



from opaque **to open**

Untangling Apparel Supply Chains
with Open Data

Funded by



HUMANITY
UNITED

The power of many

Inspired by the apparel community, the Open Apparel Registry (OAR) was built to enable effective collaboration for the entire sector.

On an early April morning in 2016, I arrived at a multinational apparel company's headquarters, was led to one of their meeting rooms, and sat down at a table surrounded by my peers from across the apparel sector. It was an impressive cross section of civil society, workers' rights organizations, certification bodies, multi-stakeholder initiatives and brand representatives. The group had been brought together to discuss transparency and data in the sector, and to brainstorm how we could share and communicate more effectively.

Each person shared a common issue: supply chain data was locked away, inaccessible and riddled with errors. It was all out there - it just wasn't open or usable. I thought to myself:

"Why aren't all these organizations just sharing their data on one open platform?"

Little did I know in that moment that I was surrounded by the very groups, individuals and change-makers that would make up the future OAR community.

The power of that moment is not lost on me. How apt that a user-driven platform, with contributions from across industry, originated in a room full of the very stakeholders who make it what it is today. This group of people - from a diverse range of organizations with a variety of missions - seeded that idea for the OAR: the need for one common registry of facility names and addresses, each with its own industry standard ID, which powers the interoperability the sector so desperately needed.

The platform as it exists today has evolved due to the contributions of many different people, including our Board of Directors; those in the sector who had been pushing for well over a decade for the creation of such a registry; the suggestion from a brand for our [Embedded Map plug-in](#), enabling users to display a cut of the OAR map data on individual organization websites; or a user encouraging us to map facilities manufacturing PPE during the COVID-19 pandemic.

Our [open licensed data](#), open source code, transparent development process and [multi-stakeholder board](#) have created an environment for collaboration and interoperability, catalyzing change and impact across the sector.

Looking back over the last two years, it's the stories from our users of how the OAR is being used to help people across the apparel sector that demonstrate the power of this tool - stories that we share throughout this report. These examples of the OAR in action, along with the thousands of users and contributors to the database, make the OAR what it is today.

We're proud of what the OAR community has achieved thus far, but there's still a lot of work to be done to untangle supply chains.

We look forward to working with you, OAR contributors, users and collaborators, in the months and years ahead.



NATALIE GRILLON
EXECUTIVE DIRECTOR
AUGUST 2021

About this report

Eleanor Roosevelt once famously said, “Learn from the mistakes of others. You can’t live long enough to make them all yourself.”

Given the urgency of the issues facing the apparel sector and similar supply chains, we share the lessons we’ve learned in building and growing the Open Apparel Registry (OAR) in the hope that our experience can be helpful for early stage non-profits, stakeholders in the apparel sector and beyond, and funders looking to support new ventures like ours.

This report is written in the spirit of everything we do at the OAR: to be open, and to share, to learn and achieve, collaboratively, together.

In this report, we map the journey of building and growing the OAR. We cover:

- 1 Context on the sectoral **challenges** the OAR was built to address
- 2 Why we established the OAR as a **neutral** data institution
- 3 **Technical** details of how the open data platform was developed
- 4 Ways the OAR **community** has grown and lessons we’ve learned along the way
- 5 Stories of the **impact** the OAR has had to date
- 6 Our plans for the future and how you can **get involved**

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Many hands have been involved in the production of this report and the process of our learning grant with Humanity Untied. Specifically, we would like to thank:

DAVID GIFFORD, illustrator and graphic artist for his work to visualize our many conversations, thoughts and ideas. You’ll see his [Rich Picture](#) capturing the essence of the OAR on page 8. www.inscriptdesign.com

HEATHER KNIGHT, for creating the OAR’s brand identity, her creative partnership and for working her design magic on this very report. www.heatherknightcreative.com

SARAH ONG, Senior Programme Manager, Labour Rights / Strategy at Laudes Foundation and our grant manager, thought partner and long-term collaborator at Laudes Foundation. www.laudesfoundation.org

This report was made possible with the support of **Humanity United** — a philanthropic organization that works to advance human dignity and to challenge the systems that enable human exploitation and violent conflict. www.humanityunited.org It forms part part of a learning grant in which we’re consolidating what we’ve learned from building and growing the Open Apparel Registry, and considering how to evolve our work in apparel - and beyond. With thanks to **Katrina Gordon**, **Sandy Tesch Wilkins** and others at Humanity United for their support, interest and belief in our vision and approach.

1. BACKGROUND

Introducing the Open Apparel Registry

Apparel supply chains are complex

Those working in the apparel industry know how complex and fragmented apparel supply chains are, with even the simplest of items involving multiple suppliers across multiple continents. Following the mass uptake of offshoring in the 80s and 90s, **the supply chains of most global brands are thousands of miles away** from their headquarters or the final point of sale, and **the majority of brands don't own the facilities in which their products are being made**. This physical distance and lack of ownership makes keeping track of supply chains a complex and costly endeavor.

Challenges

Fashion's best-kept secret:
it's got a data problem

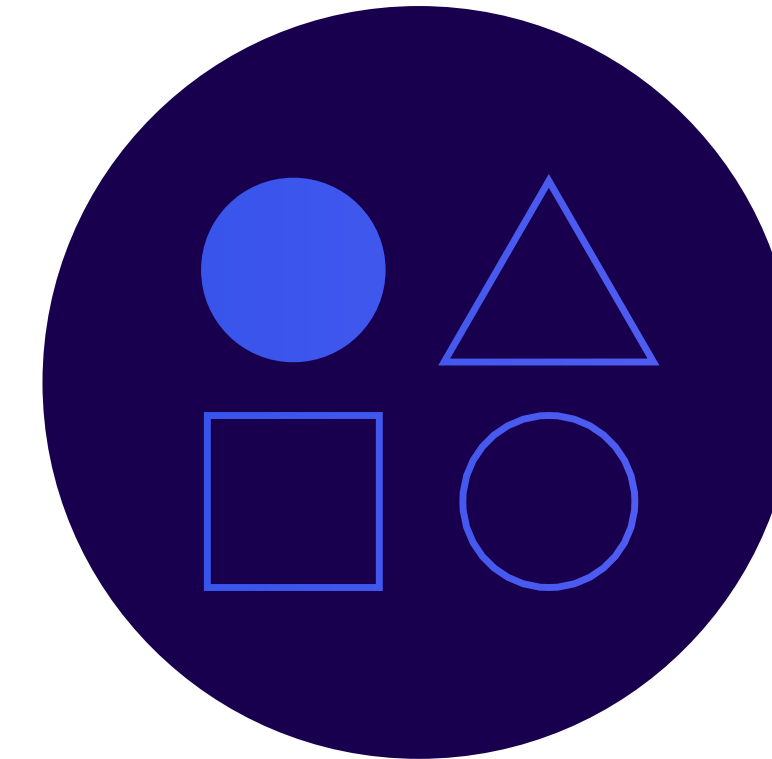
The tragic Rana Plaza building collapse in 2013 revealed to the world how little many global brands knew about where their products were being made. Following the disaster, demand for supply chain disclosure in the apparel sector was heightened.



However, in response to these **calls for greater transparency**, supply chain disclosure has been:

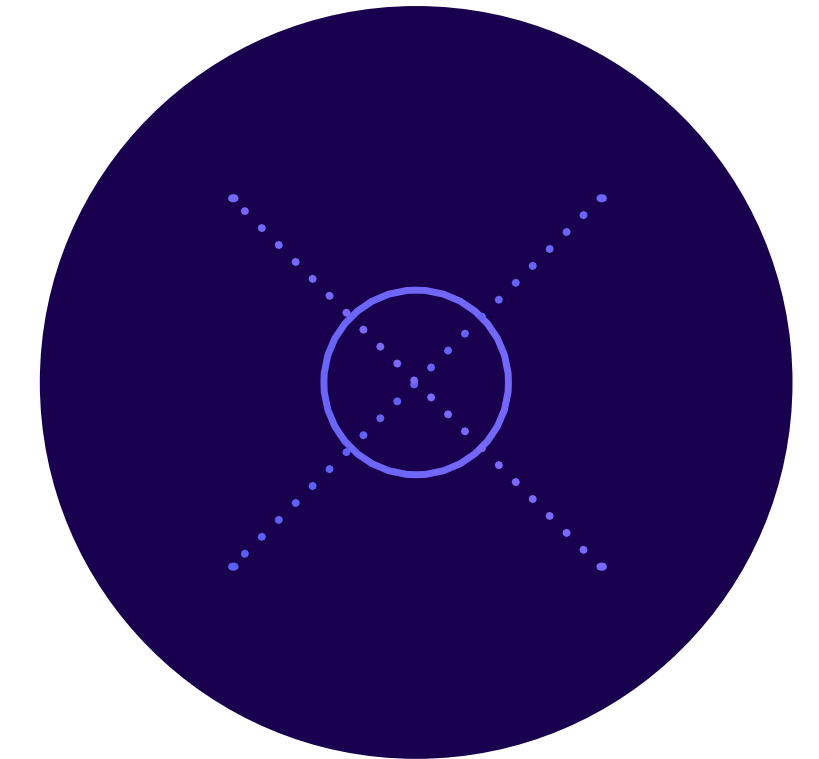
INCONSISTENT AND DIFFICULT TO TRACK

Individual brand or multi-stakeholder-initiative websites log and manage data in different ways.



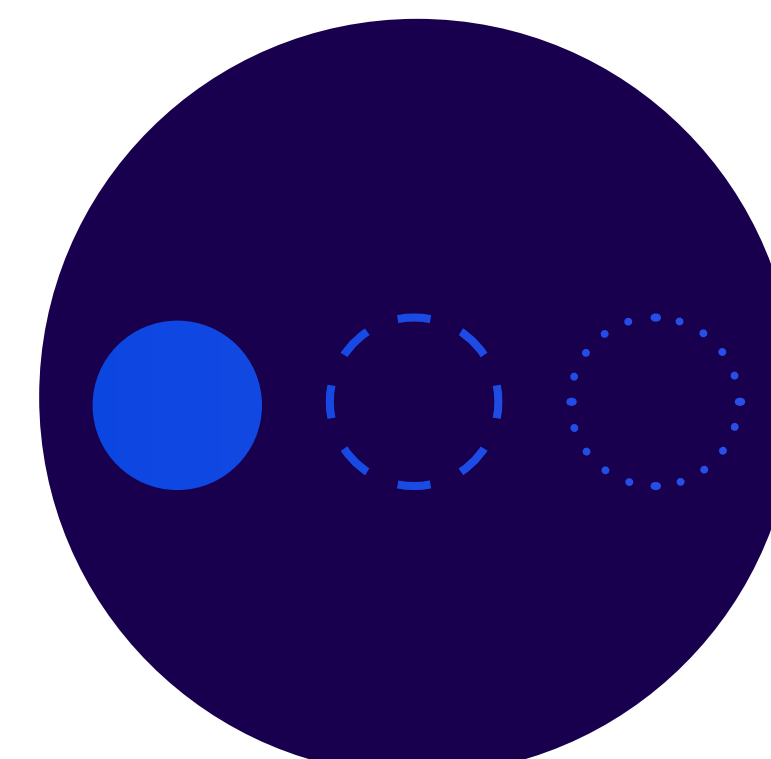
NOT ACCESSIBLE

Data is often locked away in non-machine-readable formats such as PDFs or tables embedded in websites.



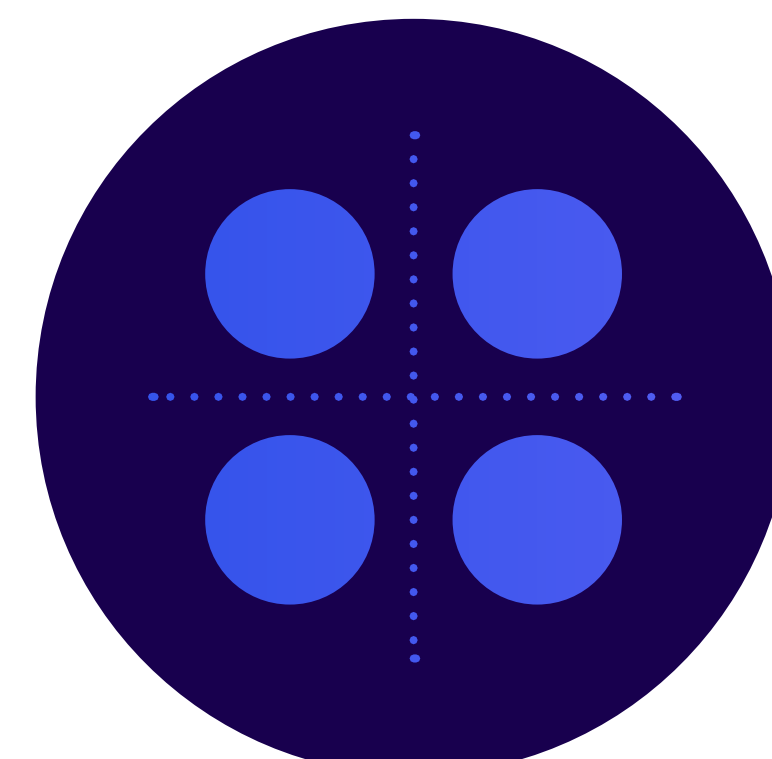
POOR QUALITY

A lack of standard formatting for information as basic as name and address data (coupled with the poor quality of this data due to human error, language translation and more) makes it difficult and costly for anyone to compare across datasets and understand shared connections to facilities.



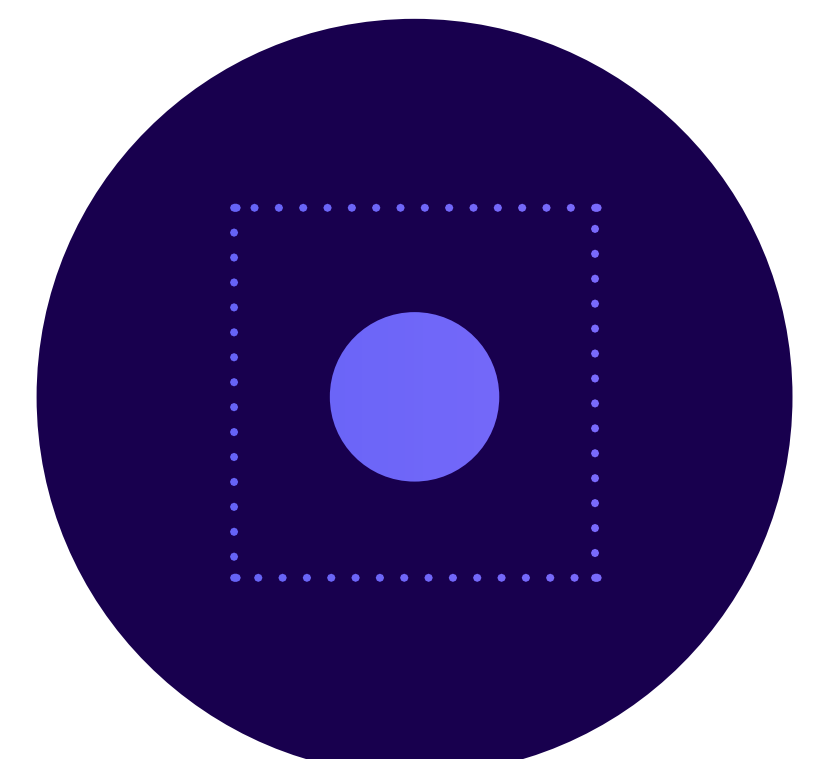
SILOED

Data has been stuck in hundreds of separate databases and without a universal, central ID through which systems could synchronize, interoperability between systems has been impossible.



CLOSELY GUARDED

Supply chain data has been considered by many brands as their proprietary information and crucial for retaining competitive advantage. This perception only exacerbates an industry reticence to openly share supply chain data.



How to overcome these challenges?

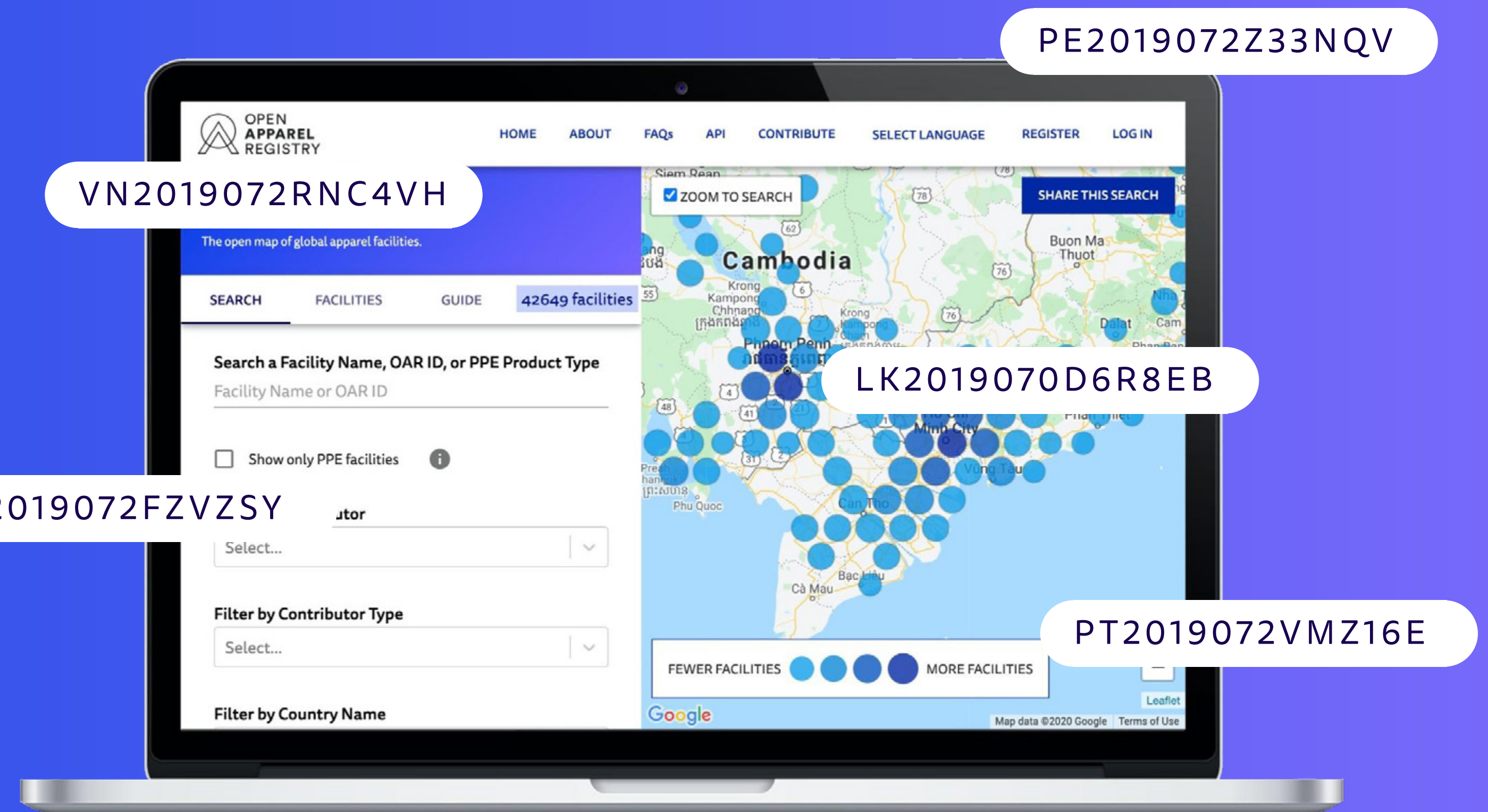
For over a decade, progressive organizations working with this data within the apparel sector have been calling for a **unique identifier for global apparel facilities, housed in an open registry**, in a bid to eliminate the confusion rife within the industry. At a basic level:

If organizations have **no clear understanding** of where their supplier factories are located, how can they possibly have any sense of the **environmental or social conditions** at those facilities?

Introducing the Open Apparel Registry

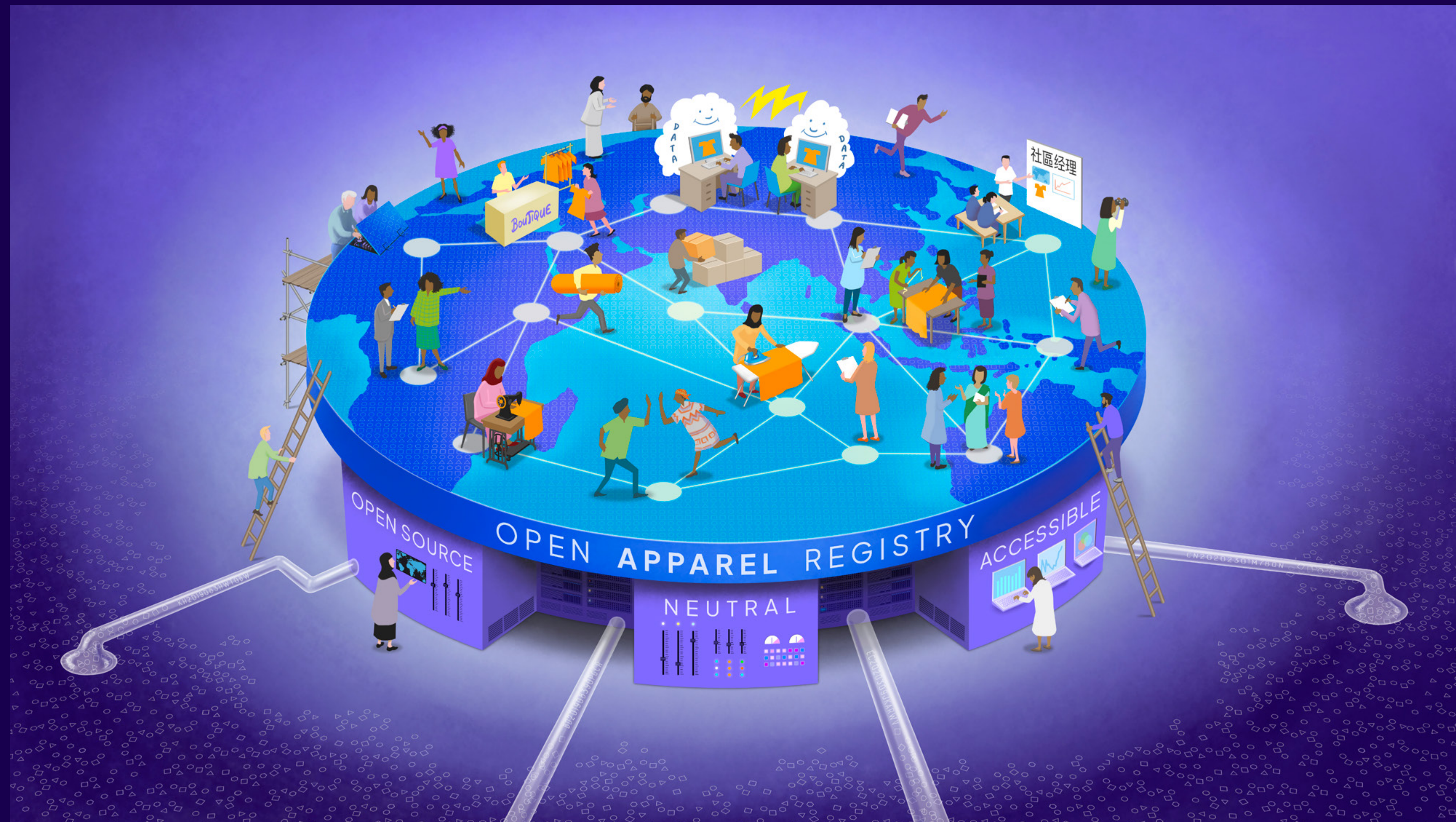
The Open Apparel Registry (OAR) was built to address all these data challenges. At its heart, the OAR exists to **drive improvements in data quality** for the benefit of all stakeholders in the apparel sector. Powered by a sophisticated name- and address-matching algorithm, the tool creates one common, open registry of

global facility names and addresses, with an industry standard facility ID. These OAR IDs do not replace any existing ID schema, rather they serve as a “central source of truth,” enabling interoperability across systems and creating a collective understanding of shared connections at the facility level.



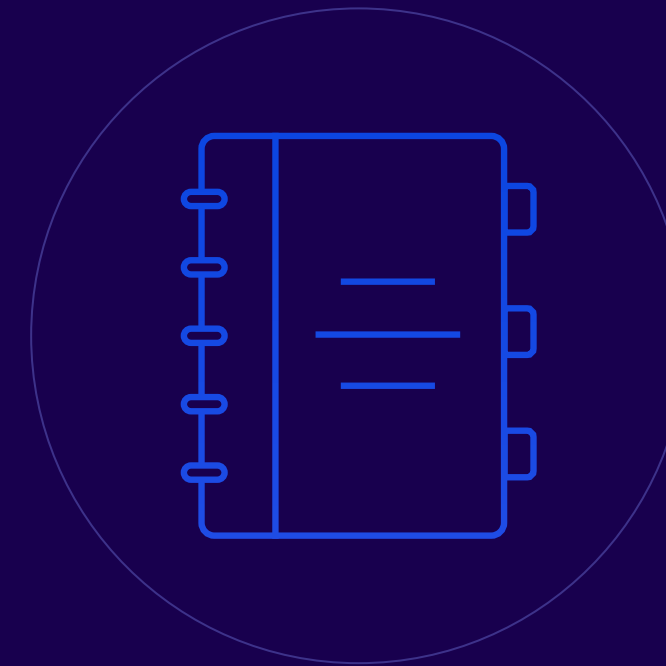
To sum it up

The Open Apparel Registry (OAR) is a neutral, open source tool mapping garment facilities worldwide and allocating a unique ID to each. Data in the tool is contributed and used by organizations all over the world, including major global brands, civil society organizations, multi-stakeholder initiatives, certification schemes, factory groups and more. As well as many other efficiency and process benefits, the way the OAR organizes and presents data ultimately improves the lives of some of the most vulnerable workers in global supply chains.



This rich picture is a visualization of the OAR and our strategy to open up supply chain data for the benefit of all. The power of the OAR's approach lies in transforming messy, inconsistent data into structured datasets, made freely available to all stakeholders under an open data license. When everyone working in global supply chains enjoys equal access to quality data, opportunities rapidly open up to shift the industry onto a more sustainable and equitable path.

The Open Apparel Registry tackles **challenges** in supply chain data by:



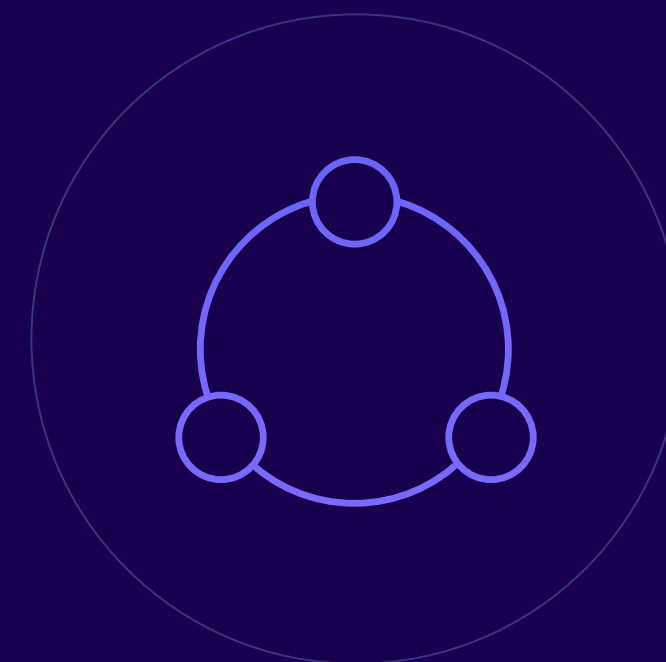
Creating a **standardized format** for the disclosure of facility name and address information, with each facility in the database allocated its own unique OAR ID.



Making data accessible to all stakeholders, by **virtue of the data being open and freely available** to anyone via an open data license.



Improving the **quality of supply chain data** through the cleaning and matching work of the OAR algorithm.



Enabling organizations to connect disparate data sets using the OAR's **industry standard ID**.

“We work to help garment workers achieve their rights. Accurate supply chain transparency is vital for that, so we can reach out to the correct brands and other stakeholders to resolve rights violations. Having a clear and unified registry of production facilities makes finding the right information easier and faster, and therefore speeds up the route to remedy.”

PAUL ROELAND
TRANSPARENCY COORDINATOR, CLEAN CLOTHES CAMPAIGN

2. NEUTRALITY

Lessons learned:
the importance of
industry positioning
and more

To build, launch and grow a technical platform for industry requires both trust and time. Here are some early lessons learned in establishing the Open Apparel Registry (OAR).

Prior to launching the OAR, we conducted an extensive **stakeholder engagement** exercise, as well as completing in-depth research into what kind of entity the OAR should be. These four key takeaways informed our decision to establish the OAR as a neutral, non-profit data institution, as well as setting the groundwork for our on-going engagement with global stakeholders:

1

The right **governance structure** and clear positioning to industry are imperative to gain stakeholder trust and buy-in.

2

A keen eye on sectoral developments combined with **user feedback** enables us to stay ahead of the game and quickly roll out new features.

3

A tool that **doesn't exist yet** is hard to visualize. Work with early adopters who share your vision.

4

To drive global uptake, we need to speak our users' **language** - literally.

The right **governance structure** and clear positioning to industry are imperative to gain stakeholder trust and buy-in.

LESSON 1

We knew that it would be crucial to the future success of the Open Apparel Registry (OAR) to select the most appropriate **governance structure** for the tool, in order to generate trust, drive data contributions and reinforce the message to our community that the OAR exists to serve the entire apparel sector.

Combining desk research with stakeholder interviews, we explored a variety of options, including a for-profit B Corporation structure, a data trust, a cooperative model and finding an institutional home for the tool.

Ultimately, we settled on a **non-profit entity**, governed by a **multi-stakeholder Board of Advisors** representing:



CIVIL SOCIETY



BRANDS AND RETAILERS



MULTI-STAKEHOLDER INITIATIVES



FACTORY GROUPS AND FACILITIES



OPEN DATA SECTOR

How and why did we reach this decision?

1. We knew that positioning the tool as a **neutral entity**, built for the benefit of the entire sector, would be key to its success and building trust within the sector.
2. Establishing the OAR as an independent non-profit with a multi-stakeholder board is a key element in how we reinforce this neutral position. **Stakeholders would not have been as willing to share their data with a for-profit company with potentially vested interests.**
3. As we considered the long-term financial sustainability of the organization, we recognized that **access to philanthropic funding** would be a key part of the mix. In many cases it is easier for a philanthropic partner to fund a legally established non-profit than a for-profit entity.

A keen eye on sectoral developments combined with **user feedback** enables us to stay ahead of the game and quickly roll out new features.

LESSON 2

The need to keep abreast of sectoral developments may seem obvious but, in our case, this is a considered, proactive and ongoing effort.

Identifying and responding to **sectoral challenges** has led to the otherwise unexpected development of key features in the tool.

Challenges that we pay particular attention to include:

- **The pace of change is slow**, when compared with the urgency of the issues the apparel sector must address, so **tailoring interactions with stakeholders** depending on their readiness to embrace our approach has been key.
- **Bureaucratic hurdles** around data sharing, particularly at major brands and retailers, are rife. It can take some organizations six months to secure internal approval to contribute data to the OAR, even when they're already sharing supply chain data on their own websites. We work with stakeholders to help them make the case internally to contribute their data, as well as acknowledging that not all stakeholders are marching to the same beat.
- Pockets of the industry, particularly smaller to medium-sized brands and luxury brands, still **view sharing supply chain data as a risk**. We celebrate all new contributors to the tool through our communications channels, which, in turn, allay concerns with others about the risks of sharing data and also generate a collective sense of endeavor.
- There are **varying levels of technical exposure and confidence** within the sector, particularly in production markets, so we've prioritized simplicity in our technical interface and have allocated time and a budget to translate our materials into other languages (more on that below).

A tool that **doesn't exist yet** is hard to visualize. Work with early adopters who share your vision.

LESSON 3

During the discovery phase of our stakeholder engagement program, before the tool was built or we had wireframes to share, it became clear that many people will only understand a tool once it's built.

Users need to be able to explore a tool themselves, or watch a demo - they learn by doing. We wish we had a magic solution for this one. Our approach was to track the stakeholders we spoke with who we sensed would be early adopters of the tool, and secure their buy-in and support for our launch. Once the tool was live, we re-engaged with those people who'd found it harder to understand the power of the tool we were building once the tool was live.

"The OAR offers a unique platform that helps to increase transparency in highly complex textile supply chains. By consolidating and mapping information from multiple sources, a high level of quality and comparability is achieved. HUGO BOSS attaches great importance to such an approach. Only by joining forces from all industry players can we achieve systematic sustainability improvements in the textile and fashion industry."

ANDREAS STREUBIG
DIRECTOR GLOBAL SUSTAINABILITY, HUGO BOSS

BRAND

Open Apparel Registry

Search the OAR

MORE OPTIONS



To drive global uptake, we need to speak our users' **language** - literally.

LESSON 4

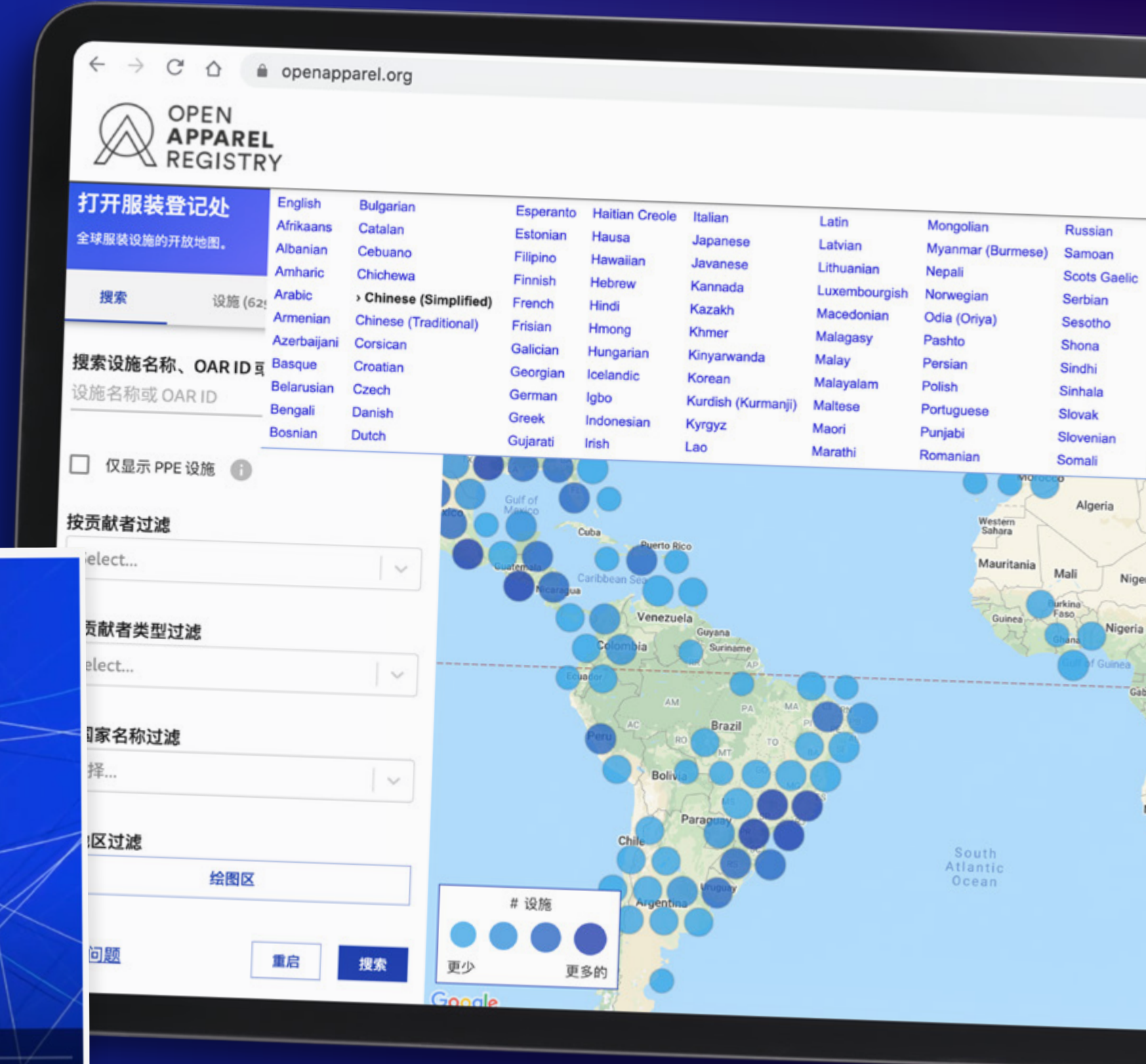
As we've worked to drive global uptake of the tool, it has been clear that **communicating with our community in their native language** will be vital to best serve our users around the world.

While the Open Apparel Registry (OAR) is available to use in **over 120 different languages**, our marketing and communications materials have historically only been available in English. If we're going to work with audiences with varying levels of technical exposure and ability, we need to be able to communicate with them in their own language. In 2021, we'll be prioritizing translating our content into multiple other languages, as well as hiring **in-country Community Managers** in the latter half of the year, to aid in building connections with the users in regions where there are high concentrations of garment facilities. We've started by translating our 90 second animation into [Bangla](#) and [Khmer](#).

"We have received a lot of positive feedback on the OAR since the AGT production location list was published. It is really cool to see that our stakeholders are actively using it, and it inspires the parties of the agreement to work more closely together both within and beyond the agreement. It has also allowed for active brainstorming between the parties on how we can use this valuable data better and try to maximise impact on the ground by initiating join projects also with other parties outside of the AGT."

FLEUR MEERMAN
SENIOR POLICY ADVISOR,
DUTCH AGREEMENT ON SUSTAINABLE GARMENTS AND TEXTILE

MSI



What exactly is open data and why is it so powerful?

Open data: a technical definition

Before we look specifically at the Open Apparel Registry (OAR), it's important to note that the term "open data" is a precise one, with a technical definition of its own. A concerning trend has developed in which people are using the term "open" or "open data" in reference to platforms which don't actually meet the standard.

So what exactly is open data? According to the [Open Knowledge Foundation](#):

Open data is data that can be freely used, shared and built on by anyone, anywhere, for any purpose.

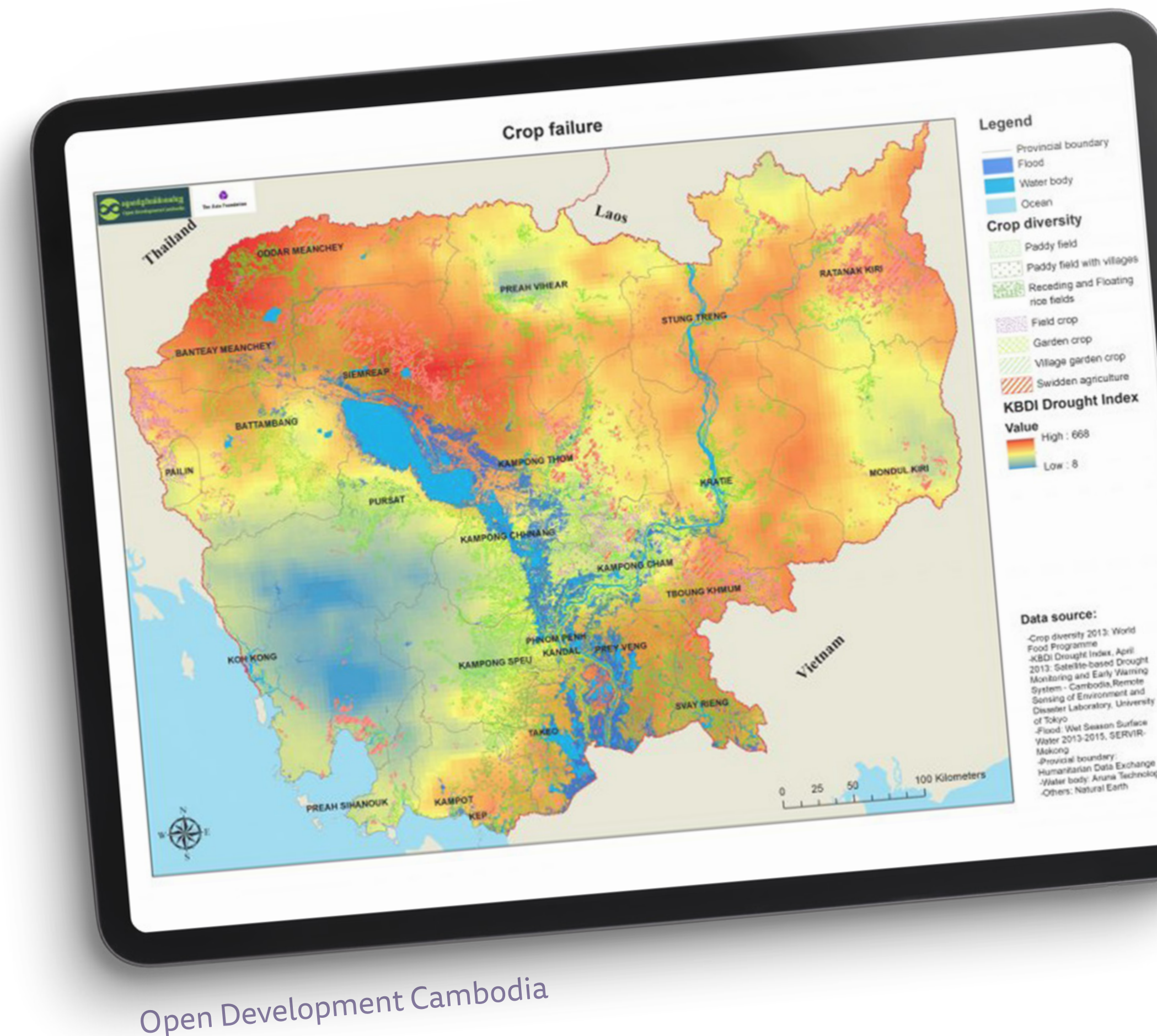
There are two key elements to openness:

- Legal openness:**
 you must be allowed to get the data legally, to build on it and to share it. Legal openness is usually provided by applying an appropriate (open) license which allows for free access to and reuse of the data, or by placing data into the public domain.
- Technical openness:**
 there should be no technical barriers to using that data. For example, providing data as tables on websites or locked away in PDF documents makes the information extremely difficult to work with. So the [Open Definition](#) has various requirements for "technical openness," such as requiring that data be machine readable and available in bulk.

Three important principles of open data are what make it so powerful:

- Availability and access:**
 that people can get the data
- Re-use and redistribution:**
 that people can reuse and share the data
- Universal participation:**
 that anyone can use the data

An example of a truly open data initiative is [Open Development Cambodia](#) (and its sister organizations in the Mekong region) which gathers and shares up-to-date, accurate information about Cambodia and its economic and social development.



Open Data vs Open Source

It's also worth noting that "open data" and "open source" are two distinct things. While "open data" is defined above, "open source" refers to opening up the code written to build a platform. The Open Apparel Registry (OAR) is open source: all the code written to develop, fix and grow the OAR is available for anyone to view on our [GitHub repository](#) and licensed under a [Creative Commons 4.0 ShareAlike license](#).

Where does data in the OAR come from?

The OAR is populated by contributions from industry, meaning that brands and retailers, civil society, multi-stakeholder initiatives, certification schemes, factory groups and more upload facility data to the tool. We use "apparel" in the broad sense, so that it includes footwear, home textile suppliers, etc. In addition to contributions from industry, the OAR team regularly accesses publicly available datasets (such as supplier lists on brand websites), formatting and uploading them to the tool. Organizations are notified when their data has been added to the tool, and we're seeing increasing numbers of brands "take control" of that data in the OAR, as they understand the benefits the tool and our unique IDs can bring them.

MYTH

"The OAR is a tool for brand supply chain disclosure."

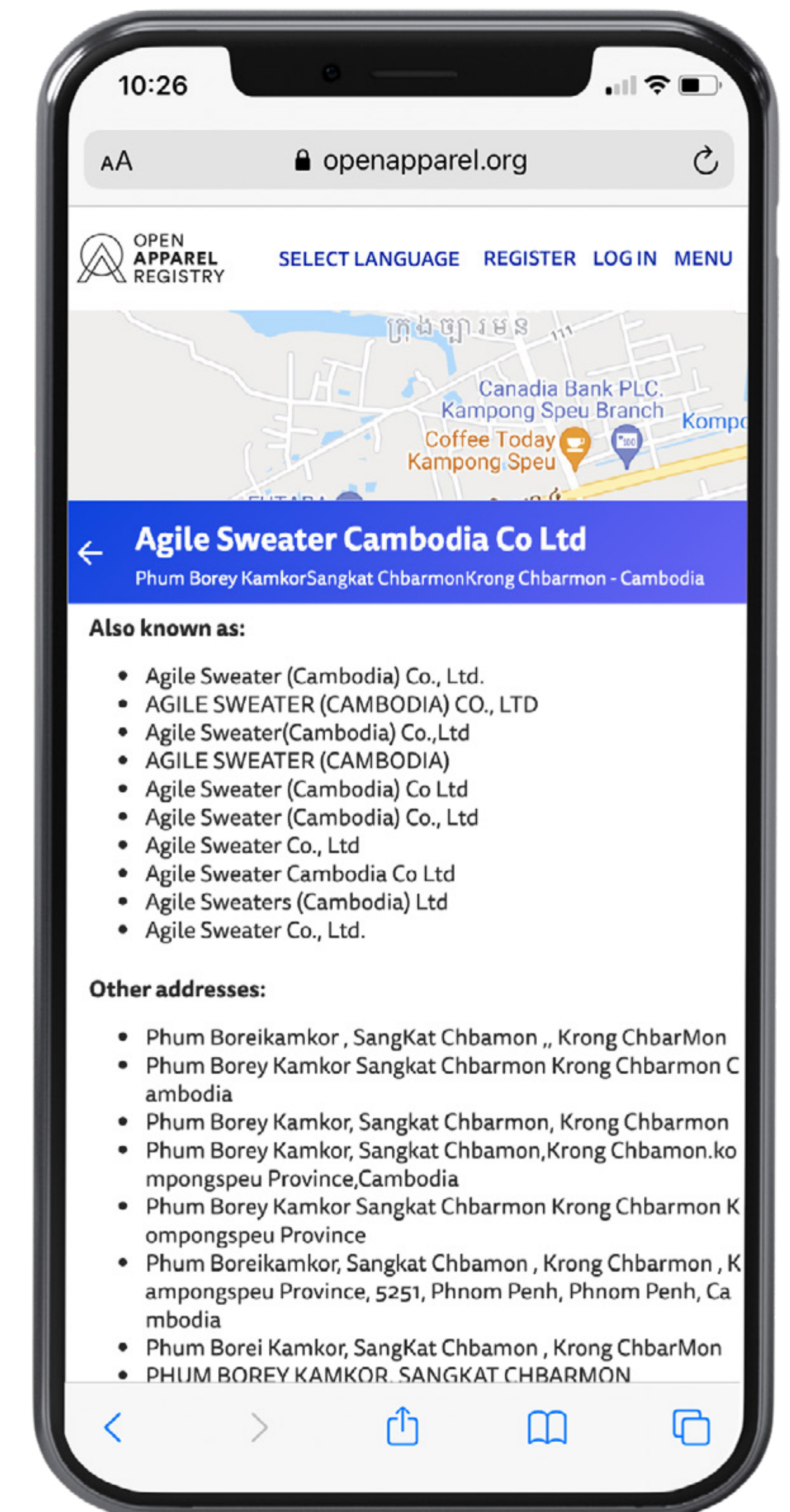
REALITY

Any organization with name and address data about the apparel sector can contribute to the tool. The greater the variety of contributors, the richer the dataset becomes.

In order to create an entry in the OAR, the only data that's required is the name and address of a facility. Users can contribute this data for free by a manual CSV or Excel file upload, or via our paid-for API connection (more on that shortly). Every single line of data is then processed by a sophisticated algorithm, which works on a statistical model. This algorithm is looking for similarities in strings of characters in the names and addresses contributed to the database, which it compares with existing entries in the tool. Where the algorithm returns 80% certainty or above, a facility is returned to the user as a "match," enabling users to access the OAR ID for the facility and see which other organizations share a connection to the same facility. There is a "middle state" for some facilities where the algorithm is not certain whether or not to return a match, so the system requests some manual intervention. In these instances, users are asked to review a list of "potential matches" and confirm or reject these. Lastly, where the algorithm is certain that a facility does not already exist in the tool, it is created as a new entity and allocated its own unique OAR ID.

Every facility profile in the OAR shows the name and address for the facility, the unique OAR ID allocated to the facility, GPS coordinates, and a Google Earth view of the facility, as well as the names of all the organizations which have contributed the facility to the database.

It's possible to see the smart work the algorithm has done, too, as the profiles display all the variations in name and address entries that it has been able to detect are, in fact, referring to the same place:



Dating advice: what we looked for in a technical provider

Thinking back to our search for a technical provider, it's worth emphasizing that when we started out, we weren't technical experts. We needed help.

The technical build and on-going support of the Open Apparel Registry (OAR) is provided by an external geospatial software company, [Azavea](#). In considering the requirements of a technical provider to build the OAR, it became clear that we needed:

- **Open data and open source expertise:** our position as an open data tool is a key part of our identity, so we needed to work with experts in this area.
- **Geo-spatial mapping knowledge:** there are all kinds of unexpected considerations in working on mapping projects, including managing nuances around geo-political boundaries or thinking through how to

display up to 200,000 facilities on a map at once. It was essential to work with an organization with expertise in these issues.

- **An agile software development process:** we knew that responding to the needs of our community would be important and did not want to be locked down into a specific set of tasks or year-long roadmap. Flexibility is key.
- **Mission alignment:** as well as many other efficiency and process benefits, the way the OAR organizes and presents data ultimately improves the lives of some of the most vulnerable people working in global supply chains. We needed to find an organization that cared about this mission as much as we do.

Contrary to earlier assumptions, a background in software or development for the apparel sector or knowledge of the challenges the apparel sector faces is not a necessary requirement. **What we needed was a realistic understanding of what would and would not be possible in building the platform.**

CIVIL SOCIETY CASE STUDY

BHRRC'S OAR STORY

In early 2019, OAR data enabled the BHRRC to quickly respond to the dismissal of over 1,000 garment workers for striking over the non-payment of benefits in Cambodia. BHRRC was able to swiftly use the OAR to identify brands sourcing from the factory and ask for their response and plan of action. Two brands responded and launched investigations.

“Through pressure from many quarters, including brand interventions, the majority of workers were reinstated”



BHRRC is a global non-profit organization dedicated to advancing human rights in business and eradicating abuse. It helps communities and NGOs get companies to address human rights concerns, and provides companies an opportunity to present their response in full. It also tracks the human rights policy and performance of more than 9,000 companies in over 180 countries, making information publicly available. It engages with companies and governments to urge them to share information publicly.

Relationship advice: how we work with our technical provider, Azavea

Following the launch of a limited beta in September 2018, in December 2018 we switched technical providers to our now long-standing partner, [Azavea](#), a B Corporation based in Philadelphia, USA.

Azavea has expertise in geo-spatial mapping and managing open source communities, and its work on the Open Apparel Registry (OAR) sits within its civic applications team. As we enter our third year of working with Azavea, we've had a chance to reflect on what it takes to build a healthy - and fun - working relationship.

The "magic sauce" behind many of the "wins" for the OAR has been **the combination of the sector knowledge of our stakeholder management team coupled with the technical expertise of Azavea.**

Here are some examples of what that working relationship and knowledge sharing looks like in practice:

- Although a background in software development for the apparel sector was not a prerequisite for building the OAR, when we began working with Azavea **we introduced the team to the challenges facing the apparel sector and why the issue of facility identification is crucial.** This understanding helped to inform the build of the platform and subsequent data integrations.

MYTH

"The OAR will eliminate duplicates within a facility list."

REALITY

The OAR does not eliminate duplicates within lists. Instead, it checks for duplicates against the OAR database, returning a "match" when a facility already exists in the tool. If there are duplicates within a list uploaded to the OAR, these will create "new facilities" for each duplicate entry. Spotted duplicate facilities in the tool? [Contact the team](#) to let us know.

- It was not only essential to set out expectations with Azavea about the quality of data contributions that we would be working with but also to share **how the sector would make use of the OAR's data.** Understanding the power of the seemingly simple set of data that the OAR provides and the profiles of the people who would be using the data helps inform the user experience.
- For the stakeholder management team, **there's no such thing as a stupid question, or too many questions.** For us to effectively communicate about the OAR and support our community, we need to understand the intricacies of how the algorithm processes data and other aspects of the technical build. Our Lead Developer at Azavea, [Justin Walgran](#), has shown endless patience as we've come to grips with these details. His ability to break down complex information into succinct, digestible explanations has been instrumental in building our knowledge.

You also can't discount that a shared appreciation for good food and good memes goes a long way.

So how was the OAR built?

Based on learnings from the Open Apparel Registry's (OAR) stakeholder management team, Azavea identified seven key issues that would inform the build of the platform:

- The OAR would be dependent on a wide range of contributors, many of whom have **limited technical access** or exposure
- There was **no industry-wide standard** for data disclosure
- Supply chain data is often **extracted from PDFs** via optical character recognition, or OCR (a type of software that converts what is a scanned image in a PDF into structured data that is extractable, editable and searchable)
- **Transliteration inconsistencies**, i.e. a local language facility name being translated differently, depending on the person doing the translation
- A lot of apparel production facilities are located in regions where there is **no structured format for addresses**, such as the number, street name, city or zip code
- Data would include **international character sets**
- The **volume of data** that we anticipated would be contributed to the OAR and the impact this would have on processing times, as new contributions are compared with the existing dataset

Here's the math for processing times related to the likely and growing volumes of data in the OAR:

$$50,000 \times 5,000 = 250,000,000$$

SEED FACILITIES

UPLOADED FACILITIES

COMPARISONS

$$250,000,000 \div 10,000 \div 3,600 = 6.94$$

COMPARISONS

COMPARISONS P/SECOND

SECONDS P/HOUR

HOURS

aka...
we need a shortcut

The solution: Dedupe

Dedupe is an open source python library for accurate and scalable fuzzy matching, record de-duplication and entity resolution. In order to speed up processing times given the continually growing volume of data in the Open Apparel Registry (OAR), Azavea chose to work with Dedupe.

By making use of the Dedupe library and training a new model, we would be able to process thousands of matches in less than four minutes. (For more information on the training of the model, you can read [this technical blog](#) by the OAR's Lead Developer, Justin Walgran.)

```
dedupe.api:With threshold: 0.235
dedupe.api:0 records
local/lib/python3.7/site-packages/dedupe/core.py:329: Fu
'1type' as a synonym of type is deprecated; in a future
stood as (type, (1,)) / '(1,)type'.
core', 'f4', 1]])
local/lib/python3.7/site-packages/dedupe/core.py:329: Fu
'1type' as a synonym of type is deprecated; in a future
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```

22

“Duplicate records almost always share something in common. If we define groups of data that share something and only compare the records in that group, or block, then we can dramatically reduce the number of comparisons we will make. If we define these blocks well, then we will make very few comparisons and still have confidence.”

DEDUPE DOCUMENTATION
SOURCE: Forest Gregg and Derek Eder. 2019. Dedupe.
<https://github.com/dedupeio/dedupe>

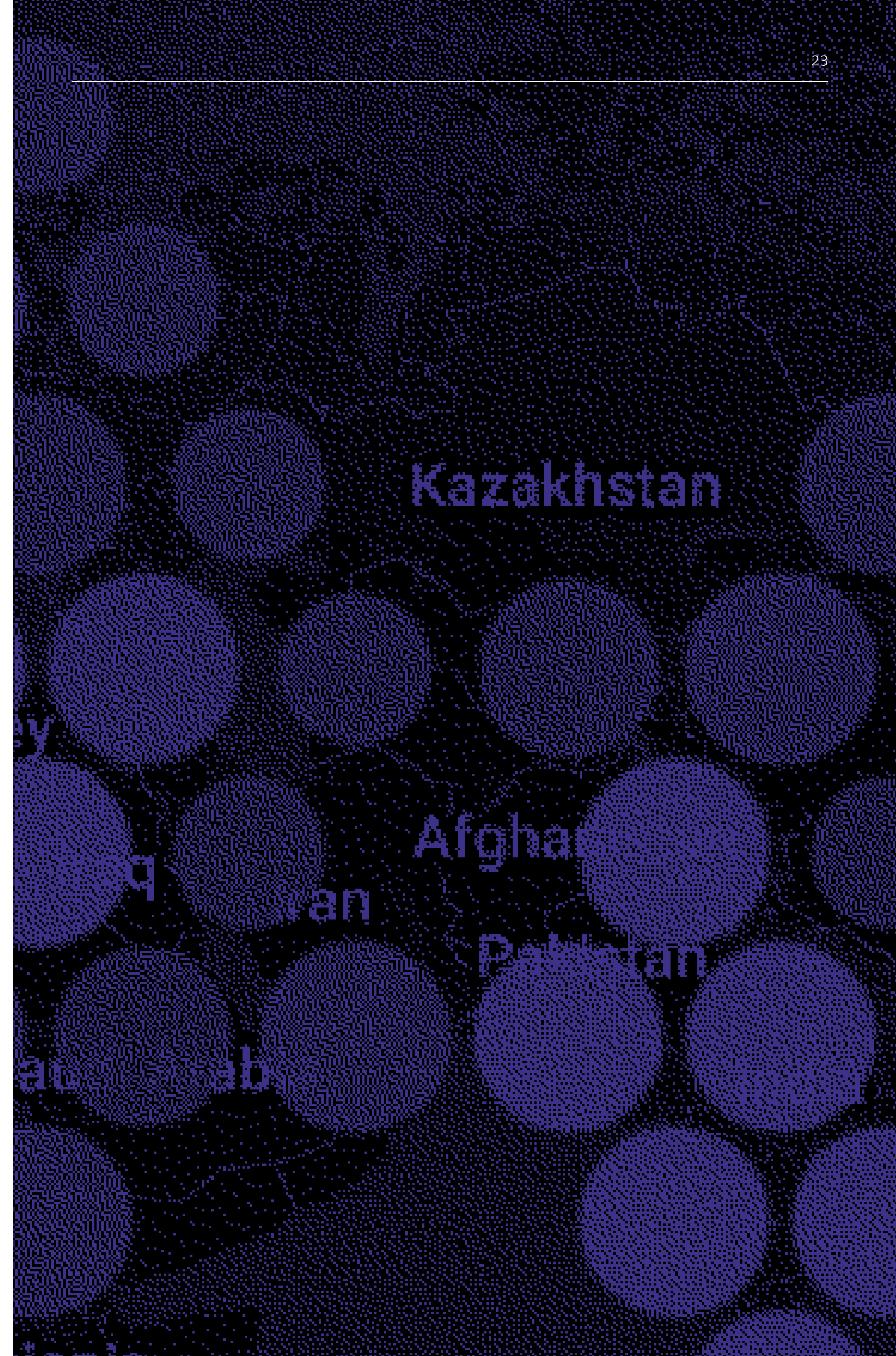
The OAR's API: connecting siloed datasets

Although different segments of the apparel sector have varied levels of technical exposure and expertise, there are notable groups within the sector whose technical requirements are more advanced, including major global brands and some of the big industry multi-stakeholder initiatives (MSIs), such as Higg, ZDHC and Fair Factories Clearinghouse. While we knew that the Open Apparel Registry (OAR) could help these organizations, we also knew that manual querying and data contributions would not be sufficient for their purposes.

For that reason, in partnership with key industry MSIs we developed and launched an [application programming interface](#) (API), which is the software version of a “middleman”, allowing two systems to “talk” to one another.

(Picture a brand website, with a Twitter feed; that feed is pulled into the brand website via an API, which is a way for two systems to connect with one another. When someone posts a tweet on the brand’s Twitter account, it automatically populates to the brand’s website.) By providing a “hooky” API, allowing other databases to programmatically push and pull data from the OAR, the OAR is acting as an industry “clearinghouse,” improving the quality and consistency of data for all.

As increasing numbers of organizations connect with our API, including brands, certifications schemes, sourcing platforms and more, we will advance closer towards the long-term goal of the OAR ID becoming the “central source of truth” for the sector.



Shouldn't everything about the OAR be free?

Offered as a paid-for service, the API is also a key component of the long-term financial strategy for the Open Apparel Registry (OAR), as we look to diversify our funding streams beyond reliance on philanthropic funding.

Having a range of revenue streams is another way in which we reinforce the neutral positioning of the OAR.

Open data and / or open source does not always mean "free": it's not free to maintain an API, and our collaborators have indicated a willingness to pay for this additional service. That being said, in the spirit of serving all OAR stakeholders and enabling access for all, we offer a program for non-profits and other civil society organizations to apply for free access to the OAR's API. You can read more about that [here](#).

MYTH

"Using OAR data is a paid-for service."

REALITY

Anyone can manually search, contribute and download data from the OAR for free. More sophisticated ways of interacting with the data, such as connecting with the OAR's API, are a paid-for service.

SERVICE PROVIDER CASE STUDY

HIGG'S OAR STORY

As the technology partner for the Sustainable Apparel Coalition, Higg manages datasets from multiple organizations, each with its own unique identification schemes, facility names, addresses and other identifying information. Higg needed a common ID for manufacturing facilities that transcended the individual customer's data format and allowed its technology platform to make connections across disparate datasets.

Connecting with the OAR's API and making use of the OAR ID gives Higg a single source of truth about facility location that can be applied to its internal data. This allows Higg and its users to more clearly see the relationship between facilities and their customers, and to guide users to the right supply chain relationship more effectively. It also allows Higg to move data quickly and seamlessly between platforms for its users.

Higg users now have increased confidence in searching and matching facilities, merging duplicate IDs and the supply chain due-diligence process. Connecting with the OAR's API has also accelerated Higg's integration efforts by removing what previously had been a large chunk of work: aligning its facility records with potential partners.

"By using the OAR as the central source of truth for facility location data, Higg can match its facilities easily and quickly with any external dataset and return OAR IDs to users. This is a great jump-start on the real work: finding ways to collaborate on facility performance improvement"

Higg

Higg is the sustainability insights platform for consumer goods industries, delivering software and services for measuring, managing and sharing supply chain performance data.

Ongoing work

Our agile software development approach means we're constantly responding to the needs and requests of our community.

In addition to our work on the Open Apparel Registry (OAR), we recognize that the need remains to educate the apparel sector about the importance of sharing data openly and in a consistent format.

To that end, we've worked with other organizations in the sector, including Clean Clothes Campaign, WikiRate and the International Corporate Accountability Roundtable to launch the [Open Data Standard for the Apparel Sector](#), which is a simple guide for any organization in the sector about how best to disclose supply chain data and why the data format matters. **The sooner the majority of the sector understands the importance of open data and starts sharing supply chain data in this way, the sooner we can get to work in tackling the systemic sustainability challenges the sector faces.**

Got an idea you'd like to share or feedback on the tool? [Contact the team!](#)
We'd love to hear from you.

BRAND CASE STUDY

MAMMUT'S OAR STORY

Mammut is a member of numerous multi-stakeholder initiatives (MSIs) in the apparel sector, tackling both social and environmental issues in the supply chain. Each of these MSIs works with its own ID systems, which makes matching facilities across different platforms difficult.

The unique OAR IDs allocated to each facility in the database help Mammut overcome precisely this challenge. Using the OAR IDs that have been allocated to its facilities, Mammut plans to begin working on analysis and visualizations, matching facilities across multiple systems and resulting in an even clearer picture of its supply chain.

The OAR has helped Mammut become much more efficient in managing its supply chain. Mammut is beginning the significant task of lowering its supply chain GHG emissions, which means that it must work closely with its facilities and other brands to improve energy efficiency and switch to renewable energy supplies. The OAR enables Mammut to collaborate more effectively with its suppliers and other brands producing at the same facilities.

“Mammut actively motivates all organizations it works with to use OAR IDs as the primary identifiers in their tools and systems”



With origins dating back to 1862, Mammut is an outdoor apparel and equipment company with its headquarters in Switzerland.

4. COMMUNITY

From closed to open:
how stakeholder
engagement is helping
shift a sector

Stakeholder engagement is a crucial, ongoing exercise. How do you get a notoriously secretive and complex industry to start sharing supply chain data for the benefit of all? And beyond encouraging organizations to contribute data, what's necessary to raise awareness and drive use of the tool?

We'll dive into the details throughout this section, but here are some of the strategies that worked for us:

1

Take the time to build and maintain trust. Thoughtful engagement with the apparel sector prior to and following the launch of the Open Apparel Registry (OAR) has been key.

2

Celebrate the entire OAR community: early adopters, as well as new users and contributors; major global brands and small civil society organizations; industry multi-stakeholder initiatives and individual facilities. The beauty of the OAR is its kaleidoscope of global users.

3

Demo the tool, talk about the tool, demo it again and then talk about the tool some more. We've been banging the drum for open data for several years now, and will continue to do so, loudly and proudly.

4

Listen and respond to feedback. We're fortunate to receive great development suggestions from users, and will always leave some flex in our technical roadmaps to enable us to build out the best ideas that will serve the entire OAR community.

5

Acknowledge where there's room for improvement. We're by no means perfect. We've learned an awful lot along the way, and recognize where and how we need to up the ante.

Let's start at the very beginning

In September 2017, having received initial funding from Laudes Foundation (formerly C&A Foundation), we began an extensive stakeholder engagement program.

Through this program, we spoke with over 200 stakeholders in the industry, including representatives from civil society, factory groups, major global brands, industry associations, multi-stakeholder initiatives and open data experts. We also ran three global workshops in New York, Amsterdam and London targeting a similar set of stakeholders.

Through this process, we wanted to understand:

- What did industry stakeholders think of the concept behind the Open Apparel Registry (OAR)?
- Were they excited by the idea of the tool? What problem would the tool solve for them?
- Would they contribute data to the tool?
- Would they make use of the data in the tool and the unique OAR IDs allocated to each facility? What benefits would the data in the OAR bring to their organization?
- What would they change about the tool?
- Did they have any hesitations around the idea of the OAR?

BRAND CASE STUDY

KINGS OF INDIGO

As an SME, Kings of Indigo recognizes that it needs to collaborate with other brands in order to have a bigger impact on improving working conditions in supply chains. Kings of Indigo uses the OAR to understand whether there are other brands sourcing from the same suppliers, or from the same region, in order to identify opportunities to work together.

In addition to this, as part of its due-diligence processes, Kings of Indigo reaches out to other organizations when it is considering sourcing from a new region to understand the challenges they may face, or how a facility performs in terms of responsible production. The OAR enables them to quickly identify which brands to reach out to, enabling them to learn from others and explore the potential to work together on projects in different regions.

“We want to inspire and motivate others to be transparent about their practices and production locations”

 **Kings Of Indigo**

Founded in 2011, Kings of Indigo is a Dutch sustainable lifestyle and denim brand which aims to lead the fashion industry to clean up and change. Its goal is to achieve 100% transparency through its entire supply chain by 2022.

If the Open Apparel Registry (OAR) was to be successful, it had to be as useful for major global brands as for tiny civil society organizations operating on the ground in production markets. While any organization can contribute data to the OAR, brands are a key source. If the tool wasn't useful for brands, the incentive to contribute data would be lost. In turn, without a critical mass of facility data in the tool, the OAR would be unable to serve its purpose as a tool for the entire industry, which multi-stakeholder initiatives, factory groups, civil society groups and others can make use of.

It was important through this stakeholder engagement program to:

- Build trust with all segments of the apparel sector
- Secure loyalty and enthusiasm for the launch of the tool
- Establish our position as a neutral platform, built as a "public good" for the sector
- Take future users of the tool with us on the journey of building, launching and growing the OAR

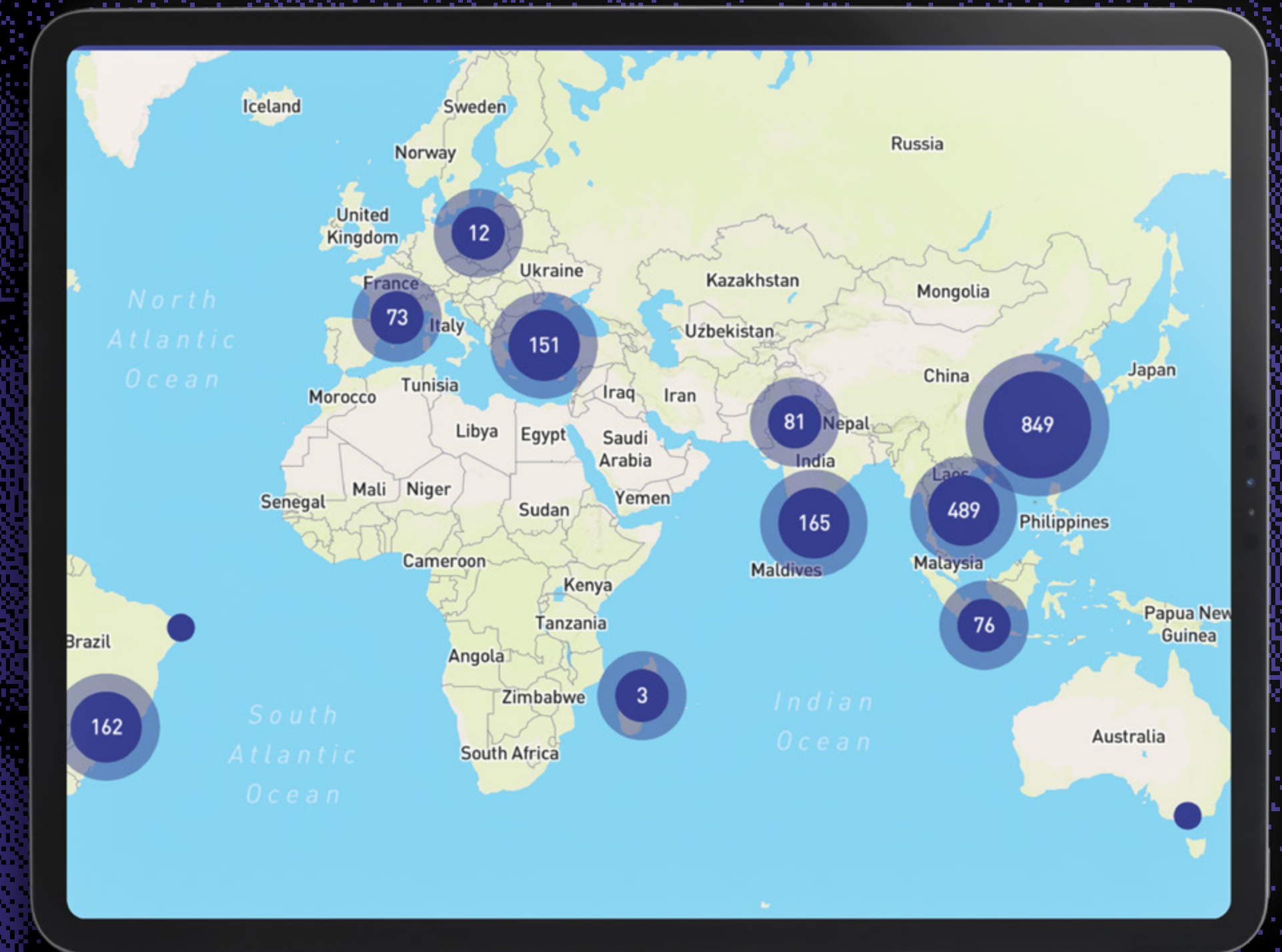
Overall, the reaction from industry was positive: the OAR was needed, and we could anticipate good levels of adoption. However, some organizations were still nervous about using the tool.

Reasons for hesitation included:

- Continued secrecy around supply chain data
- Varying levels of technical exposure and expertise, and therefore difficulty in understanding the need for and power of the tool
- Certain organizations in the sector viewing the OAR as a competitor

While we certainly haven't overcome these issues entirely, continually listening to, understanding and working with stakeholders to look for smart solutions which offer value for everyone is how we work on an ongoing basis to overcome barriers to adoption.

We used the insights gleaned from these conversations to inform the build of a limited beta version of the tool, which launched in September 2018.



An identity to get behind

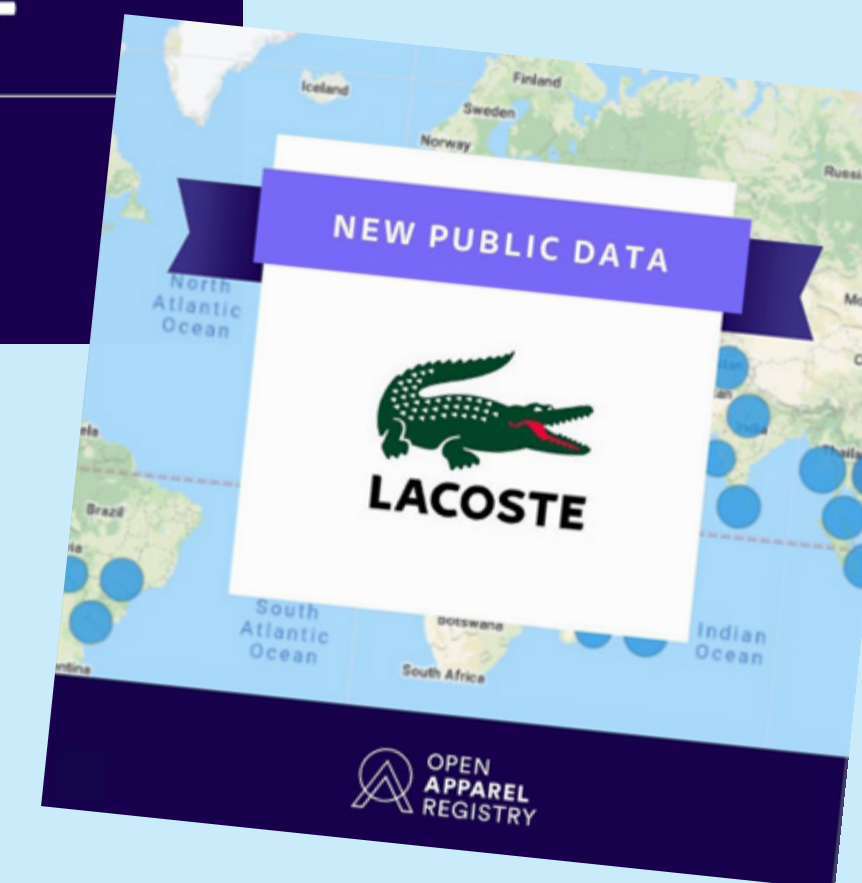
While the team at [Azavea](#) reviewed the code on which the beta was built and began rebuilding the tool from scratch, the Open Apparel Registry's (OAR) stakeholder engagement team set to work thinking through how to build a sense of identity, loyalty and spirit of collective endeavor within the community we'd started to grow during our stakeholder engagement program. Two meetings were crucial in this process: the first was with the co-founder of the creative agency [Nice & Serious](#), [Tom Tapper](#); the second with a designer and former head of branding and communication for [Fashion Revolution](#), [Heather Knight](#).

These two early enthusiasts for the OAR pushed us kindly but resolutely to answer:

- Why would anyone engage with the OAR? Answers along the lines of "it depends what role the individual plays within the industry" weren't going to cut it. We needed an elevator pitch.
- What thought, if any, had been given to the overall look and feel of the OAR? Did we have a brand identity? If not, why not? When you're building a movement - in our case an open data movement - you need to create a sense of belonging, and a key way to do that is through a strong visual identity.

Multiple coffees, conversations and brainstorming sessions later, and Heather had created a strong [brand identity](#) for the OAR, which elegantly straddles our two worlds of open data and the garment sector.

Armed with this suite of design assets to work with, Nice & Serious set to work on creating a 90-second animation - our elevator pitch - to introduce the OAR. You can view the animation in English [here](#), a version with Bangla subtitles is available [here](#) and with Khmer subtitles [here](#). We've long been advocates of speaking "plain English," with minimal technical or industry jargon but, as a global tool, many of our users - potential and existing - speak English as a second language, if at all. It's for that reason that we're working to share our content in multiple global languages, with many more translations planned.



From beta to OAR 2.0

With the foundations for building our community in place and Azavea having rebuilt the Open Apparel Registry (OAR) from scratch, by March 2019 we were ready to launch.

The OAR was launched to the public on March 29, with around 8,000 facilities in the tool. These facilities were contributed to the database by a combination of early adopters and supporters of the OAR, as well as the OAR team, who accessed publicly available brand datasets with which to seed the database. We announced the news of our launch to key trade press, and continue to openly share [a range of free communications assets](#) for members of the OAR community to make use of, in order to help us spread the word about the tool.

“Arvind Limited believes there are real benefits to facilities and factory groups engaging with the OAR. By being able to demonstrate the relationships of your facility through the affiliations visible on the site, and directing people to the OAR as a verified resource, the OAR serves to enhance trust between supplier and client. Through using the unique OAR ID, there is the potential to save hours of time and huge financial cost through more streamlined and efficient reporting. We’d encourage other supplier groups to get on board to reap the benefits this free tool can offer.”

ABHISHEK BANSAL
HEAD OF SUSTAINABILITY, ARVIND LIMITED

 **FACTORY GROUP**

Ongoing engagement

The work to build a community does not begin and end with the launch of the Open Apparel Registry (OAR); it's an ongoing, daily affair.

We continue to raise awareness and drive uptake of the tool through:

- One-on-one calls and demos with stakeholders
- Continually adding publicly available facility datasets to the tool, reaching out to the source of the data to encouraging them to take ownership of their data in the OAR
- Webinars and presentations for brand teams, multi-stakeholder initiatives, software providers and more

- Speaking slots at industry conferences and events
- Regular op-eds and press outreach around big data integrations

In addition to the work carried out by the OAR team, we've been delighted to see industry peers recommending the OAR to one another, whether that's civil society organizations sharing stories with one another of how to use the OAR's data for advocacy, or brands recommending the tool for the interoperability enabled by our OAR IDs.



CIVIL SOCIETY CASE STUDY

BETTER WORK

When designing in-country programs, Better Work previously had to ask brands individually which facilities were likely to participate, which could take weeks. The OAR helps Better Work to quickly identify potential facilities, enabling them to plan the amount of resources required in different locations with more accuracy and much greater speed.

Better Work will continue to use the OAR as a planning tool for the same purpose and to approach new factories to participate in their programs.



“We are hugely impressed with the progress of the OAR. The volume of factories now in the system and the more open attitude of brands to disclosing key suppliers make it a useful tool for us”

Agile development, user-centered design

We had a sense through what we'd learned during our stakeholder engagement program that, once launched, the Open Apparel Registry (OAR) community would be committed to and engaged with the tool.

The tool has now been live for over two years, and this hunch has been vindicated. Some of the best ideas for developments to the OAR come not from the OAR team but from our community, which is exactly how it should be. We learn about these ideas through our daily interactions with our users, as well as the surveys we've run since our launch.

Got an idea you'd like to share or feedback on the tool? [Contact the team!](#)
We'd love to hear from you.

The OAR as an open data institution

As well as working to grow awareness of the OAR within the apparel sector, we recognize the importance of engaging with the open data community.

We do this in a variety of ways, including:

- Speaking slots at events like the [Linux Foundation Summit - Europe](#) in 2019, the [ODI Summit](#) in 2020 and [csv.conf,v6](#) in 2021
- Publishing regular op-eds with, for example, [Interline](#), [Thomson Reuters Foundation](#) and [WTiN](#) which focus on the power of open data
- Having an open data expert on our [Board of Directors](#)



Key challenges

While we're proud of the impact our small but mighty team has achieved to date, the work to build and grow the Open Apparel Registry (OAR) has not been without its challenges.

Known areas for growth are:

- Increasing the volume of facilities beyond tier 1 of the supply chain (i.e. the final stage of the process, where garments are cut and sewn together).
- Mapping the facilities which "do not want to be found" - the subcontractors and shadow facilities which are a known but, as yet, unquantified presence in the industry.
- Strengthening engagement and data contributions from the many certification

schemes within the sector. We're delighted that [Fair Trade USA](#) and [Oeko-Tex](#) have led the charge for certification schemes to contribute to the tool, and we're working to ensure many others follow suit.

- Building relationships with global worker organizations and other groups, particularly in the Global South. We know that there are so many potential users who could be benefitting from making use of the data in the OAR that we simply haven't reached yet.

Our work to translate our marketing materials and resources into other languages is a key part of how we're growing our reach with potential users in geographies and stakeholder groups that weren't originally well represented in the OAR. Ongoing hiring of Community Managers in key regions and running regular workshops with target groups, such as trade unions and worker organizations, are other tactics we're deploying to ensure growth in these areas.

BRAND CASE STUDY

ESPRIT

Esprit has been working on mapping its supply chain for several years, beginning at a time when suppliers weren't used to being asked to share this information with their clients. The brand has now mapped tiers 1 and 2 of its supply chain, and shares all of this data on the OAR.

Esprit regularly updates its data on the OAR both for the benefit of civil society users of the tool and to improve the quality of its own database. The sustainability team shares the better quality address data it obtains from the OAR with its vendor management team.

It is working on mapping tier 3 of its operations, which it plans to publish on the OAR when the process is complete.

"The OAR is a very credible tool and supports Esprit's transparency goals, which are a huge topic in the company"



Founded in 1968, Esprit has over 580 stores across 40 countries worldwide. Its network of suppliers spans 25 countries and includes hundreds of globally interlinked partners.

 **FACTORY GROUP CASE STUDY**
TAL APPAREL LIMITED

Until now, TAL Apparel Limited has worked with a limited number of subcontractors, all of which it has been able to visit in person. As the company expands, it is looking to grow its subcontractor network with confidence - something the Open Apparel Registry (OAR) assists with.

The OAR has also helped TAL Apparel Limited to promote transparency of its supply chain by providing a platform to share it.

“The OAR provides a platform to check potential subcontractor information”



Part of the global TAL Group, TAL Apparel Limited has nine facilities in Asia and Africa, and provides garment manufacturing and services across multiple stages of the apparel supply chain.

 **CIVIL SOCIETY CASE STUDY**
CLEAN CLOTHES CAMPAIGN

Clean Clothes Campaign (CCC) uses OAR data both in its Urgent Appeal work, in which it responds to concrete violations reported by workers and unions, and in research initiatives, such as the “Living Wage through Increased Transparency” project.

OAR data enables trade unions to identify which brands are sourcing from which factories. Following the dismissal of a union leader, this information was used in combination with data from the [Transparency Pledge](#) and revealed that the brand was also a member of four multi-stakeholder initiatives (MSI). In consultation with the CCC, the union picked the MSI known for the fastest response times on grievance mechanisms, and was able to swiftly resolve the issue. Case closed, to the satisfaction of all involved.

“Within five days, the union leader was reinstated to her full job, including backpay”



Clean Clothes Campaign is a global alliance dedicated to improving working conditions and empowering workers in the global garment and sportswear industries.

 **CIVIL SOCIETY CASE STUDY**
FEMNET

FEMNET receives complaints from workers regarding conditions in the factories in which they work. These complaints will often name brand(s) being manufactured in the factory.

The OAR helps FEMNET to verify worker claims, including whether a brand is currently connected to a particular facility, or to check how many suppliers a brand has in a particular country.

“The OAR enables us to quickly check for relevant data on the specific questions we have that arise from worker complaints”



With its headquarters in Germany, FEMNET is a non-profit organization committed to political engagement, educational and advisory work as well as a solidarity fund for the rights of women in the global clothing industry.

5. IMPACT

Is it working?
Measuring the
OAR's impact

Measuring our impact: the numbers

In this section, we take a step back to reflect on the impact the Open Apparel Registry (OAR) has had to date and to consider what comes next in our work to map all apparel facilities worldwide.

When the OAR was launched to the public on March 29, 2019, it contained around 8,000 facilities across 83 countries. These had been contributed to the database by a combination of early adopters and supporters of the OAR, and the OAR team, which accessed and contributed publicly available brand datasets to seed the database.

Two years later, the OAR has:

- Grown to over 64,000 facilities
- Received data from more than 400 contributors
- Mapped facilities in over 120 countries
- Fostered a community of more than 1,300 registered users, 1,800 subscribers, and many others who search the tool regularly for their work or research

While the growth of the registry has been encouraging, these aren't the only metrics of importance to the team. Given that the OAR exists to power collaboration in the sector, three quantitative metrics are key:

- How many facilities uploaded to the tool match with an existing entry in the database?
- What is the average number of affiliations (or connections) for each facility?
- How much time are visitors spending on the map?



CIVIL SOCIETY CASE STUDY

BHRRC

In August 2019, Business & Human Rights Resource Centre (BHRRC) used the OAR to trace back to brands after a factory closure in Mauritius. The closure had left Bangladeshi migrant workers stranded and owed unpaid wages.

After reaching out to the brands, BHRRC was able to work with a major brand sourcing from the factory and a local trade union to ensure remedial steps were taken (back wages, re-employment for some, repatriation talks with the Mauritian government, re-installation of water and power lines, etc.).



BHRRC is a global non-profit organization dedicated to advancing human rights in business and eradicating abuse. It helps communities and NGOs get companies to address human rights concerns, and provides companies an opportunity to present their response in full. It also tracks the human rights policy and performance of more than 9,000 companies in over 180 countries, making information publicly available. It engages with companies and governments to urge them to share information publicly.

“Obviously, much more is needed to be done in terms of severance and recruitment fees, but even these impacts that have been achieved so far would not have been possible without the OAR”

Why are these metrics significant? Consider a facility with the following affiliation breakdown (meaning each organisation listed below has contributed this facility to the database):

- 6 global brands
- 2 industry multi-stakeholder initiatives
- 1 certification scheme
- 1 civil society organisation

This entry offers greater scope for exploring collaboration opportunities at the facility level than a facility which has just one visible affiliation.

MYTH

"I don't need to upload a facility to the OAR that is already in the tool."

REALITY

Multiple contributions of the same facility are encouraged, as they will be recognized by the algorithm which powers the OAR and returned to the contributor as a match. In turn this enables those users to consider potential collaborations at the factory level

The OAR is not just a tool for brand supply chain disclosure; it's essential for us to continue to drive the variety of contributor types which are sharing data with the OAR.

In addition to brand contributions, we're glad to be steadily increasing the number of [civil society organizations](#), [factory groups](#) and [certification schemes](#) sharing their data with the OAR which, in turn, drives up the average number of affiliations per facility.

Understanding the range of connections that a facility has to different organizations provides the insight for those organizations to get together to work on social or environmental improvement programmes at the facility, or for civil society organizations to advocate more effectively on behalf of the people working there.

Dwell time on the map is also useful to understand how site visitors are making use of the tool. Are the majority of users running quick checks and leaving or is deeper level analysis taking place? We use the insights this data provides to prioritize our technical roadmap, as well as our stakeholder outreach.

"Planet Tracker identifies the best available scientific metrics on key planetary boundaries and prioritises environmental flashpoints for financial markets. We conducted research looking at the wet processing part of the textiles supply chain with the aim of linking apparel facility locations to water-risk. Having a central repository of textile facility location information saves significant time compared to searching the disclosures provided by individual companies."

PETER ELWIN
HEAD OF TEXTILES PROGRAM, PLANET TRACKER

 CIVIL SOCIETY

Measuring our impact: the stories

Brené Brown says
“Stories are data
with a soul.”

Quantitative metrics are important, but they don't paint the complete picture of Open Apparel Registry (OAR) use cases and impact.

As a team, we've always believed in the power of a good story and we're fortunate to have an engaged community, eager and willing to share how they're making use of the tool. We've featured case studies and testimonials throughout this report - here are a few more from a range of users:

BRAND CASE STUDY

KATHMANDU

Kathmandu had issues with conflicting name and address data for its supply chain, with some suppliers having multiple names, others updating or modifying their names, or some names and addresses being lost in translation.

Through the name and address matching algorithm processing Kathmandu's data and the GPS information provided for each facility in the database, the OAR helped Kathmandu ensure one generic, agreed upon name for each of its suppliers. The OAR enables Kathmandu to verify any inconsistencies in its data, and to quickly and easily share supply chain information for the purposes of collaboration and social impact initiatives.

Kathmandu now has more confidence in the mapping of its supply chain and has also saved time and money by not having to start this supply chain work from scratch or build a customized map for its own website.

“The OAR provides the perfect vehicle for collaboration between brands, and eliminates previous confusion relating to facility names and addresses.”



Kathmandu®

Founded in 1987 with headquarters in New Zealand, Kathmandu is a certified B Corporation specializing in outdoor apparel and equipment.

 MSI CASE STUDY

SOCIAL AND LABOR CONVERGENCE PROGRAM

The SLCP Gateway is the central repository for all SLCP-verified social and labor data. It connects multiple platforms and a wide range of stakeholders. A key challenge SLCP faces is ensuring that it has an accurate and reliable way to consistently identify facilities across the different platforms it connects, and amongst stakeholders.

Making use of OAR IDs provides a common language for all stakeholders and platforms linking to the SLCP Gateway. It enables everyone to match facilities on the Gateway to facilities in their own operating systems. Connecting with the OAR also helps SLCP to transparently demonstrate which facilities are making use of SLCP to collect and verify their social and labour data.

There are over 2,000 facilities in the SLCP Gateway, all of whom can now add their OAR ID to their Gateway profile. This improves clarity and reduces confusion for the facilities themselves, SLCP's signatory organizations and the users of its Accredited Hosts partners, such as Higg and Fair Factories Clearinghouse (FFC).

“Working with OAR IDs will support SLCP to increase the credibility of our verified data and boost user confidence.”


 CIVIL SOCIETY CASE STUDY

CLEAN CLOTHES CAMPAIGN

In December 2018 and January 2019, thousands of workers in Bangladesh were dismissed, blacklisted and subjected to trumped-up criminal charges following participation in public wage protests against low wages and the unequal distribution of the new minimum wage rise.

Faced with a lack of cooperation from the Bangladeshi factory owners, Clean Clothes Campaign and others turned to the brands and retailers sourcing from these factories, asking them to address the repression in their supply chain. Using the OAR and other sources, up to 20 brands sourcing from the over 30 factories involved in the repression were identified.

By early 2020, 14 cases against workers had been dismissed by the court. The vast majority of these workers were employed by factories which had major brands among their buyers. These brands engaged with factory management when these issues were brought to their attention. By contrast, the vast majority of cases that are still pending were filed by factories where no major buyers could be identified.

“Searching factories through OAR proved again to be much faster than trailing through individual brand websites.”



The road to impact can be rough: challenges we've faced

Here are some of the key roadblocks we've encountered along the way and the mindsets we've adopted to navigate them:

- **Adopt nimble working models when navigating bureaucracy:** this gets right to the heart of the crucial but less glamorous reality of running a start-up. As a small, fast moving team, key elements of our progress have been slowed by antiquated systems and bureaucracy. For instance, applying for non-profit status, while essential, has taken far longer to process than anticipated and left us currently unable to access pro-bono support programs. Patience and nimble planning are essential.
- **Funding for day-to-day operations is game-changing, even if it's harder to find:** all organizations have essential day-to-day expenses, such as lawyers, accounting services and financial providers, but finding a philanthropic funder who is willing to finance this essential "engine room" work

is hard. We've been fortunate that our long-standing partner Laudes Foundation has recognized the importance of this necessary work, and to have secured a further 5 years worth of unrestricted funding for our work.

- **No matter your size, carve out resources for reporting - you're going to need it:** until 2021, the Open Apparel Registry (OAR) stakeholder team consisted of two people, only one of whom worked full time on the tool. However, as a US-based non-profit, the OAR is held accountable to the same reporting requirements as a well-established, global non-profit with hundreds of staff and support services. The burden of managing these reporting requirements becomes a huge distraction from day-to-day delivery which, ultimately, slows impact. Perseverance is key.

- **Tech is expensive, but worth it. Invest if you can:** this makes it crucial to consider how best to ensure the long-term financial sustainability of an open data platform like the OAR. For us, the optimal mix appears to be philanthropic funding + a suite of paid-for services, such as our [API](#) and our [embedded map plug-in](#).

Looking ahead: how we'll maximize our impact

While we work to overcome these bureaucratic challenges, we've continually got our eye on next steps for the Open Apparel Registry (OAR).

Here are some of the goals we're setting for ourselves:

- **85 - 90% of facilities in the apparel sector are in the OAR database and allocated an OAR ID.** We're continually asked how many apparel facilities there are globally, or what percentage of the overall total is currently represented in the OAR. While we've yet to see a robust figure based on thorough research, we've made some research-based assumptions, extrapolated out from the current number of OAR facilities and set ourselves a target of mapping 200,000 facilities by 2025. (We'll be sharing more details about how we reached that figure in the future - [stay tuned](#) for updates!)
- **Maintain and strengthen the OAR's neutrality and position as a pre-competitive tool delivering a public good.** We built the OAR for the benefit of the entire sector, and we'll be continually checking in with our community through interviews and surveys over the next five years to ensure that we're delivering on that promise.
- **The OAR business model is operational and sustains the OAR's existing footprint.** Maintaining the OAR tool and managing and stewarding data on behalf of the apparel sector is expensive. We need to ensure a long life for the OAR and to maintain access to the data in perpetuity, as the industry has come to rely on it.
- **Expand the range of paid-for services we offer.** We're looking at a variety of options to enhance how users engage with the OAR including data analysis, and data cleaning and maintenance services for those organizations who need it. While we're committed to ensuring that any organization can access better quality name and address information and OAR IDs for free, offering a range of more sophisticated or convenient ways of interacting with the tool to users who are able and willing to pay is a key part of how we plan to ensure our ongoing financial sustainability.

CIVIL SOCIETY CASE STUDY

WAGEINDICATOR

WageIndicator works extensively to track changes in apparel supply chains, including facility closures and relocations. The process of collecting and managing supply chain data was manual and time consuming. Making use of the data in the Open Apparel Registry (OAR) enables WageIndicator to crosscheck facility name and address information more efficiently.

In addition to this, WageIndicator was able to make use of OAR data as part of its work during the COVID-19 pandemic. By cross-checking against OAR Contributor data for the facilities surveyed in WageIndicator's COVID-19 Impact Survey, the organization was able to work on comparative studies looking at whether facilities that produce for global brands have changed working conditions during the pandemic.

Through its partnerships with local trade unions, this data has been used to more effectively advocate on behalf of workers at both the factory level and the national level.

“Using OAR data as part of our COVID-19 Impact Survey has enabled trade unions in 42 different factories to advocate for the rights of workers during the COVID-19 pandemic”


WageIndicator.org

WageIndicator is a non-profit organization which gathers and presents data on wages and working conditions in 140 different countries worldwide. By sharing the structured data on wages and working conditions openly, WageIndicator's research enables comparative studies, and helps workers to fairly assess their factories and advocate for better working conditions and living wages.

CIVIL SOCIETY CASE STUDY

MICROFINANCE OPPORTUNITIES

MFO was looking to connect data collected directly from workers at factories in Bangladesh with global fashion brands. Through the brand supplier lists available on the OAR, MFO was able to link these workers to the brands whose products they were working on.

The OAR has contributed to MFO collating better and higher quality data that is more useful and engaging to a wide range of stakeholders.

“Using data found on the OAR, MFO has so far been able to link over 700 workers to global brands sourcing from about 200 factories in Bangladesh.”



Through its Garment Worker Diaries initiative, Microfinance Opportunities (MFO) collects regular, credible data on the work hours, income, expenses, and financial tool use of workers in the global apparel and textile supply chain in producing countries. The objective of the project is to have the data inform government policy decisions, collective bargaining, and factory and brand initiatives related to improving the lives of garment workers.

Working beyond apparel

Since the day we launched the Open Apparel Registry (OAR), we've received flattering interest from other sectors about expanding our approach beyond apparel.

While the OAR was built specifically in response to a set of needs in the apparel sector, the tool's technology is not. We recognize that supply chains do not exist in silos and problems surrounding data quality and a lack of open data exist across multiple sectors. We're continually exploring how to expand our approach. Keep an eye out for updates, or [contact the team](#) if you're interested in learning more.



6. GET INVOLVED

Get involved:
how to contribute
to the OAR's growth

Get involved

As we draw this report to a close, it's important to emphasise a common thread through these pieces: the success of the Open Apparel Registry (OAR) begins and ends with the strength of the community behind it.

Without data contributions from that community, or the range of organizations using OAR data to create meaningful change in apparel supply chains, there would be no story to tell.

So how can you get involved? Here are some simple, free ways, to help drive the OAR into our next phase of development:

- [Explore the tool](#)
- [Contribute a supplier list](#)
- Lead work at a factory? [Claim your facility profile](#) and add additional data points
- Worked with our data and got a great story to tell? [Get in touch!](#) We'd love to hear how you've been making use of the OAR
- Stay up to date with all our developments: [sign up for OAR news](#), or follow us on social media:

 [@openapparelreg](#)

 [@openapparelregistry](#)

 [@open-apparel-registry](#)

"As a free, public registry, the OAR has become a vital tool for corporate transparency and accountability, for us, and partners. It brings immediate benefits to our work. For instance, we use the OAR to track back the abuse reported to us in apparel factories to ensure brands are informed of violations in their supply chains, and to seek accountability – due diligence to end abuse, and remedy for those harmed. We see enormous gains for the entire industry. Human rights advocates inside companies, civil society, investors, and governments can use it to help drive the change needed to achieve sustainability and respect for human rights throughout apparel supply chains"

PHIL BLOOMER
EXECUTIVE DIRECTOR, BUSINESS AND HUMAN RIGHTS
RESOURCES CENTRE

 CIVIL SOCIETY

Together,
we will untangle
supply chains.

