

How Beam uses Code-based Dashboards to Scale Analytics Products

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Data Council | 2024



Introductions

Team



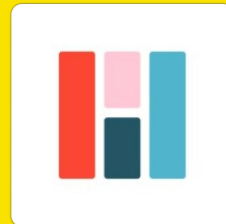
Lisa Snortheim
Sr Analyst | Lead Programmer
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Wallace Engberg
Analyst | Reporting Guru
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Emilio Tamez
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Tools

Beam is

...a **Software-as-a-Service (SaaS)** startup offering a robust cash assistance program administration platform to **State, Local, and Education (SLED)** customers.

Application, Intake, Survey

Case Management, Workflows

Eligibility, Verification & Security

Payments

Reporting

Understanding **customers' needs**

Reporting use cases

- **Financial accounting**
- **Impact reporting**
- **Organizing and coordinating**
- **Planning and evaluating**
- **Communicating progress and performance**

Application, Intake, Survey

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Reporting

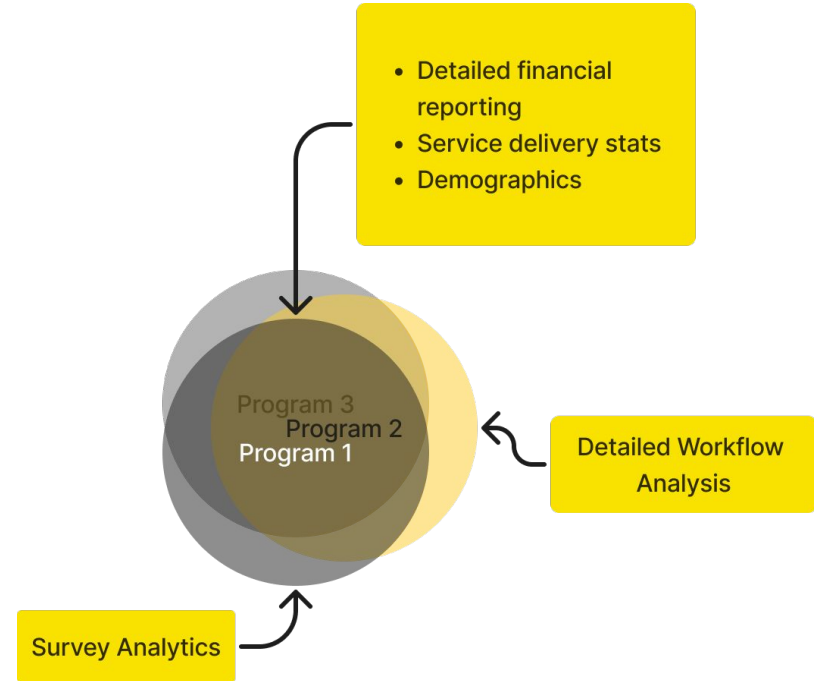
Customer Problems

- **Ad hoc reporting** and data pulls are **stressful**, while regular **reports** are **burdensome**
- **Fragmented tools** for data storage, analysis, and reporting results in **no source of truth across programs or departments**, collaboration happens by coordinating different contributors/ions in an **excel file, over email**
- Actors with different skill levels, objectives, and available time interacting with the same data, often towards common ends
- Federal, state, local, or non-government/profit create web of requirements
- Many programs are a little or a lot **unique**

Needs vary even w/in category

Within a program category, reporting needs are 80/20 general vs unique to the program

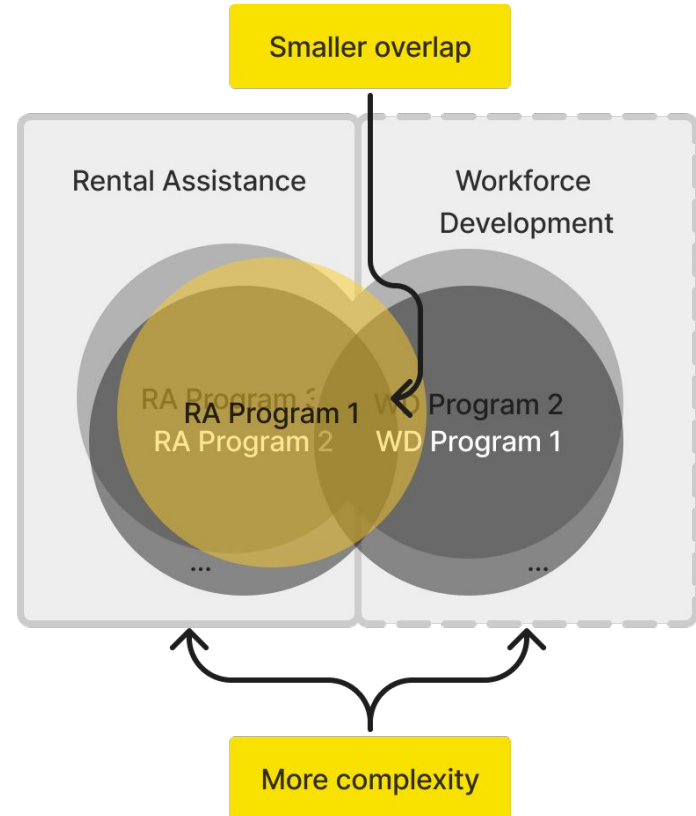
Caveat: lots of variance in collection and storage methods, sources, and formats



Example:
Rental Assistance

Needs vary across categories

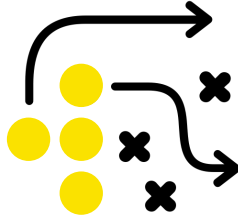
Between program categories, reporting needs are 80/20 unique vs general



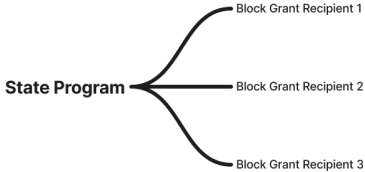
Other GovTech needs



Security, Privacy,
and Observability

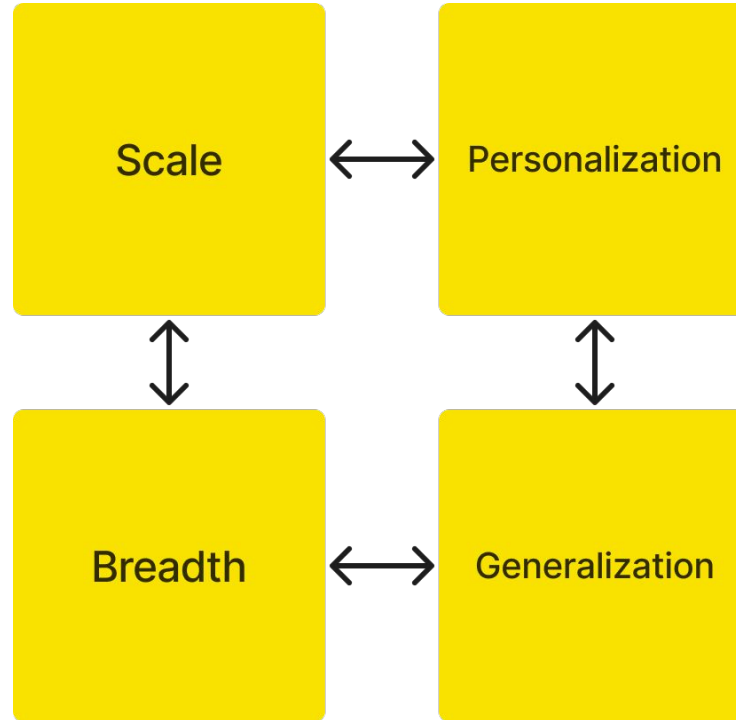


Sector-wide
initiatives to
standardize/codify
gov data



Multi-tenant
structures are
common

Requirements are in tension



**Scalable, but not
customizable**

OR

**Customizable, but
laborious to scale**

Our solution uses
dashboards-as-code

What is dashboards-as-code

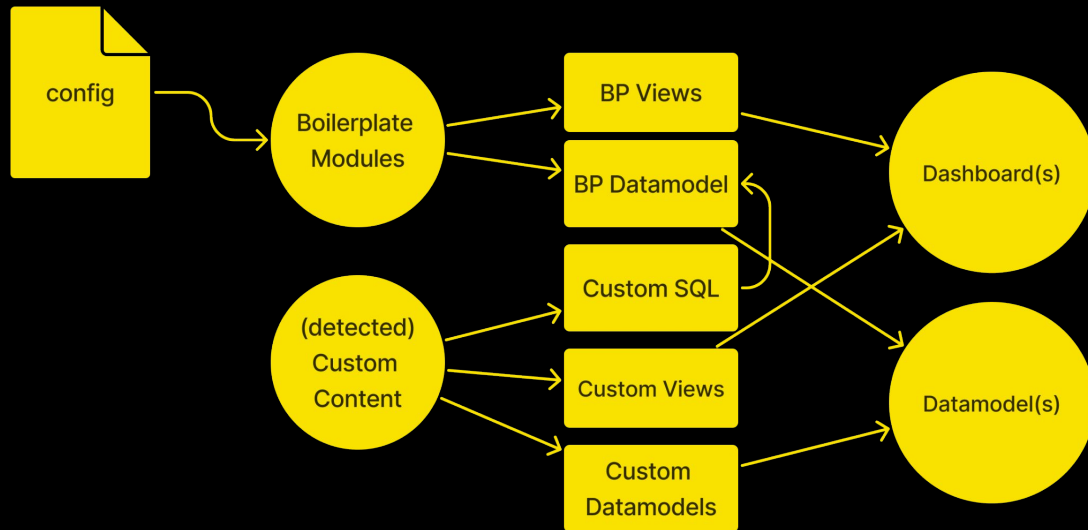
- Dashboards-as-code framework: create and manage dashboards by generating or editing code, such as JSON or YAML*



- Variously specialized, integrated, cloud-agnostic, priced, and featured

Let's see it in action!

How the Solution Works



- Python scripts generate YAML files and a credential file programmatically
- In this demo, the resources deploy automatically
- Custom code stacked on top of boilerplate code deployed after

Demo

Customer Profile

- Multi-tenant: parent is a funding source supporting multiple programs
- Children are running slightly different programs, but reporting is similar
- Parent needs a custom view for financial forecasting

What you'll see:

- Pared down experience
- Set up reports from scratch
- Customize parent dashboard

Benefits



Scalable



Customizable



Secure



Flexibly
programmatic



Fast + Easy



Iterable



Collaborative



Self-service

Thank You!
