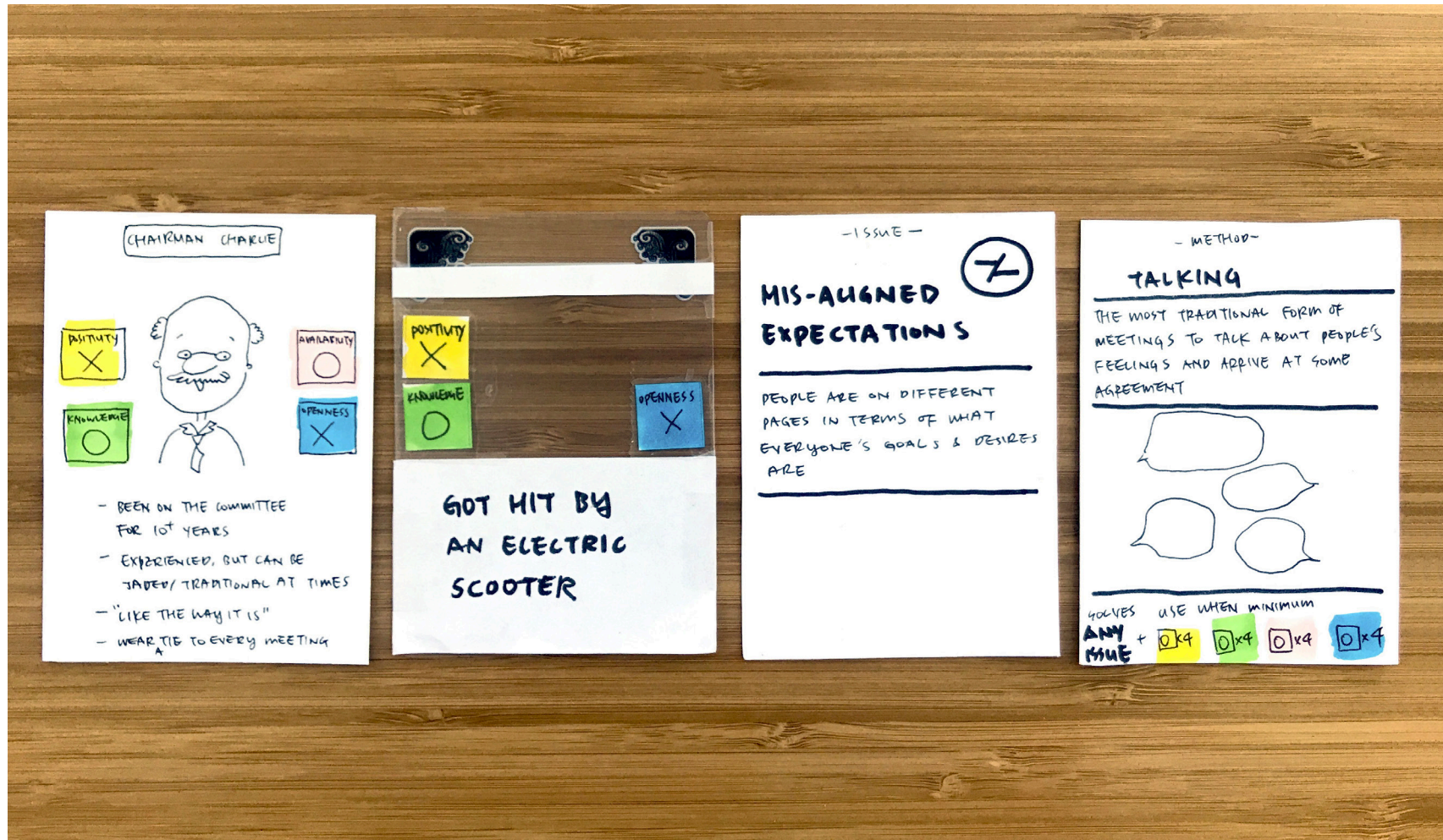


Meetings in the Policymaking and Implementation Cycle

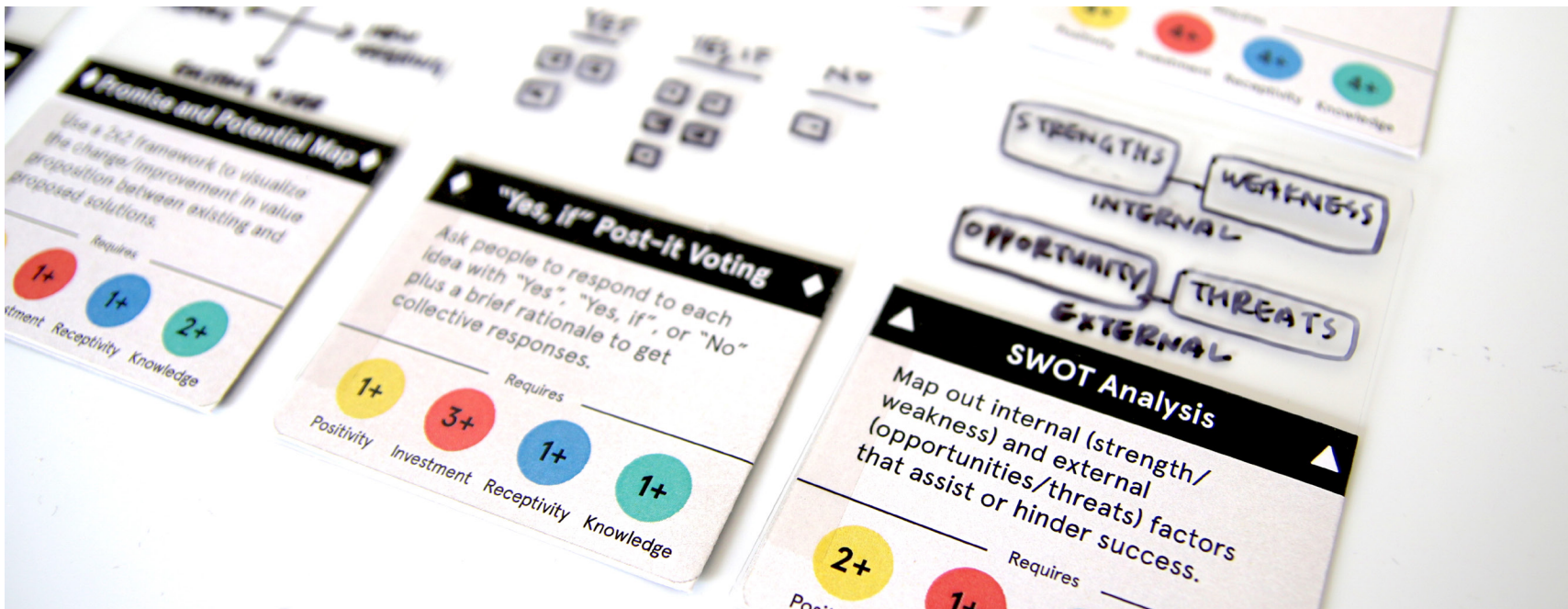
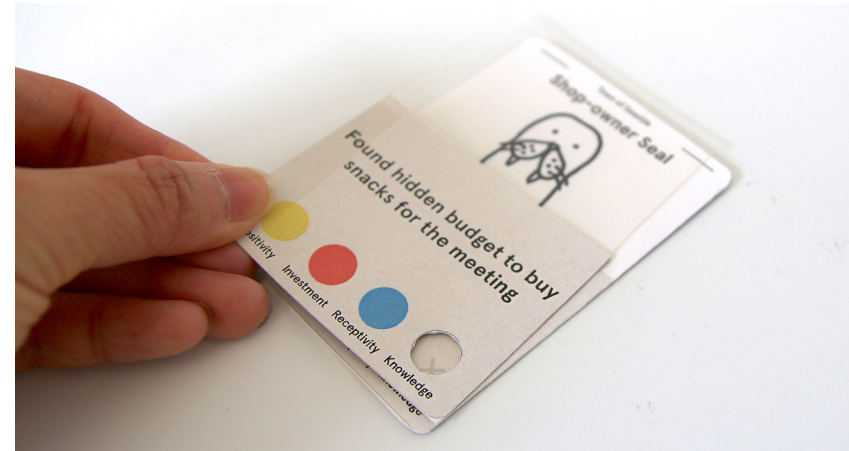
Each circle represents a meeting during the process. Color of circles represents the continuation of intent.



Appendix 3: Additional Prototype Photos



Role play card game, 1st prototype



Role play card game, 2nd prototype

Appendix 4: Additional Final Design Photos





APPROVAL OF SUBMISSION

October 2, 2018

Appendix 5: IRB Approval

Type of Review:	Initial Study
Title of Study:	Design for Maintaining Policy Intent for City Planners
Investigator: Study Team Members:	Yin-Jen Wang Kristin Hughes
IRB ID:	STUDY2018_00000422: Design for Maintaining Policy Intent for City Planners
Funding:	None

The Carnegie Mellon University Institutional Review Board (IRB) has reviewed and granted **APPROVAL under as Exempt on 10/2/2018, in accordance with 45 CFR 46.101(b)(2)**.

This approval does not expire. However, if you wish to make modifications to this protocol, please contact the IRB regarding these changes prior to their implementation to ensure compliance with this designation.

The Investigator(s) listed above in conducting this protocol agree(s) to follow the recommendations of the IRB of any conditions to or changes in procedure subsequent to this review. In undertaking the execution of the protocol, the investigator(s) further agree(s) to abide by all CMU research policies including, but not limited to the policies on responsible conduct research and conflict of interest.

Sincerely,



John Zimmerman
IRB Chair

APPROVAL OF SUBMISSION

December 7, 2018

Type of Review:	Initial Study
Title of Study:	Design for Maintaining Policy Intent for City Planners (Generative Research)
Investigator: Study Team Members:	Yin-Jen Wang Kristin Hughes
IRB ID:	STUDY2018_00000545: Design for Maintaining Policy Intent for City Planners (Generative Research)
Funding:	None

The Carnegie Mellon University Institutional Review Board (IRB) has reviewed and granted **APPROVAL under EXPEDITED REVIEW on 12/7/2018 per 45 CFR 46.110 (6 & 7) and 21 CFR 56.110. This APPROVAL expires on 12/6/2019.**

The IRB has granted a waiver of written documentation of informed consent for the telephone and teleconference portions of this study.

If continuing review approval is not granted before the expiration date of **12/6/2019**, approval of this study expires on that date, unless suspended or terminated earlier by action of the IRB. **Note that submitting for continuing review in a timely manner is the responsibility of the PI.**

Unanticipated problems and adverse events must be reported to the IRB within three (3) working days. Any additional modifications to this research protocol or advertising materials pertaining to the study must be submitted for review and granted IRB approval prior to implementation.

The Investigator(s) listed above in conducting this protocol agree(s) to follow the recommendations of the IRB of any conditions to or changes in procedure subsequent to this review. In undertaking the execution of the protocol, the investigator(s) further agree(s) to abide by all CMU research policies including, but not limited to the policies on responsible conduct of research and conflict of interest.

Sincerely,



John Zimmerman
IRB Chair

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A thesis submitted to the School of Design, Carnegie Mellon University,
for the degree of Master of Design in Design for Interactions.

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