



Behavioral Design Toolkit

**resource for concept
development teams**

How might we apply knowledge from the field of behavioral science to increase the chances new products and services will succeed?

Opportunity

The innovation and design consultancy Doblin is committed to human-centeredness. Concept development projects always start with establishing empathy with stakeholders. They start with extensive user research.

Later in the process, when the research data is collected and analyzed, Doblin concept development teams often noticed similar insights about people from one project to the next. They were identifying and re-identifying biases and heuristics codified and cataloged by the field of behavioral science.

Doblin project manager and IIT Institute of Design adjunct professor of behavioral economics Ruth Schmidt was one of the Doblin employees with extensive knowledge of behavioral science. Naturally, she shared her knowledge with

Brewer Palmer

the project teams with which she worked, but formal knowledge of behavioral science wasn't universally known.

Ruth wanted to create a resource to share these innate human tendencies, these biases and heuristics of behavioral science with all Doblin concept development teams. She wanted to create a tool that could assist them at critical stages in the process of developing new products and services, presenting just the right information when it was needed to make them more accommodating and ultimately, more successful.

Ruth picked a team and successfully lobbied for them to work on the effort as an internal project for six weeks. Under her oversight, the Behavioral Design Toolkit was created.

Client

 Doblin

Project team

 **Paul Keck**
Design Lead

 **Brewer Palmer**
Intern

 **Ruth Schmidt**
Project Manager

Overview

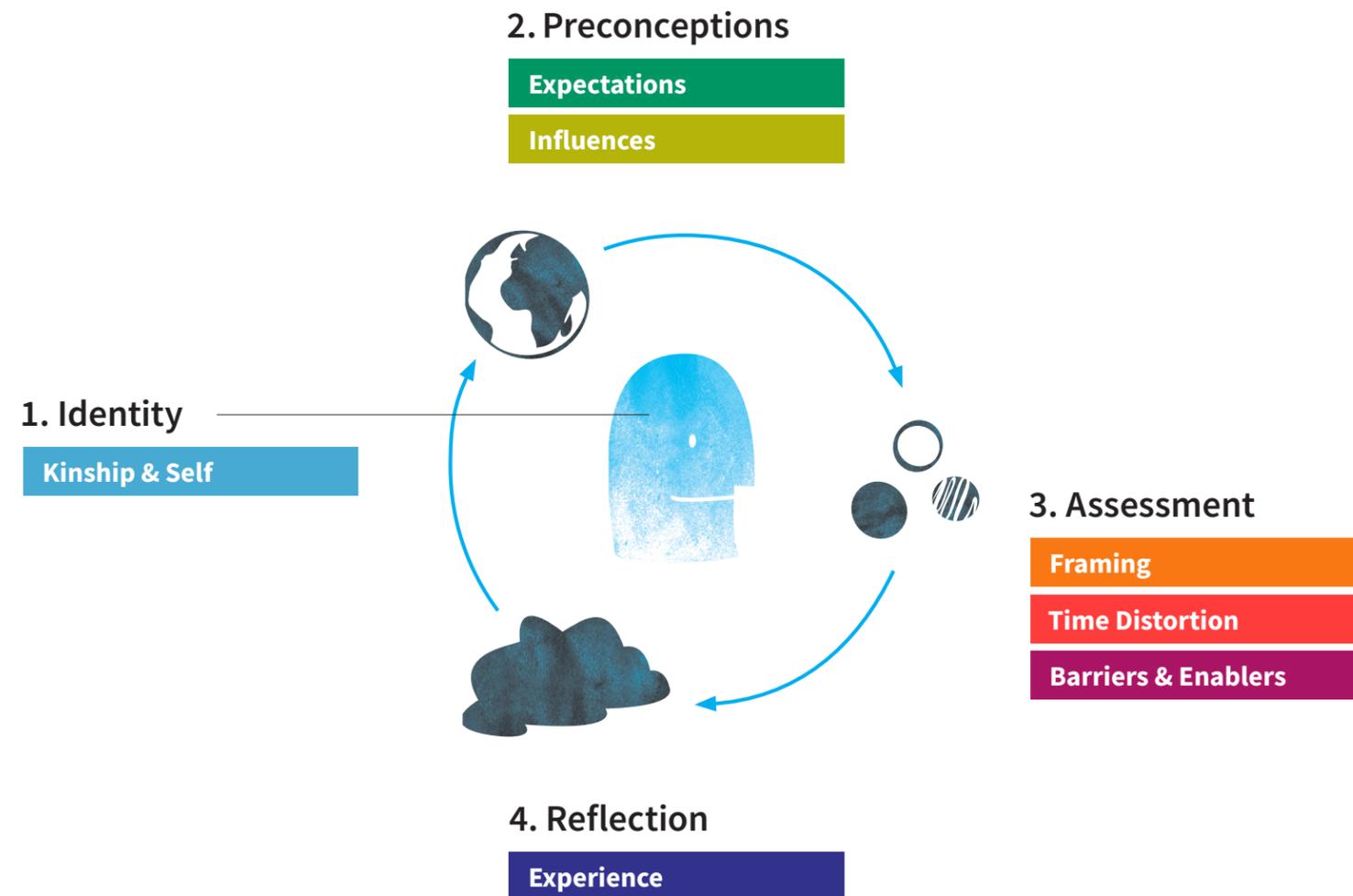
The Decision Model

Foundation of the toolkit

A person's decision to adopt a new product, service, or behavior forms the basis of the toolkit.

Understanding how a person makes a decision necessitates understanding how they view themselves, the preconceptions they bring to the decision with them, how they conduct their assessment, and how they reflect on the decision after it is made.

The Decision Model is composed of four categories and seven subcategories we referred to as decision *Factors*. The Behavioral Design Toolkit is organized around these seven *Factors*.



Overview (cont.)

Structure

Factors

Strategies

Kinship & Self		Relevant Identity	New Identity						
Expectations		Past Experience	Value Exchange						
Influences		Anchors	Standards & Structure	Social Norms	Exposure to Examples				
Framing		Simplification	Loss	Uncertainty	Probability & Data	Tangibility	Defaults	Mental Models	Mental "Accounts"
Time Distortion		Selective Recall	Immediacy	Future Self	Time Separation				
Barriers & Enablers		Goal-Setting & Motivation	Commitment	Accountability	Control	Small Barriers	Behavioral Modeling	Ownership	
Experience		Whole Journey	Key Moments	Feedback					

Challenges

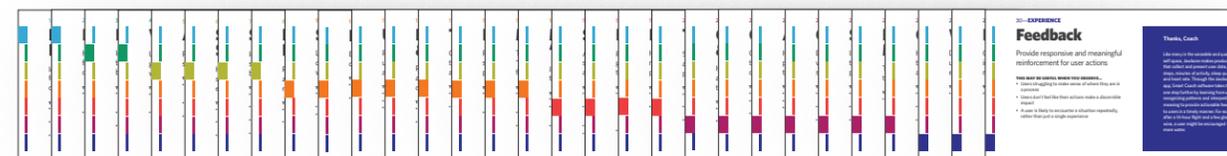
- Navigating Choice**
- Overcoming Paralysis**
- Navigating Impulsive Decisions**
- Dealing with Long-Term Implications**
- Grounding Abstract Consequences**
- Trying Something New**
- Overcoming Distrust**
- Developing & Breaking Habits**
- Instilling Self-Control**
- Making Habits Persist**

Components

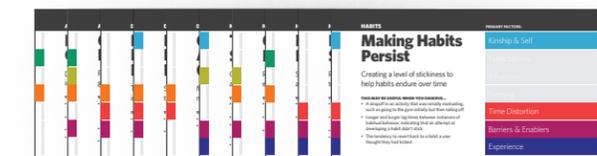
7 Factor cards



30 Strategy cards

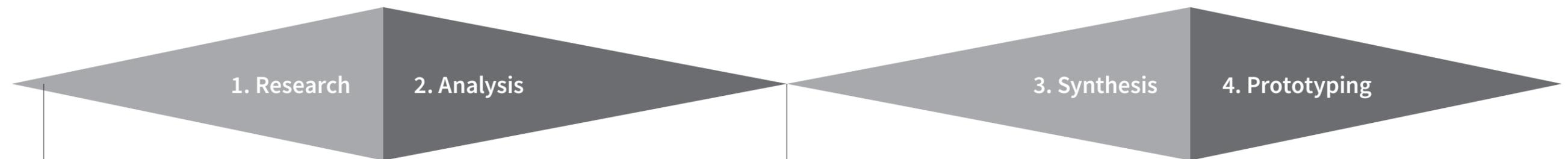


10 Challenge cards



How it works

Stages of the concept development process



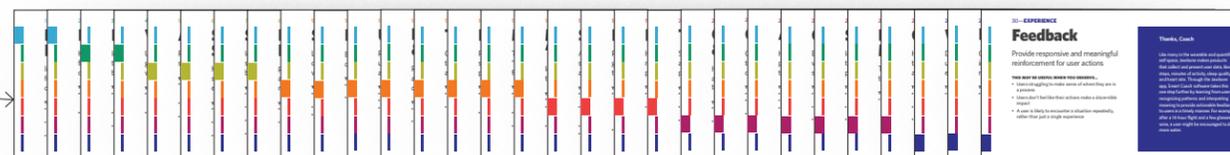
Prep for research with Factor cards

Reviewing the factors of the Decision Model at a high level can help concept development teams when developing research protocols,– ensuring observations and interview questions posed to users touch on how they view themselves, what their expectations and influences are, etc.



Narrow aim with Challenge cards

Based on what was observed and discovered during Research and Analysis, Challenge cards are used to point toolkit users to the most appropriate strategies.



Inspire and refine design concepts with Strategy cards

Tactics and examples on the Strategy cards can be used at the beginning of Synthesis as inspiration during ideation, and throughout Synthesis and Prototyping to continually refine product and service design concepts to accommodate behavioral tendencies.

Detail of Factor cards

Front

Factor name & description

Detailed description

Behavioral science foundation for why this factor is important

Kinship & Self

A person's sense of self, both individually and socially

Relevant Identity
New Identity

A user's sense of "who I am" (or want to be) at any given time informs their decisions

We each carry multiple identities around with us: with work colleagues you're the responsible one, with friends you're the clown, and with your parents you still fundamentally feel like a version of your 15-year-old self. Appeals to a user's current sense of "me" are strong—we naturally tune into information that feels personally relevant—and which "I" is at the fore dictates the values we weigh, and even the options we consider. Our identities are sometimes in conflict, however; for example, our inability to know our future self make long-term planning difficult. In the words of the philosopher Derek Parfit, "*There is no enduring "I" over time... which gives our descendent future selves the status of other people...*"

Associated strategies

Strategies associated with this factor in the decision-making process

Back

DOBILIN

Detail of Strategy cards

Front

Strategy name & description

Associated Factor

1—KINSHIP & SELF

Relevant Identity

Identify which 'self' is most relevant for the user at any given time or context

THIS MAY BE USEFUL WHEN YOU OBSERVE...

- Behavior can be directly connected to an individual's strong sense of self or core beliefs
- Specific cues, language, or environment can reinforce people's sense of identity
- "That makes sense for someone like me..."

When to use

Indicators for when this strategy may be useful

Concrete example

Real world example of this strategy in use

Don't Mess With Texas

To combat littering along its highways, the Texas Department of Transportation ran a public service campaign with the slogan "Don't Mess with Texas." The tone and language of the campaign called on a sense of protectiveness and pride over one's turf, positioning anti-littering as a tough-guy rallying stance for young men—the primary culprits—rather than a plea for tidiness that would have fallen on deaf ears. The PSA campaign is credited with reducing litter on Texas highways by roughly 29% during its first year and 72% within ten years.

Back

Tactics

Specific actions that can be taken to strengthen a design concept

TACTICS

- Speak using language—or about values—that clearly resonate with how people see themselves
- Align concepts with aspirational identities or attributes (e.g. a desire to be perceived as an expert)
- Associate the concept with groups or causes meaningful to users to create or reinforce connections
- Recognize when nostalgia has a strong impact or pull
- Make users feel "special" or uniquely understood
- Tightly "lasso" a behavior to other groups to increase perceived relevance and shared identification

In 2003, Robert Cialdini ran an experiment to encourage hotel guests to reuse their towels. When people were told that most hotel guests reused towels they were 26% more likely to do so... but people who were told that guests who stayed in the same room reused their towels were 33% more likely to keep their towels—a powerful example of "normative messaging."

Concrete example of Tactic

Associated Challenges

Challenges this strategy can help to address

RELATED CHALLENGES

- Navigating Choice
- Overcoming Paralysis
- Dealing with Long-Term Implications
- Trying Something New

RELATED BIASES & HEURISTICS

- Cognitive Dissonance
- Fundamental Attribution Error
- Endowment Effect

Scientific basis

Official names of cognitive biases at play

Detail of Challenge cards

Front

Challenge name & description

Associated Challenge type

Associated Factors

Factors most relevant to addressing this challenge

NEW BEHAVIORS	PRIMARY FACTORS:
<p>Trying Something New</p> <p>Getting over the anxiety of climbing a learning curve or feeling inept</p> <p>THIS MAY BE USEFUL WHEN YOU OBSERVE...</p> <ul style="list-style-type: none"> • Hesitation in engaging due to a fear of feeling (or looking) dumb or silly • Repeatedly rationalizing not doing something • A lack of exposure to or practice with a new behavior that they now must deal with • "I would feel silly..." • "I don't even know where to start..." 	<p>Kinship & Self</p> <p>Expectations</p> <p>Influences</p> <p>Framing</p> <p>Time Distortion</p> <p>Barriers & Enablers</p> <p>Experience</p>

When to use

Indicators for when this is the type of challenge you may be addressing

Back

Associated Strategies

Strategies most relevant to addressing this challenge

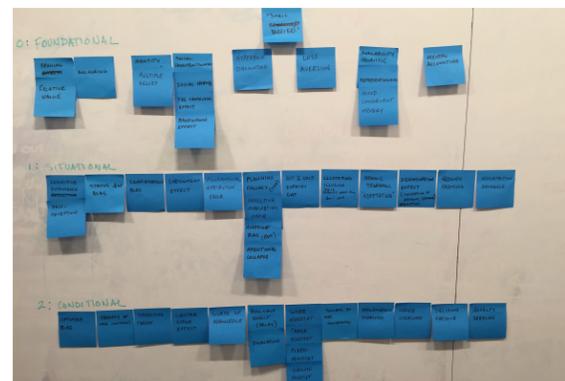
ALL RELEVANT STRATEGIES:	TRYING SOMETHING NEW
<p>Relevant Identity</p> <p>Value Exchange</p> <p>Loss</p> <p>Future Self</p> <p>Goal-Setting & Motivation</p> <p>Whole Journey</p>	<p>New Identity</p> <p>Exposure to Examples</p> <p>Uncertainty</p> <p>Time Separation</p> <p>Commitment</p> <p>Key Moments</p> <p>Control</p> <p>Feedback</p> <p>Small Barriers</p> <p>Behavioral Modeling</p> <p>Ownership</p>

Methodology

Research

Contextual research

The development of the Behavioral Design Toolkit began with an intense survey of cognitive biases and heuristics, e.g. confirmation bias, availability heuristic, hyperbolic discounting, etc.



Additionally, the team researched other tools and resources for sharing behavioral science knowledge and making it more accessible to designers. We discovered most existing resources do an excellent job of explaining what the cognitive biases and heuristics are and how to recognize them. However, most offered little to no recommendation on what to do about them.

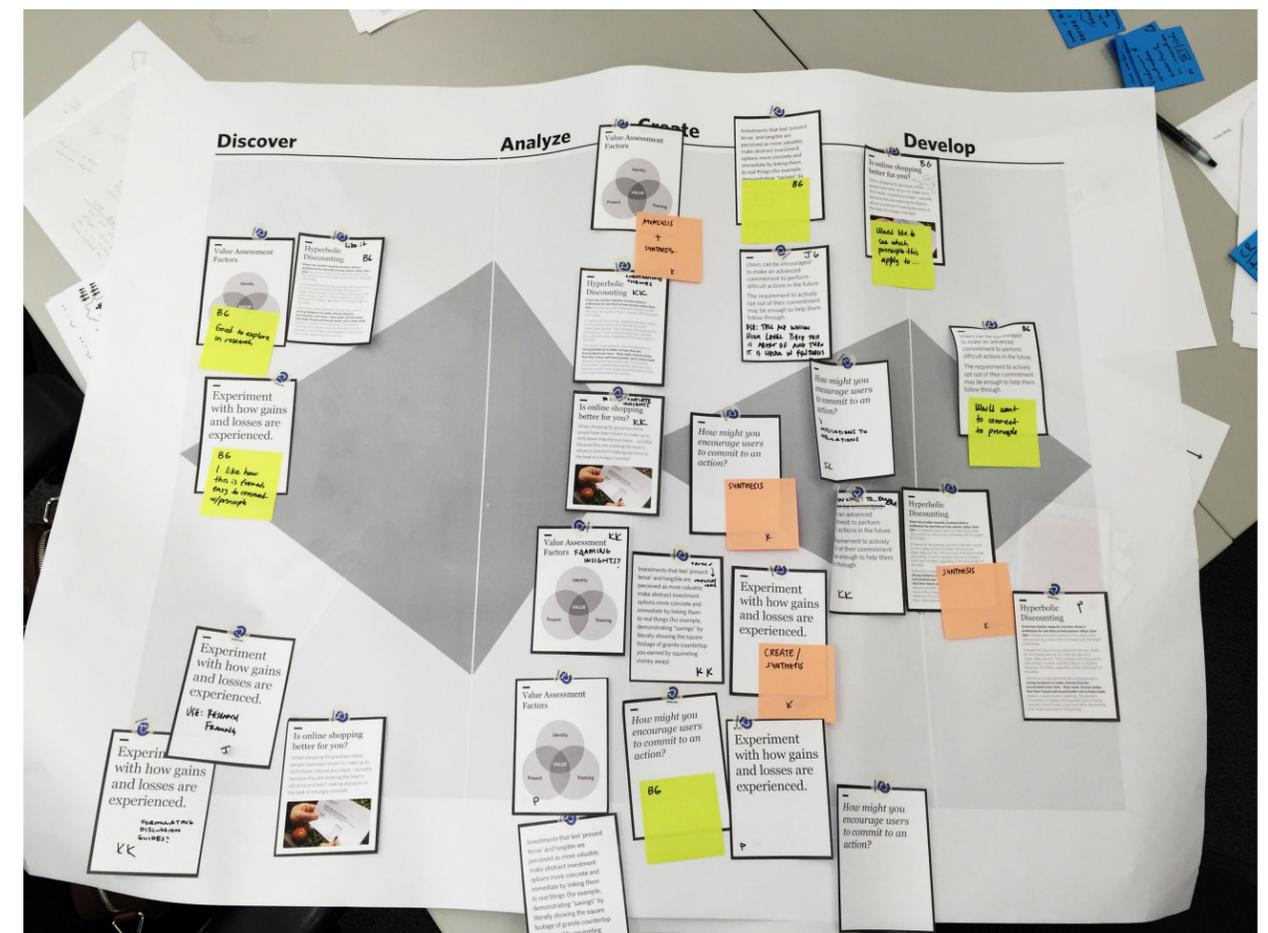
Evaluative user research

Once early iterations of the toolkit possessed enough fidelity to be put in front of prospective users, we hosted a workshop to solicit feedback.

Specifically we wanted to know what types of content toolkit users would find valuable and when.

Our initial assumption was that the toolkit would be considered most valuable during research planning and in the early stages of analysis. Initial reactions from Dublin Insights Leads (responsible for leading teams through research and analysis) was that the toolkit might introduce a new bias, – causing them during to see only what the toolkit primed them to see during observation. However, Design Leads (responsible for leading teams through synthesis and prototyping), were enthusiastic.

This led the team to reframe the toolkit into an aid for synthesis, for making product and service concepts stronger.



Outcome of workshop. Attendees pinned potential toolkit content to a poster representing the Doblin concept development process. The locations indicate where in the process they believed that specific type of content would be most useful.

Methodology (cont.)

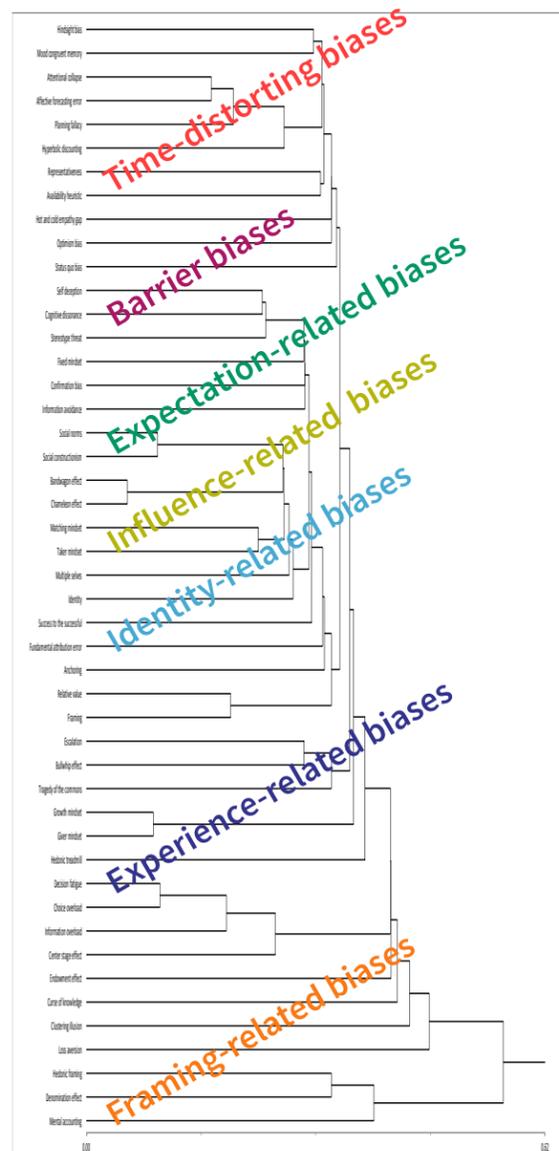
Analysis

Affinity clustering

After thoroughly researching and understanding over one hundred different cognitive biases and heuristics, the team recognized they were at different levels of specificity. Some were very broad and general in nature. For our purposes, others seemed to be specific examples of the broader, more sweeping biases. We clustered and rearranged biases until we had a set of 47 that was mutually exclusive, and collectively exhaustive.

Symmetric Clustering Matrix

We still needed a framework or structure by which to organize and make sense of the 47 remaining biases. We decided to try a symmetrical clustering matrix. We made a grid of 47 columns by 47 rows, one for each bias. Together, on a scale from 0-3, we methodically scored how similar each bias was to all the others. Once complete, a specialized Excel plug-in evaluated the results and produced a dendrogram graphic showing the complex relationships (right).



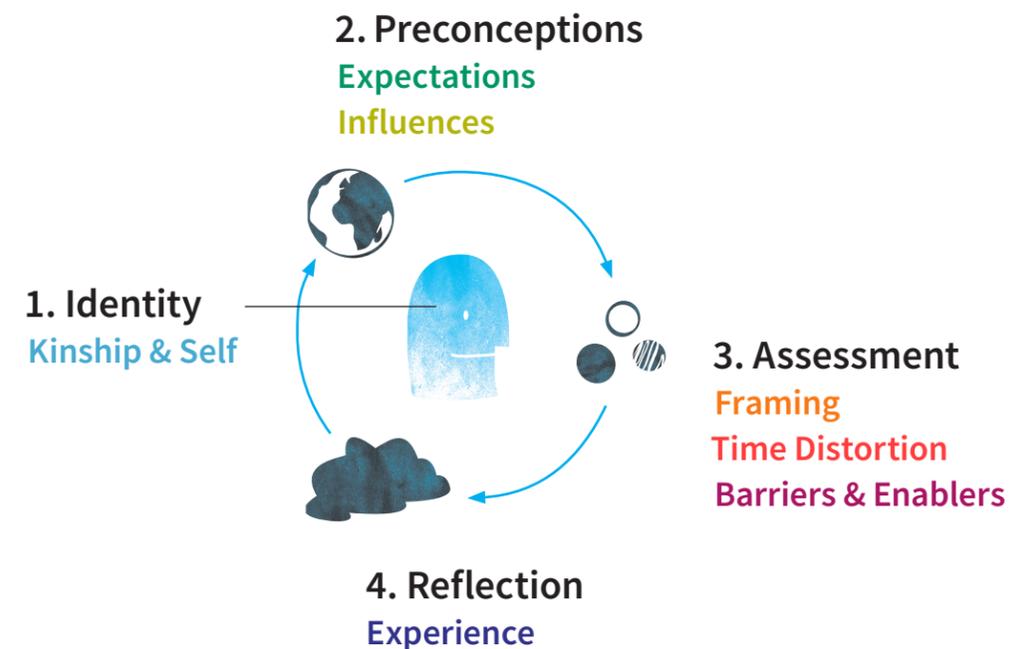
Structure creation

A rough pattern emerged from the dendrogram which led to the seven categories we eventually called *Factors*.

The *Factors*, in turn, were rearranged many times over until they coalesced into the Decision Model (below).

Additional objectives

Based on our contextual and user research, we came to the conclusion that explaining human behavior alone would be less valuable than providing strategies and tactics for addressing it. To that end, we structured the toolkit around this goal.



Methodology (cont.)

Synthesis & Prototyping

Detailed content creation

At this point in the development of Behavioral Design Toolkit, we had an abundance of scientific definitions for and examples of cognitive biases, a structure for the content in the Decision Model, and an objective to focus more on strategies and tactics over terms and definitions.

Thus began the long and methodical task of researching and brainstorming the ways and means concept development teams might modify their designs to better accommodate biases and tendencies.

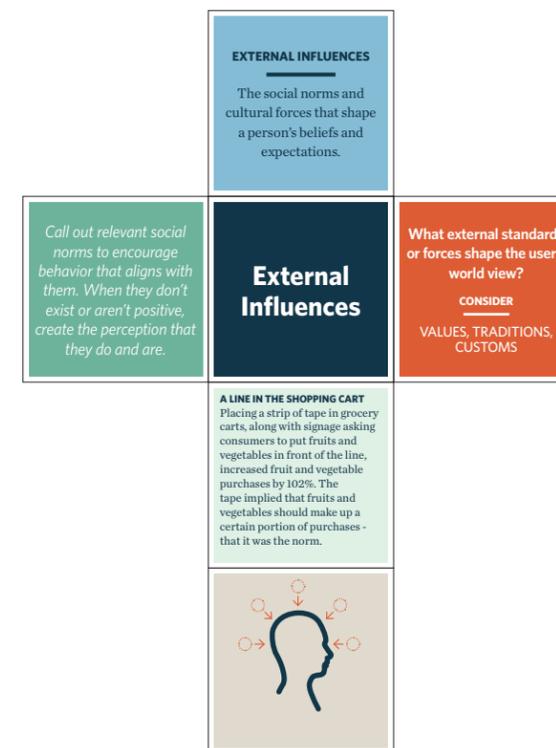
Additionally, in order to make the strategies and tactics easier to understand, we sought to find concrete examples of the strategies in use to make them stick.

We split up the areas and began researching, writing, editing, and refining, – all contributing to a shared spreadsheet.

Development of form

At the beginning of the project, there was a strong possibility the toolkit would take the form of a deck of cards. They are portable, easy to view several at a time, and relatively easy to distribute digitally, too (the aspect ratio we ultimately used is the same as the iPhone 6 and later). However, we didn't want to take that for granted. We brainstormed and considered alternative forms like posters and worksheets.

To keep the creativity flowing and maintain outside interest in the toolkit while it was still under development, we quickly made a prototype set of dice (right) one afternoon and set them out to see how they might be used.



Content from one of nine prototype Behavioral Design Dice developed as an early prototype.

Putting it all together

In parallel to the whole team writing and editing the strategies, tactics, and concrete examples, team member and experienced graphic designer Paul Keck laid out the content in card form, regularly soliciting input from the rest of the team.

By the end of the six-week project, all of the content was written and incorporated into card form.

After my internship concluded, Ruth and Paul have continued to meet regularly to refine the toolkit, create training and marketing materials, and champion its use at Doblin.

