

Building a Reliable Analytics Team With Independent Talent

How Upwork maintains data security and raises productivity by 3x with a distributed team

Foreword

In mid-2015, Elance-oDesk rebranded to Upwork. During the change, business teams formed and grew, which significantly increased the volume of strategic business questions we needed to answer as an analytics team. At the same time, the number of operational data requests was also increasing at a rapid rate.

Adding to the changes, our analysts wanted to spend more time partnering with the business. This meant spending less time manually generating weekly dashboards and answering operational data requests. Supporting the analysts' needs required transitioning from our existing Excel-based analytics to a world of business intelligence (BI) tools. The challenge was making this transition while continuing to deliver for the business.

Our small analytics team struggled to keep up with increased demands. However, it was difficult to find the skills we needed in the Bay Area, where we're located. Within Upwork, engineering and creative were using hybrid teams with tremendous success—but we had our concerns. How could we maintain security with a hybrid team accessing our data and working on our systems? How could we ensure high work quality and productivity with a team spread across the globe?

This ebook shows you how we did it. You'll see the processes, protocols, and tools we created to build a hybrid team. You'll also see that with remote help, our team can better serve our business partners to help further the company's growth.



Adam Rhuberg

Senior Director
Analytics at Upwork

What Wasn't Working

In 2015, we scrambled to keep up. Our small data team struggled as the company's rebranding created a surge in data requests and strategic business questions.



01

Analysts spent more time pulling data than performing high-value analysis



02

Analytics were Excel-based, and analysts spent most of their week just keeping the weekly dashboards up-to-date



03

The business needed to ask an analyst for every data request, as there were no self-service tools



04

Limited resources prevented us from hiring more analysts

Our Small and Mighty Team

Our six-person data team operated under a predominantly flat structure. Each analyst supported an entire department. We pushed to meet all requests, but that often left us scrambling.



The Benefits of a Hybrid Solution

We knew that hybrid teams were a growing trend. And within Upwork, the engineering and creative departments were using Upwork Enterprise to build hybrid teams with great success. After evaluating the use of a hybrid team, we knew it was the right choice.

With a hybrid team, employees perform the core work, and independent professionals help with project-based work requiring specialized skills.

A hybrid team could significantly improve our:

01

FLEXIBLE CAPACITY

We could quickly ramp talent up and down to meet volume fluctuations.

02

RESPONSIVENESS

With team members located in multiple time zones, we could answer urgent requests 24/7.

03

COST-EFFECTIVENESS

With a greater range of talent options, we could contract the ideal skill levels needed to complete the work.

04

ACCESS TO SPECIALIZED SKILLS

As we transitioned from Excel, we could fill talent gaps by contracting specialists to help us develop in SQL and certain BI tools.

Despite Hybrid-Team Advantages, We Still Had Concerns...

Concerns ranged from maintaining our work quality to keeping data secure. Here were our top concerns and how we resolved them.

How can we shorten ramp-up times?

It takes time for outside talent to become familiar with our internal systems, processes, and lingo.

Solution:

Create a playbook, or general information guide

Every new team member receives a templated playbook at the start of a project. The playbook provides new members with information about the project and Upwork's internal processes. Having this information at their fingertips also enables talent to resolve common questions on their own. In turn, talent can optimize their time and avoid work delays. The staff saves time by handling fewer admin tasks such as fixing login issues and answering systems questions.

What's in Upwork's playbook?

- Background on Upwork
- Introduction to internal terminology
- Team member names and contact information
- Upwork data-warehouse and star-schema basics
- Expected project results
- Additional documentation related to a project

How Can We Keep Data and Systems Secure With a Remote Team?

With a hybrid team came two new security challenges: talent working remotely, and dynamic teams whose members change as project needs change.

Solution:

Categorize data access by project



To help prevent digital eavesdropping or data theft, talent receives VPN access before work begins. All projects are categorized into one of five levels, according to potential security risk. Appropriate data permissions and security processes are assigned to each risk level.



For higher-risk projects, we classify access levels by a project's stage: pre-project, mid-project, and post-project. Doing so ties access to expected deliverables. Just as important as onboarding tasks are offboarding tasks, which include deactivating permissions once the project is closed.

How Can We Handle Urgent Requests and Work Efficiently With a Global Team?

We started with just a few remote team members. The hybrid team soon grew to 10 people distributed across 7 countries and 4 continents.

Solution:

Thoughtfully structure a data operations team

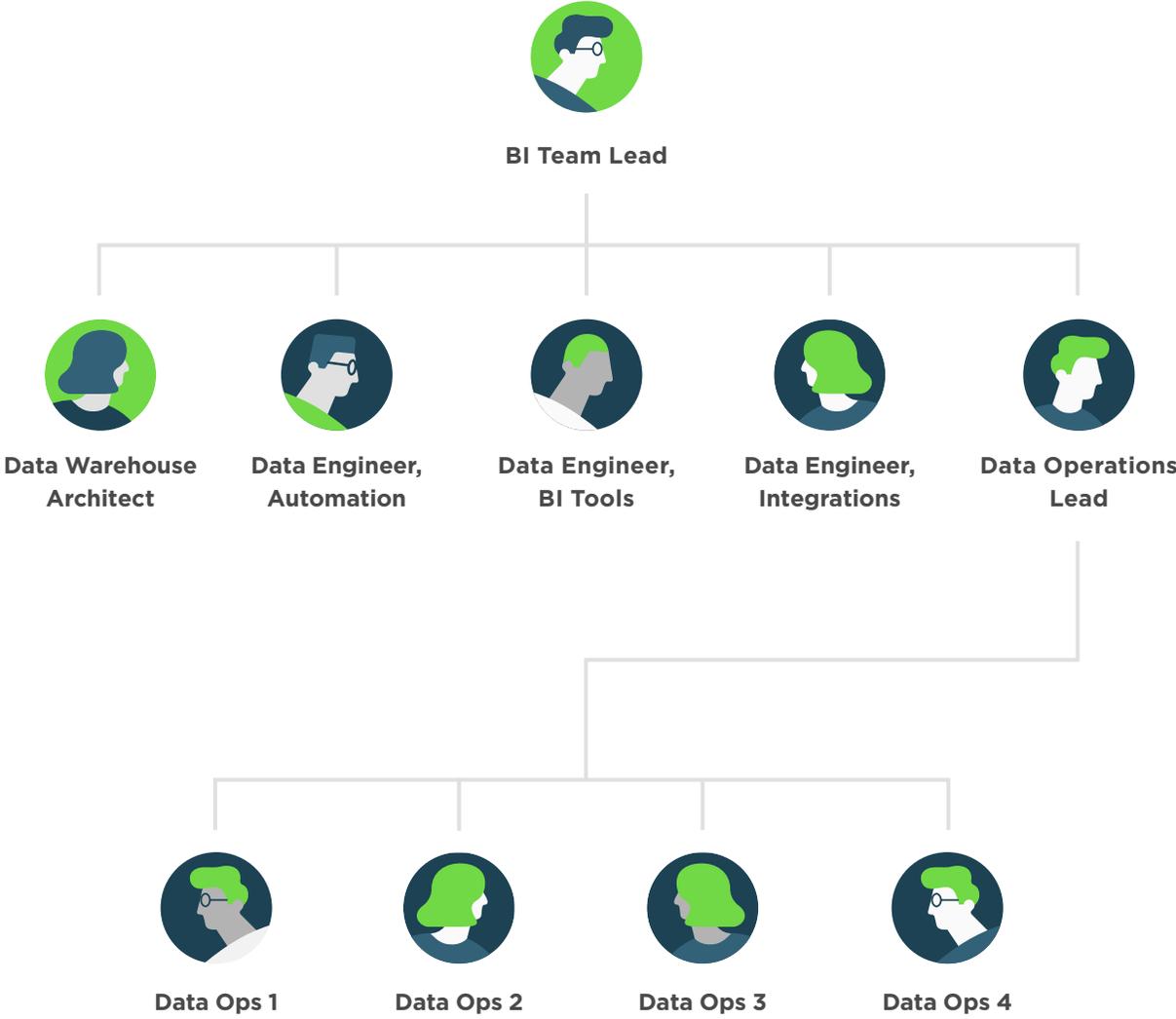
The current data ops team consists of one director, who is a full-time Upwork employee based in the Bay Area, one in-house data warehouse architect, and 8 remote team members. The structure enables us to balance workloads, streamline workflows, and centralize communications. Without this structure, each analyst would need to engage and work directly with their own team of independent talent.

Data ops team structure

- Director (analyst) serves as the face of the business
- Hybrid team members support analysts with projects such as building dashboards
- Director acts as a liaison between the team members and the business partners

The team structure:

- Full-Time Employees
- Independent Talent



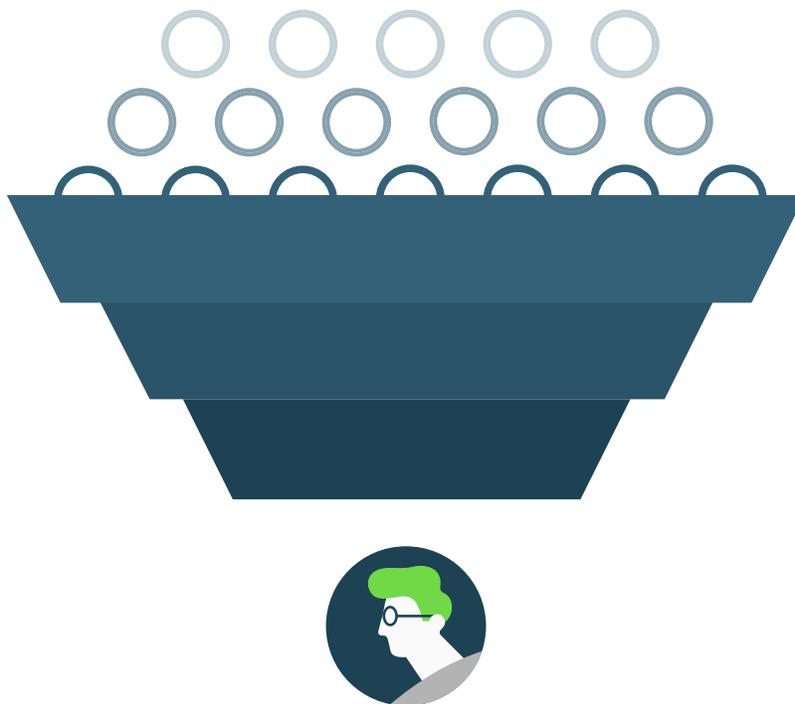
How Can We Maintain High-Quality Work With Independent Talent?

We questioned whether external talent would care about the work enough to produce at our high standards.

Solution:

Establish a solid vetting process

We source talent on Upwork Enterprise. After narrowing talent down to a short list, we contract each person for a small project. This enables us to look at their work quality, communication style, and how well they utilize the playbook. The talent who deliver the best work are contracted for larger projects.



How We Create a Strong, Reliable Team

By adhering to this process, we maintain a bench of reliable talent who consistently deliver high-quality work. In fact, years after completing their first project with us, many of the them remain part of the team.



01

SOURCE

Post a project on Upwork and vet proposals.



02

SHORTLIST

Create a short list of 5-10 qualified professionals.



03

TEST

Give each person a data team playbook and 5 small projects. The projects expose talent to different domains within the business and project management work. Look for motivation and ability to pick things up quickly.



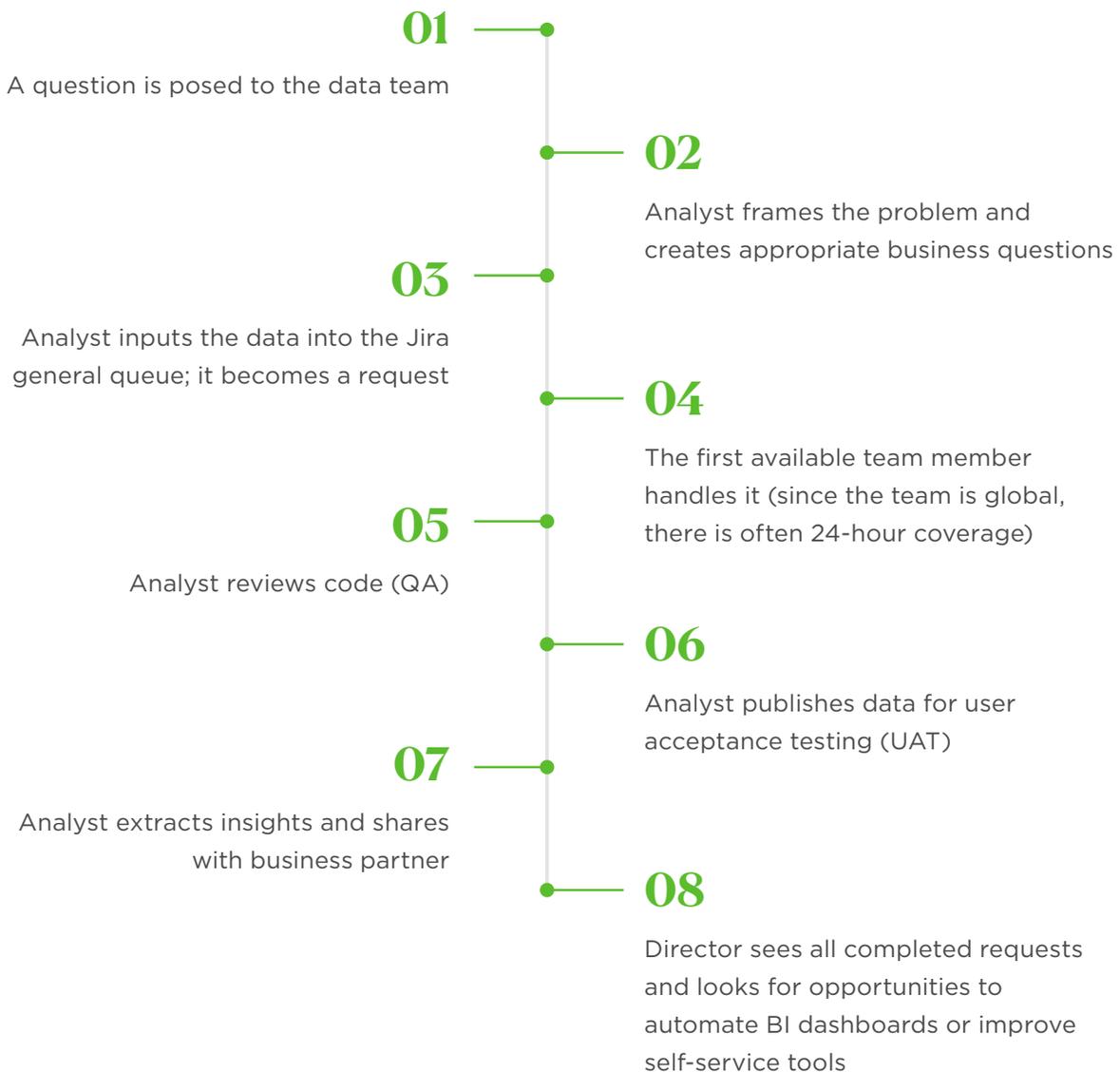
04

FILTER

Those who complete the projects well and show motivation are contracted for a larger project. Results are gauged, then those with the best work product are contracted for another project.

The Workflow: From Data Request to Delivery

To reduce the chances of miscommunication and delays, we use the following process to ensure all data requests are answered promptly.



The best part about this work structure is that it allows us to see the team’s work quality. This includes measuring SLA performances and tick reopen rates.

See the protocol we use to securely share data with a remote team (page 18).

Internal and External Tools Are Key to Project Success

Our internal tools:



DATA TEAM PLAYBOOK

Includes process and other project-related information to increase efficiency



UPWORK MESSAGES

Upwork's in-product messaging tool that centralizes and encrypts communication via SSL connections



VPN

Provides team members secure access to Upwork's data and data warehouse

Internal and External Tools Are Key to Project Success

Our external tools:



JIRA

An issue planning and tracking product where all data requests are entered



GOOGLE MEET

A video conferencing tool used when discussing projects



SQL TOOLS

For developing and managing databases



BI TOOLS

For building our own reporting and analysis tool to better generate operational data



GOOGLE DOCS

Cloud tool for sharing files and documenting requirements

The Results

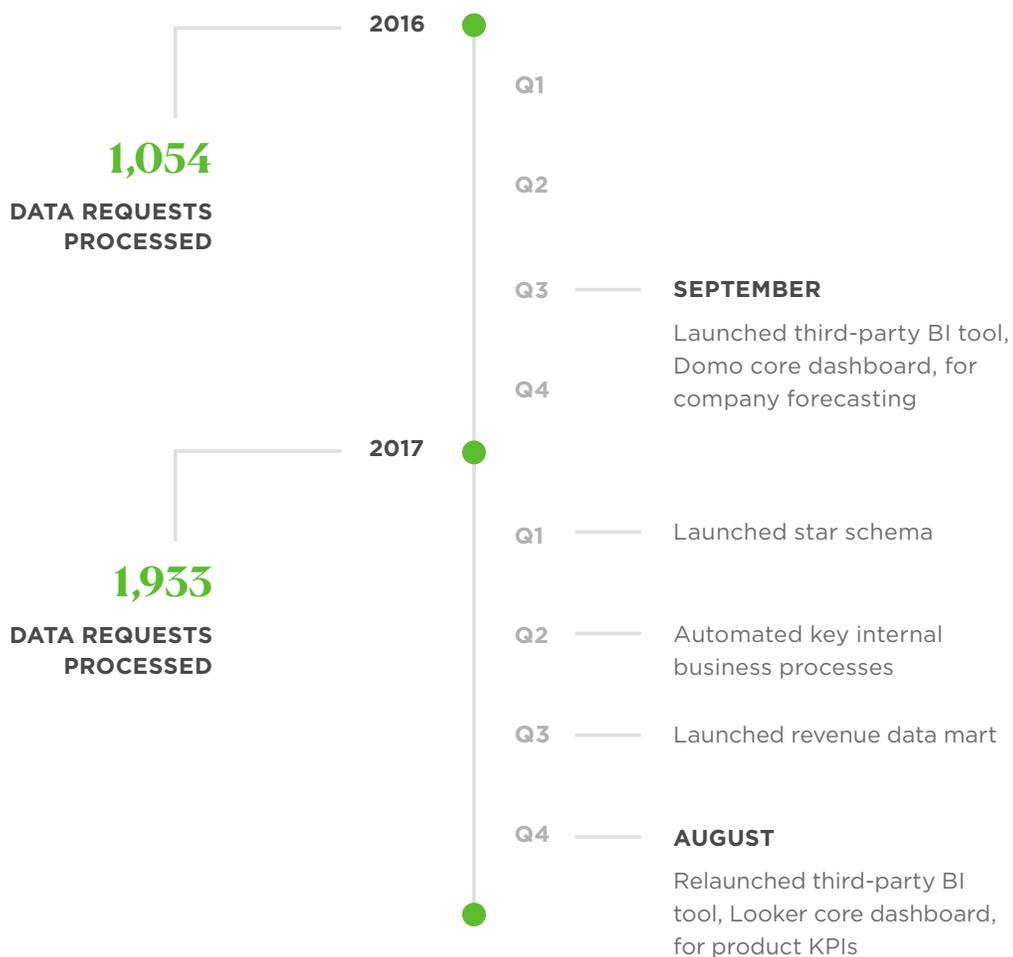
Within the first year, we nearly doubled our productivity and achieved critical milestones within our data infrastructure.

83% increase in volume

- 1,054 data requests processed in 2016
- 1,933 data requests processed in 2017
- In 2019, the number of data requests processed continues rising

2-3x rise in analysts' productivity

- Remote team's work frees analysts to focus on core tasks



Our Global Data Team Today





After putting the right vetting and security processes in place, we can confidently utilize independent professionals for nearly any type of data-based projects.

Adam Rhuberg, Senior Director, Analytics at Upwork

Our Protocol for Securely Sharing Data With a Remote Team

Many data teams are understandably concerned about sharing data with independent talent working remotely. This security protocol works well for us at Upwork.



STEP 1: Categorize data by risk level

Avoid the one-size-fits-all approach. Consider all the types of data that a independent talent may access. This helps you categorize the amount of risk your company may incur if the data becomes compromised. From highest to lowest risk, the categories we use are:

- **Sensitive**
This category is for the highest-risk data, such as personally identifiable information (PII).
- **Confidential**
If publicly disclosed, data in this category can affect operations.
- **Private**
Some data may not be meant for the public, but exposure wouldn't affect the company.
- **Proprietary**
At times, there's data you may want to make public on a limited basis because it may affect the company's competitive advantage.
- **Public**
This data bears no risk at all if publicly disclosed.



STEP 2: Regularly evaluate access

Security protocols require each team member work with talent to regularly evaluate their level of access. We want to ensure talent doesn't receive more access than required as project needs change.



STEP 3: Minimize data being copied locally

To prevent data from being copied without permission, the data is accessed and worked on within a tool. Talent logs into Domo or Looker to access and work on scripts.



STEP 4: Work on pre-production environments

While building models, data analysts work on pre-production environments. This enables talent to work on simulated, instead of live, data. For example, if we're working with social security numbers, the talent sees a simulated data set such as 123-45-6789. Then we can run models to see how the outputs work.



STEP 5: Log data accessed by independent talent

If talent has access to PII, we use monitoring and logging tools to understand what kind of data team members use, what queries they run, and the output from those queries. When accessing data, all applications and tools are on our VPN. This enables staff to see what the team members see. It also provides controls on what the talent can access. For added defense, our VPN has a multifactor configuration.

Q: Can You Build a Reliable Hybrid Data Team With Independent Talent?

A: Yes

In the beginning, we wondered if independent professionals could provide our team a safe and productive solution. With the right processes in place, the answer is a definitive yes. Our hybrid team increased analysts' capacity by up to 3x and helped us become more effective business partners

If you're considering a hybrid team, you already have two resources to help you succeed. You can use this ebook for ideas and Upwork Enterprise to source and engage the quality talent you need.

For more details, visit upwork.com/enterprise.

About Upwork Enterprise

Upwork Enterprise delivers customized and scalable talent sourcing and collaboration for companies leveraging blended workforces. By providing direct access to qualified talent, technology for engaging independent professionals and specialized agencies, expert sourcing, and classification compliance services, Upwork Enterprise enables companies to get high-quality work done, faster and more cost-effectively.