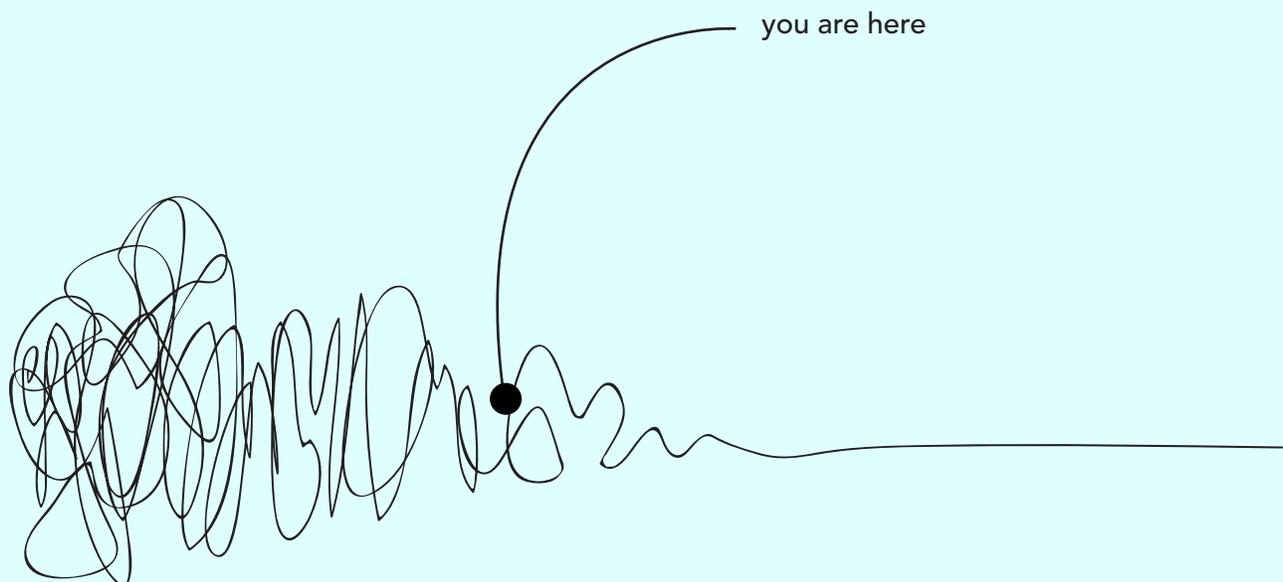


*A short introduction to*  
Qualitative analysis,  
Pattern recognition, and  
Design principles.

Three methods we employed during the  
synthesis phase in the design process.

prepared by Central  
for the Future of Fish project.  
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# Qualitative Analysis

## What is it?

Qualitative analysis makes sense of information;

It's insight driven, not metric driven;

It uses conceptual models to frame, analyze and create new understanding;

It is subjective, but rigorous and consistent to the analytic rules devised for a given situation.

## Quantitative versus Qualitative

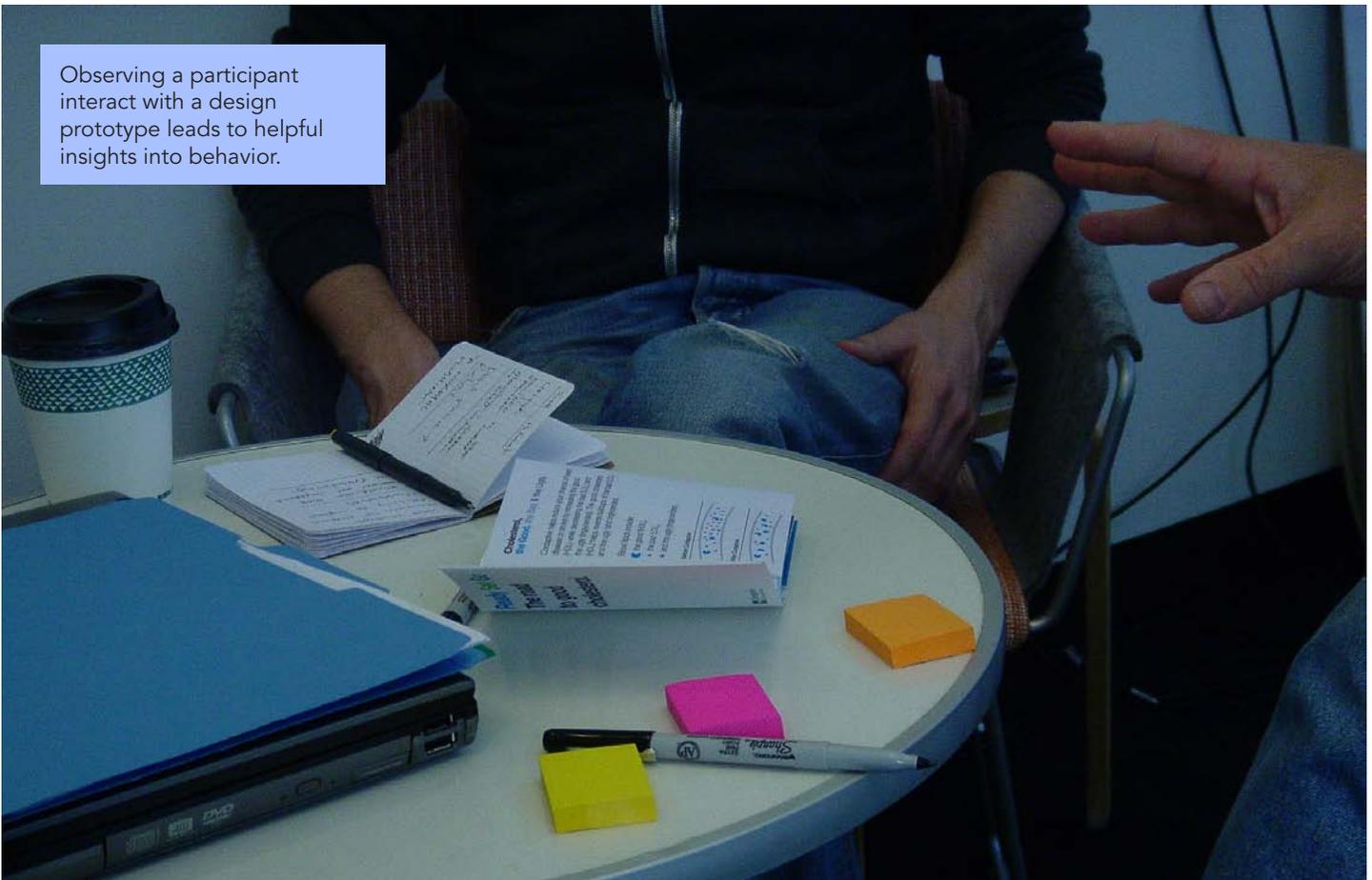
Quantitative analysis is about replication: How do we understand what has worked so we can do more of it?

**vs.**

Qualitative analysis is about innovation: How might we understand what is missing that needs to be invented?

Quantitative is past focused. Qualitative is often primary research and human-centered. It can capture behaviors and motivations that can be observed but not necessarily measured.

Observing a participant interact with a design prototype leads to helpful insights into behavior.



# Pattern Recognition

## What is it?

We use pattern recognition to make sense of field research.

By spotting like phenomena in interviews or ideas, we can recognize trends.

Patterns help us understand larger truths about behavior that go beyond the individual.

## How do we use it?

Patterns help us discern “rules” for how systems or people behave. Those rules provide a defined target to design towards in our prototyping phase.

Patterns help us predict how players in a system respond to a new idea.



# Design Principles

## What is it?

Design principles are rules we used that guide invention and help us make decisions in design activities.

Based on patterns in qualitative research, design principles become valuable guidelines for designers to use to understand how human-centered insights translate into design elements.

Design principles are intended to be generative rules, enabling a designer to interpret the principle in many different ways, but still accurately within the parameters of its intent.

## How do we use it?

Design principles are guides for new ideas. They set criteria that an idea or tool must meet to better increase the likelihood that it will be embraced.

Below are five design principles from a previous project, which came from our synthesis work. For example, the “It must feel complete” principle was interpreted in several ways by the designers. Making the final deliverable “feel” complete was accomplished by the weight of the document, as well as providing enough details and overall content to convey its scope and breadth.

principles emerge:

Make it modular

Make it educational

Make things easy to find

Show the landscape

It must feel complete

# Some examples

We used the three methods explained in this document in our synthesis in the Discovery Framework, which was completed at the very beginning of this project. Here we explain how we used them in creating the three Discovery Frameworks.

## **Qualitative analysis**

We used qualitative analysis at the outset of our project to better understand the types of solutions being applied to the fisheries challenge. Because weren't interested in replicating these solutions, we needed a way to parse the thinking behind them, a way to classify and understand the strategies that had been devised, not a way to measure their performance or statistical significance.

We assembled a sample of solutions pulled from Ashoka's network of social entrepreneurs, as well as solutions identified by interviews with more than 100 experts in the field. This sample was not intended to be exhaustive, but a fair enough representation to give us a distribution of the types of solutions applied.

These solutions were analyzed using pattern recognition to tell us which types of levers were focal points for entrepreneurs in the space, and which pieces of the problem they had identified most commonly as compelling issues to address. That framework enabled us to see where the bulk of the attention and strategy in the field was pointing.

## **Pattern recognition**

Once we assembled our core group of solutions (sorted by whether they addressed fisheries, consumers or fish buyers) we used inductive analysis to identify which problem each solution identified. In some cases, that was clearly articulated by the entrepreneur. But particularly in cases where a solution solves for several aspects of a problem, we sought to identify, which aspect does this solution target most heavily?

For our buyers framework, this analysis allowed us to define the core five problems that buyers face in purchasing sustainable fish. The aspect of the problem that received the most attention and energy was sourcing difficulties. This gave us some basic information about how the supply chain was (or wasn't) functioning: supply shortage and lack of information necessary to locate sustainable fish pointed to a fragmented and immature system.

## **Design principles**

Patterns can lead to an understanding of design principles, which are underlying guidelines or rules for operating in a system. They can be based on anthropological work, or, as in the case of our frameworks, on analysis of secondary research.

We were interested not in just what entrepreneurs were creating, but the underlying technique or idea they had discovered. By clustering the solutions and looking for patterns, we were able to see deeper trends.

## A short case study *continued*

For example, we saw a pattern among these three entrepreneurs:

**Wayan Patut** established a cooperatively owned company in Indonesia that allows fishing communities to trade in entirely new industries. He built that by first engaging the children of village fishermen about conservation. By teaching the children about the value of precious coastal regions and biodiversity, he created tension and conversation in homes of fishermen who were using dynamite or cynaide. That awareness led to training of the fishermen in the cultivation of coral, which has now become a replacement career for many.

**Orri Vigfusson** of Iceland founded the North Atlantic Salmon Fund to buy out coastal fishing operations that use drift nets. A key part of fund raising included establishing local economic incentives for making salmon a more lucrative natural resource: catch-and-relase sport fishing, tourism and the branding of local salmon products.

**Antonio García Allut** in Spain developed a new electronic marketplace owned by a fishing cooperative that allows fishermen to market directly to restaurants and markets, bypassing middlemen. The system also captures catch data that allows the fishermen to provide catch method information and traceability to the final customer.

While education programs for kids, promotion of sport fishing and an electronic marketplace are on the surface quite disparate solutions, we identified an underlying commonality that is a powerful approach: Naming a new value.

In the case of Wayan, that new value was the job opportunities associated with conservation. For Orri, that new value was the economic value to the community of all the related industries that a healthy fish stock could sustain. And for Antonio, the value was introducing fish provenance as a meaningful selection criteria for local vendors. Each of these entrepreneurs articulated for stakeholders, with meaningful incentives and proof attached, a value that had not previously been considered. By doing so, each managed to create a new marketplace for behavior and shift patterns.

Having identified this design principle of “name a new value” we better understand one possible lever for creating movement in this system. The principle is not a specific strategy. It is, however, a blueprint with inherent criteria by which a new idea can be measured. Does this new idea adequately articulate and assign value to that which is unvalued now? Does it create incentive structures for those involved to reap that value? These are meaningful guidelines that can help us vet innovation.