

Bill DeRouchey

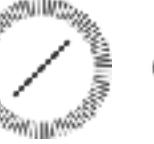
Designer, information architect, design leader

September 2022

25+ Years in Design and UX

Focusing on systems, patterns, connections, structures, and language.

Product Designer
Information Architect
Design Director
Creative Director
Interaction Designer
Writer

2022 (contract)	 COMPASS
2018–2021	 zendesk
2012–2018	 GE Digital
2010–2012	 SIMPLE
2004–2010	 ziba
2007–2010	 IXDA <small>INTERACTION DESIGN ASSOCIATION</small>



Led experience at a banking startup



Designed interfaces for physical products



Co-chaired a design conference



Directed design for jet engine maintenance



Presented on design topics at 30+ events

Three Stories



GE Digital

Design Director
2012–2018



Zendesk

Principal Designer
2018–2021



Compass Realty

Experience Architect
2022 (contract)

Three Stories, One Theme

To deliver a coherent experience,
you have to act coherently.

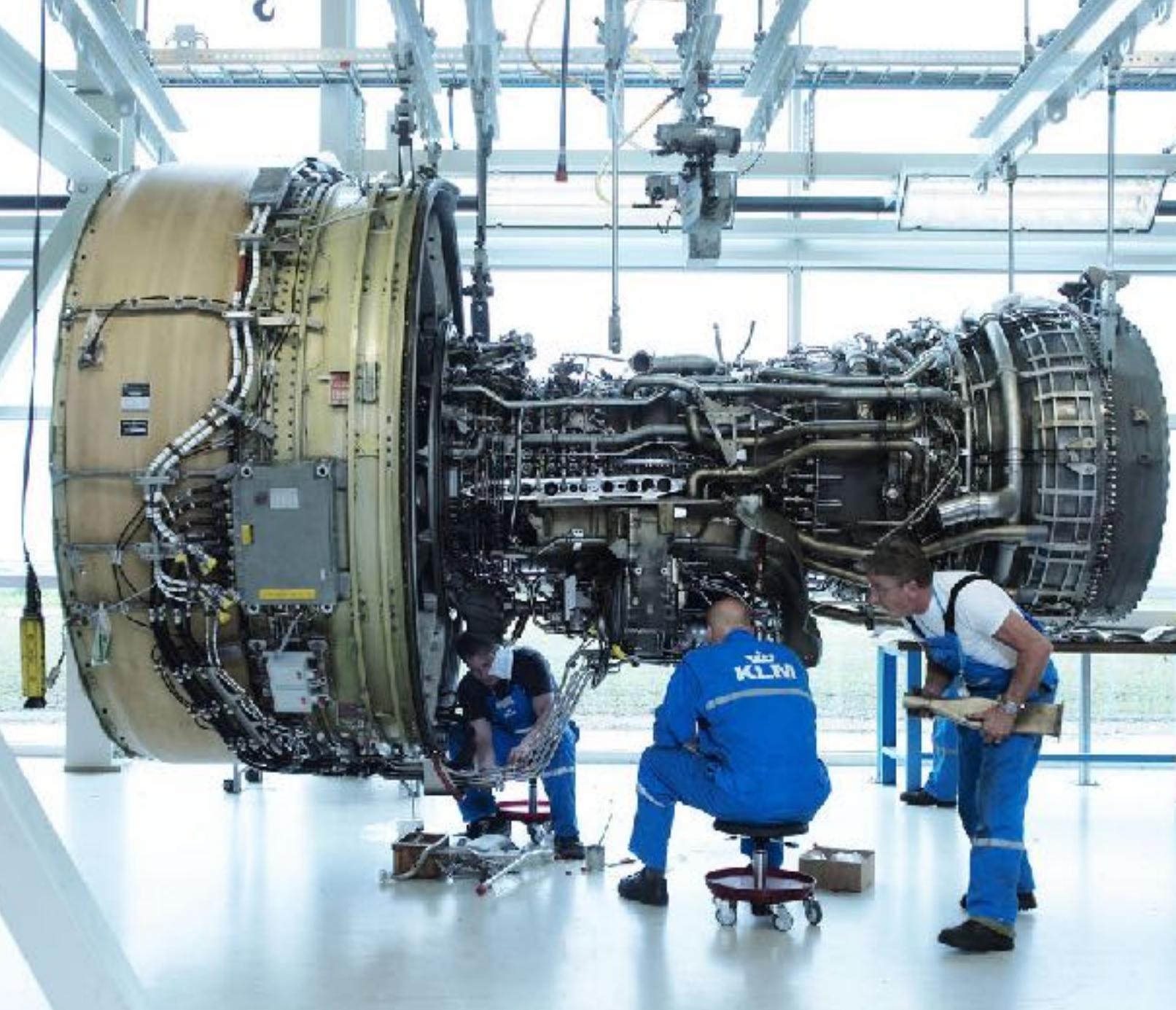


GE Digital
Jet Engine Management

About

Historic corporate giant with the mission to build the Industrial Internet.

Aimed to use sensor data to better predict engine maintenance in wind farms, power plants, locomotives, jet engines, and other things that spin.



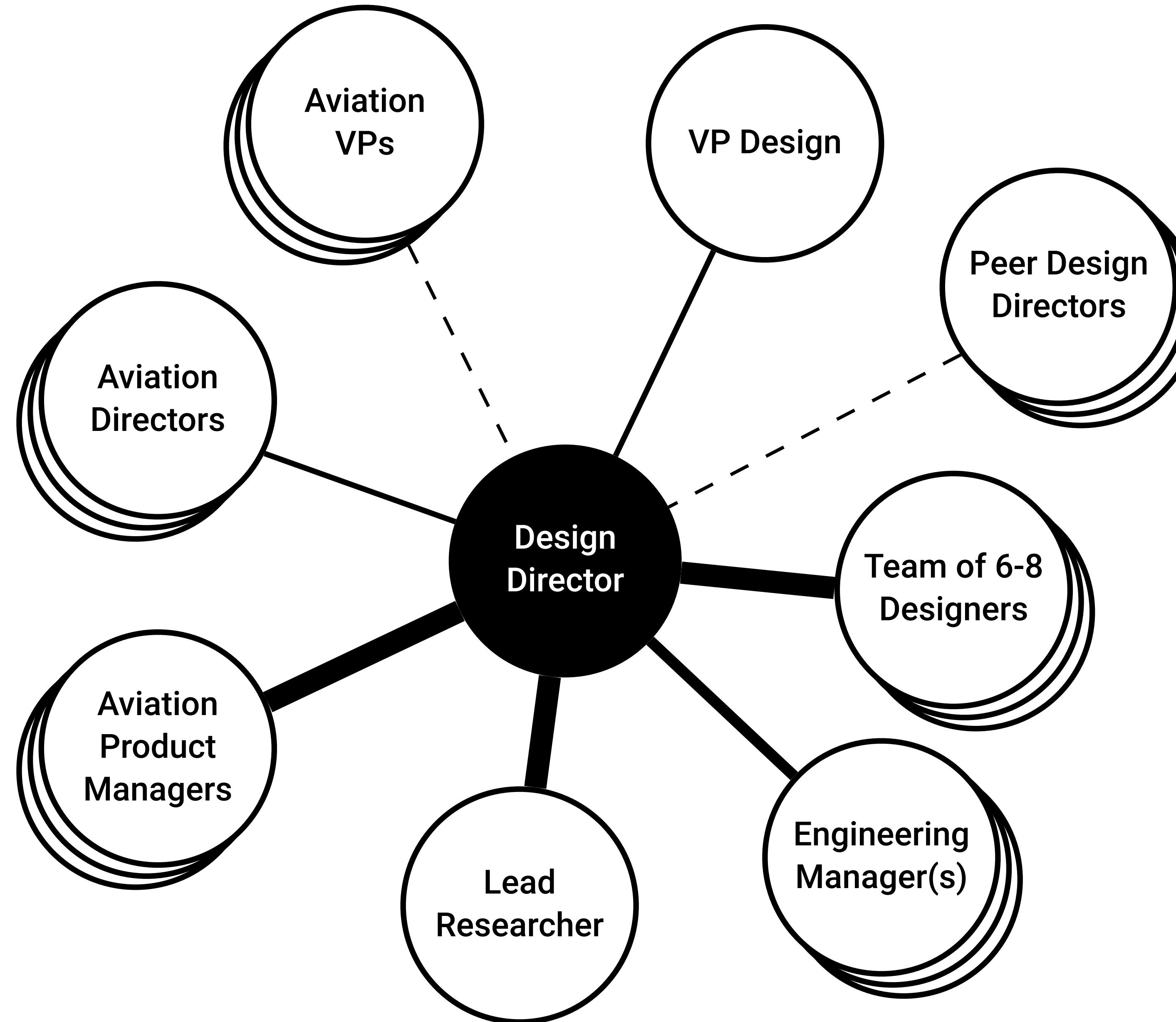
My Role

Help **GE Aviation engineers** use data to
diagnose engine issues faster to better
help **Airlines** maintain aircraft availability

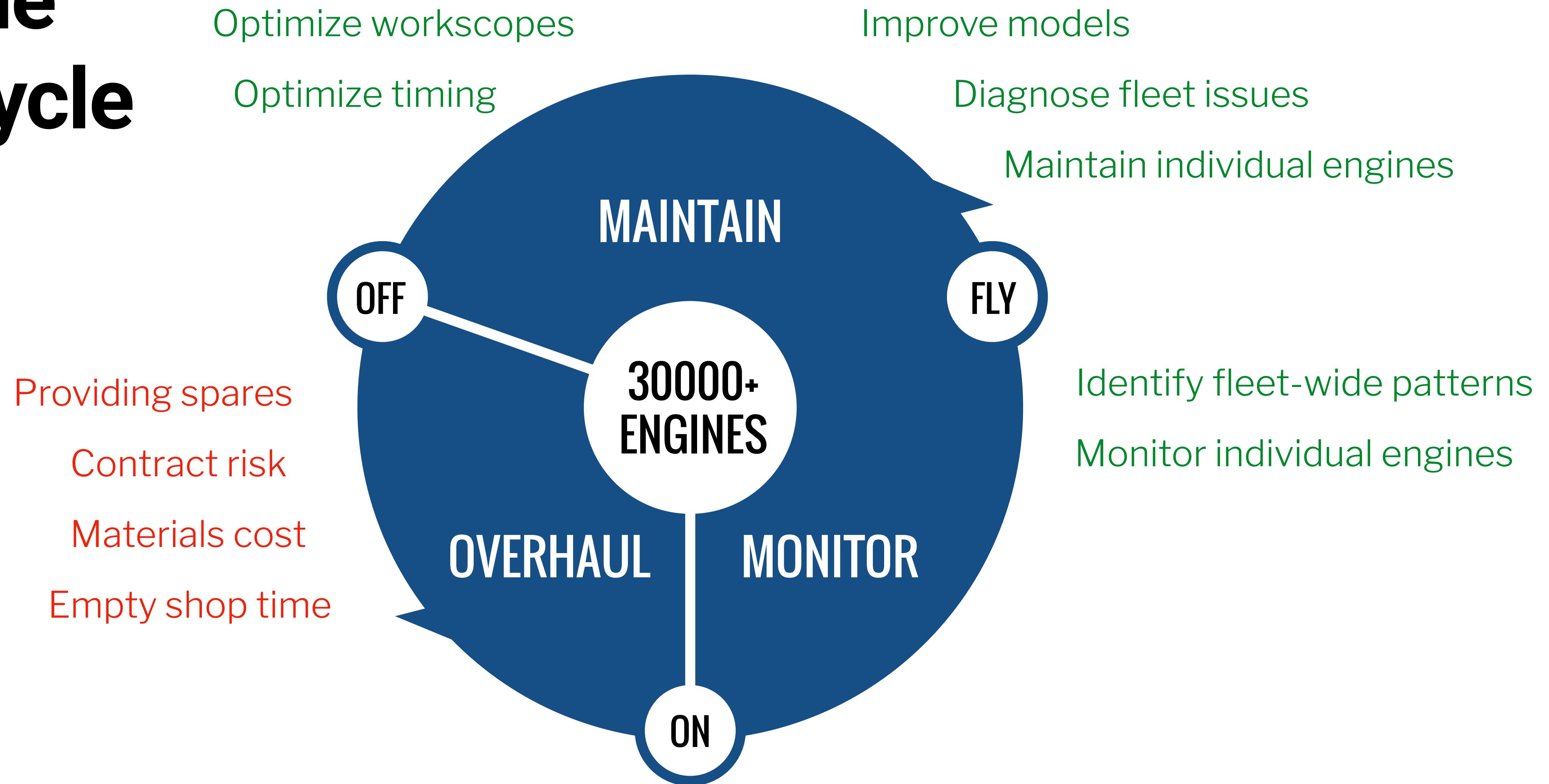
Directed 20+ projects/products for GE Aviation



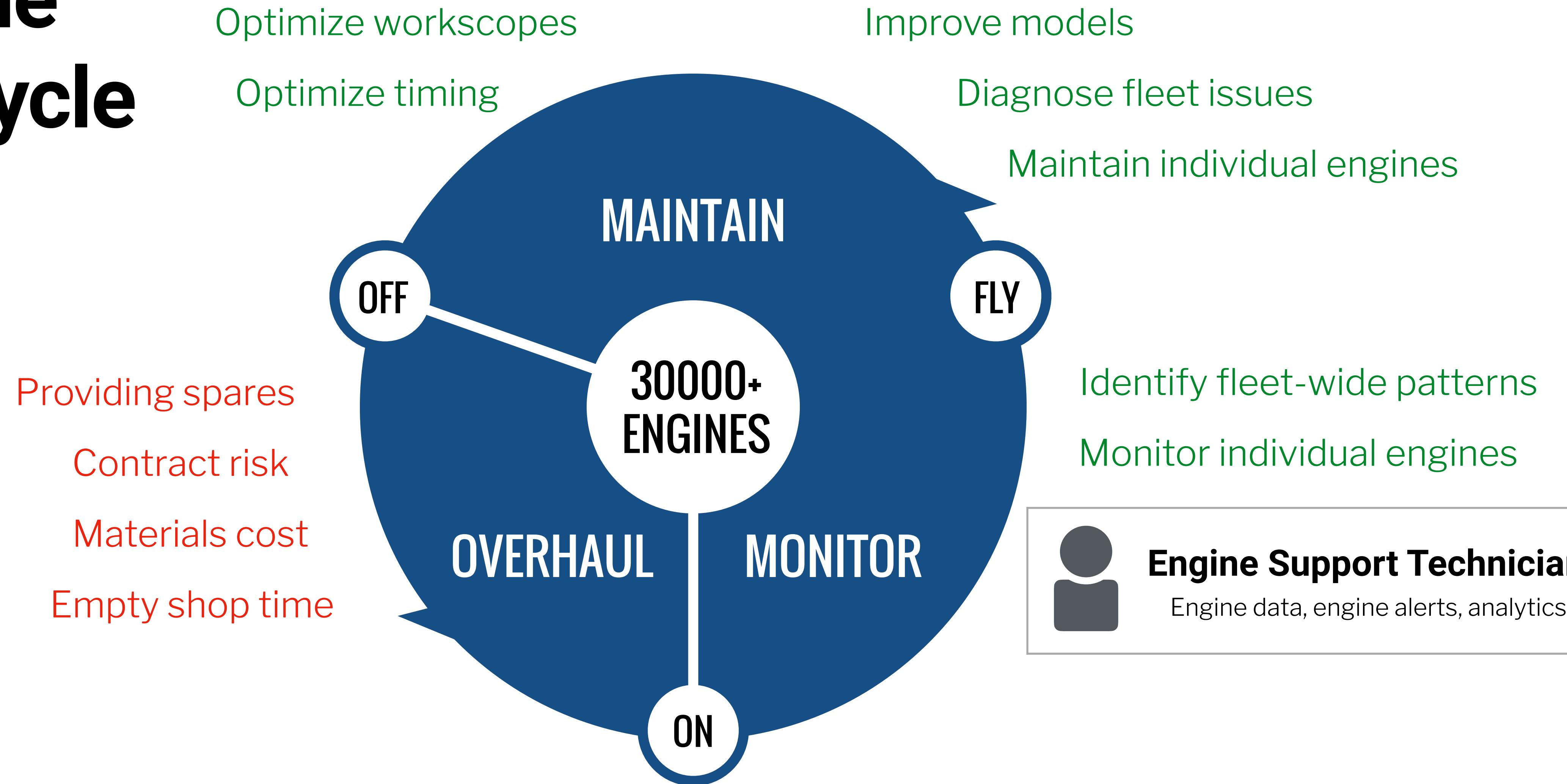
Partners



Engine Lifecycle



Engine Lifecycle



Led Research Programs



GE Aviation Fleet Support outside Cincinnati, Ohio



Engine Support, Fleet Managers, Propulsion Engineers

Key Insight

Talk was all about alerts

“The alert queue.” “This is how we’ve been doing it for 20 years.” The ancient system required them to think this way.

Behavior was about engines

They immediately accessed contextual data about the engine in order to diagnose whether a problem existed.

Key Insight



**Engine
Alerts**

**Aircraft
Availability**

Airlines

Focusing on alerts created a disconnect with customer airlines.
We needed to shift how they thought and acted.

Key Insight



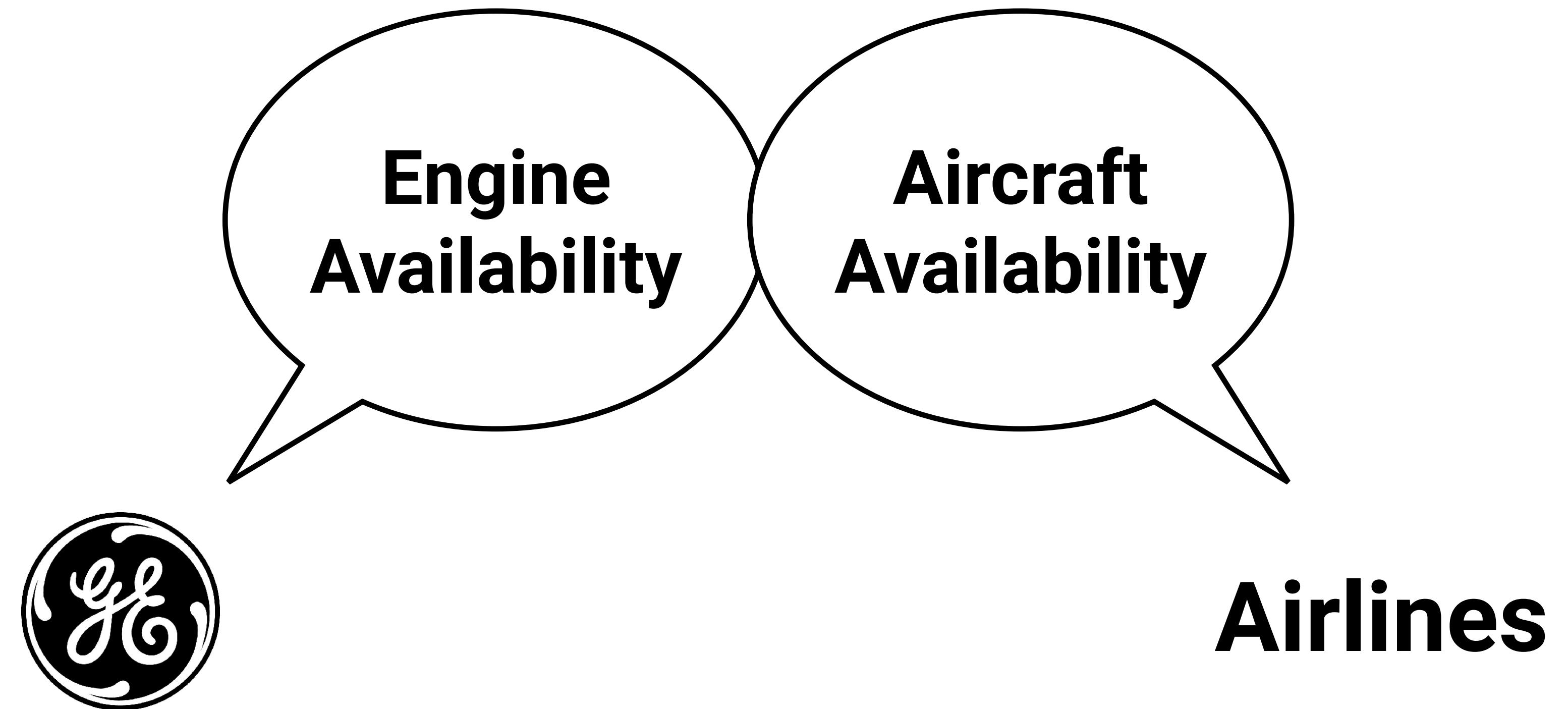
**Engine
Health**

**Aircraft
Availability**

Airlines

Focusing on alerts created a disconnect with customer airlines.
We needed to shift how they thought and acted.

Key Insight



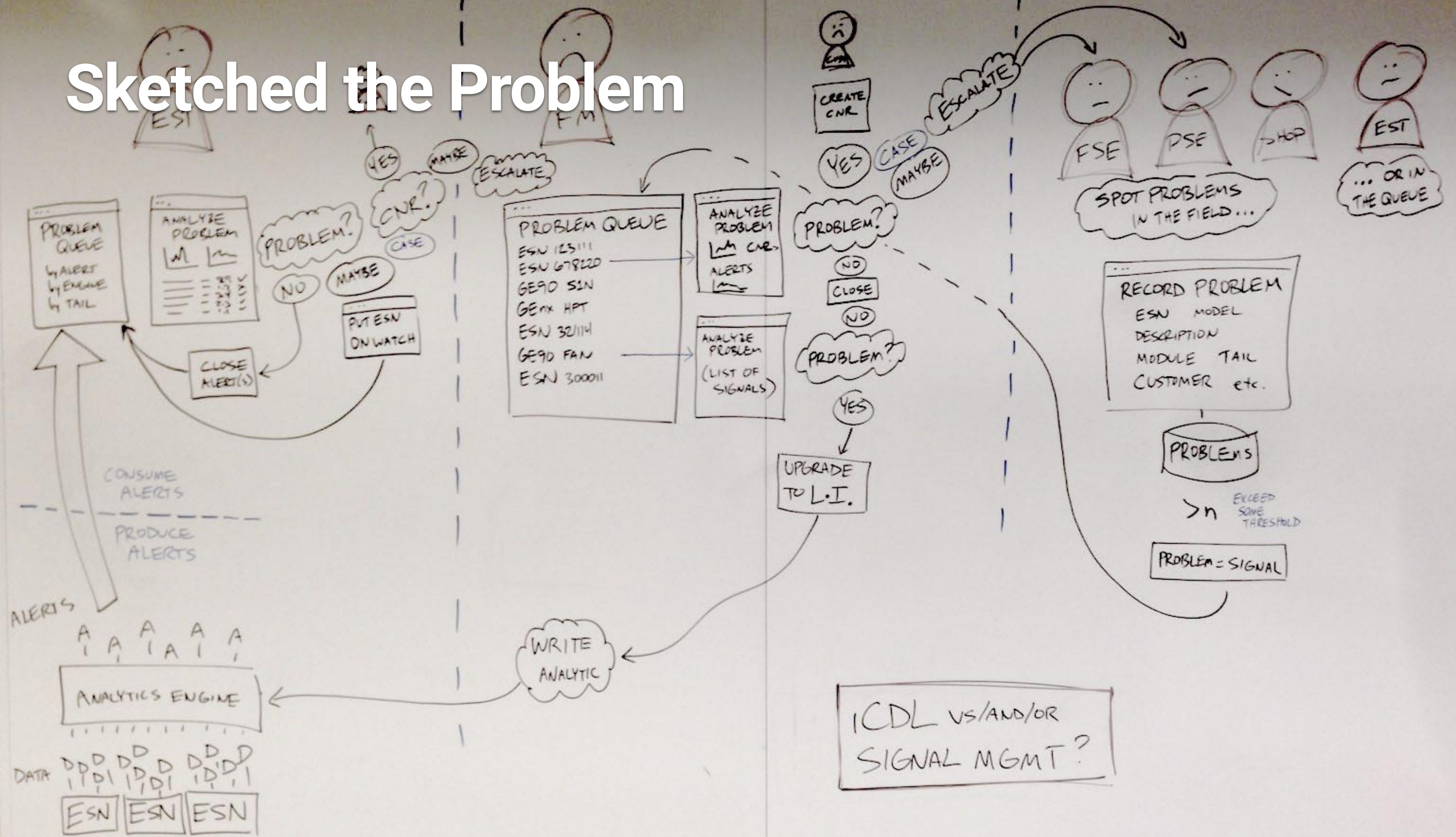
Focusing on alerts created a disconnect with customer airlines.
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Key Insight



Focusing on alerts created a disconnect with customer airlines.
We needed to shift how they thought and acted.

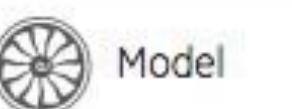
Sketched the Problem



[Alerts](#) [Cases](#) [Engines](#)

Family

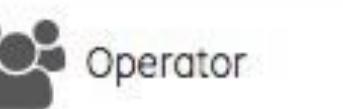
1



Model



Aircraft



Operator



All

All

All

All

2

LanChile Open

Alert Status Open Severity All Type All Alert Date Last 7 days Flight Date Last 7 days

Classification 2 selected

4

[Engines](#) [Alerts](#) [Faults & Exceeds](#)

Sort By Severity

Export

3

706963 LanChile
CF6-80C2F CC-CWY
Position 2 B767-300ER 6 Alerts
NEWEST ALERT
an hour ago
25 Apr 2018 - 14:04 UTC

5

706741 LanChile
CF6-80C2F LV-CDQ
Position 2 B767-300ER 2 Alerts
NEWEST ALERT
5 days ago
20 Apr 2018 - 08:12 UTC**706961** LanChile
CF6-80C2F CC-CZZ
Position 2 B767-300ER 2 Alerts
NEWEST ALERT
4 days ago
21 Apr 2018 - 17:57 UTC**706725** LanChile
CF6-80C2F CC-CWF
Position 2 B767-300ER 2 Alerts
NEWEST ALERT
5 days ago
20 Apr 2018 - 14:34 UTC**707118** LanChile
CF6-80C2F N420LA
Position 1 B767-300ER 1 Alert
NEWEST ALERT
7 days ago
18 Apr 2018 - 15:41 UTC**704644** LanChile
CF6-80C2F CC-CWF
Position 1 B767-300ER 1 Alert
NEWEST ALERT
5 days ago
20 Apr 2018 - 14:33 UTC

Fleet Monitor

We created a system that encouraged flexibility.

- 1 Filter by engine type if you have a technical role.
- 2 Or by airline if you have a customer-facing role.
- 3 Default the view to group alerts by engine.
- 4 Filter and sort flexibly.
- 5 Prioritize engines with the most and/or severe alerts.



6 ESN 706741

Aircraft Information

Aircraft Type	B767-300ER
Tail Number	LV-CDQ
Operator	LanChile
Operator Code	LAN



7

Engine Information

ESN	706741
Engine Series	CF6-80C2B6F
Engine Position	2
Last Installed	14 Apr 2011
Last Removed	Not Available
Sister Engine	704729
Engine Status	Installed

8

Times and Cycles

CSN	8371 cycles
TSN	45673 hours
CSSV	3890 cycles
TSSV	24219 hours
CSI	Not Available
TSI	Not Available

9

Last 90 Days

Alerts Cases Trends History Faults & Exceeds

Status Open ▾ Severity All ▾ Type All ▾ Sort By Severity ▾ Alert Date Last 7 days ▾ Flight Date Last 7 days ▾ Classification 2 selected ▾

10

MEDIUM OPEN ALL_ALL_CF6-80C2F_GRADUAL_INCREASE_DEGT
5 days ago 20 Apr 2018 - 08:12 UTC

MEDIUM OPEN ALL_ALL_CF6-80C2F_GRADUAL_INCREASE_DEGT
5 days ago 20 Apr 2018 - 08:12 UTC

MEDIUM OPEN ALL_ALL_CF6-80C2F_SUDDEN_INCREASE_DEGT
5 days ago 20 Apr 2018 - 08:12 UTC

▼ Trends

Alerting Parameters

Detected By: SEA
Fault Confidence: NA
Flight Phase: CRUISE
Parameter: NA
Parameter Value: NA
SEA007828

Fleet Monitor

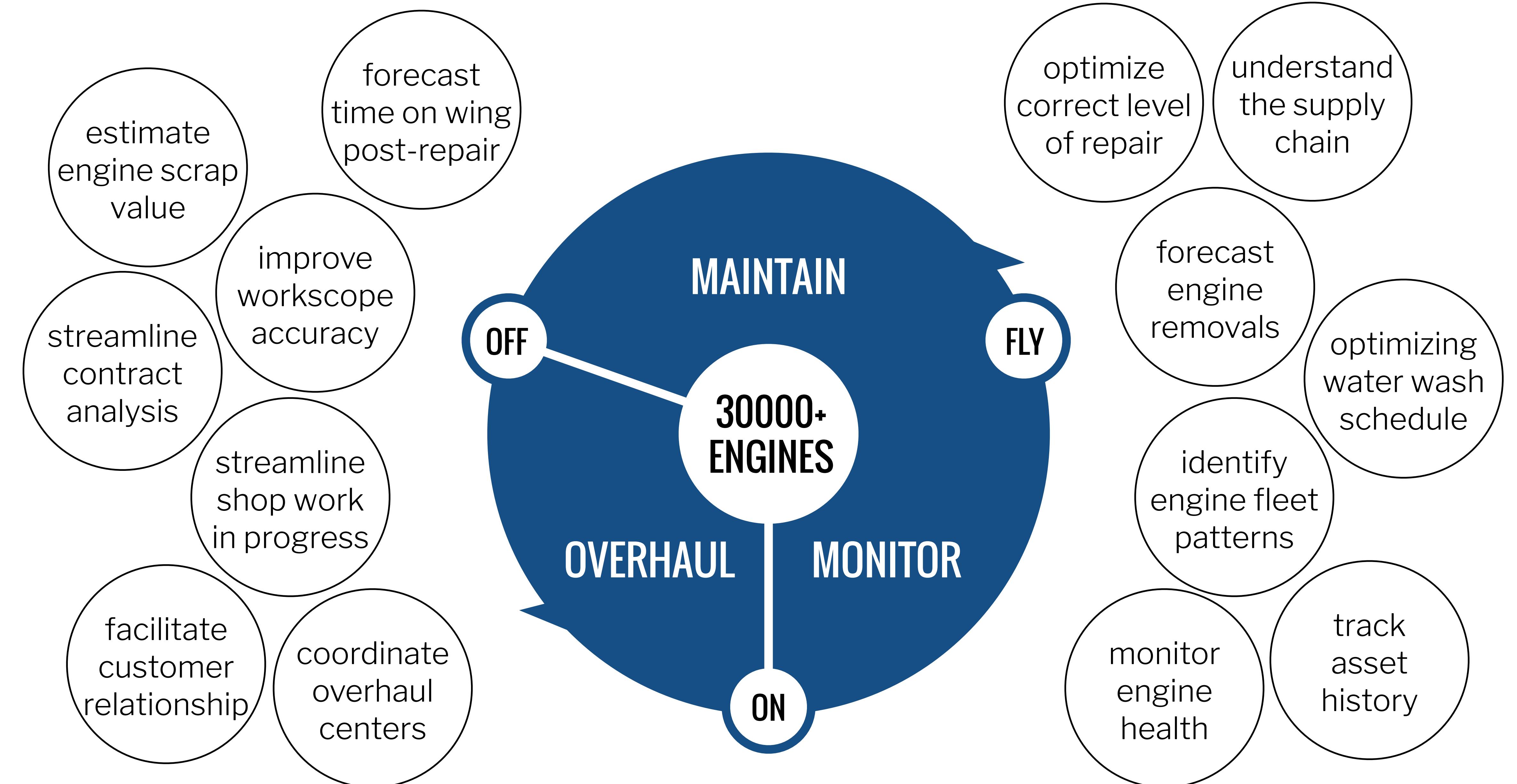
We presented the engine as a whole.

- 6 Focus analysis on the engine, not the alerts.
- 7 Introduce the concept of viewing by aircraft.
- 8 Provide access to the sister engine to compare operational performance.
- 9 Incorporate related data from other systems.
- 10 View all currently active alerts for this engine.

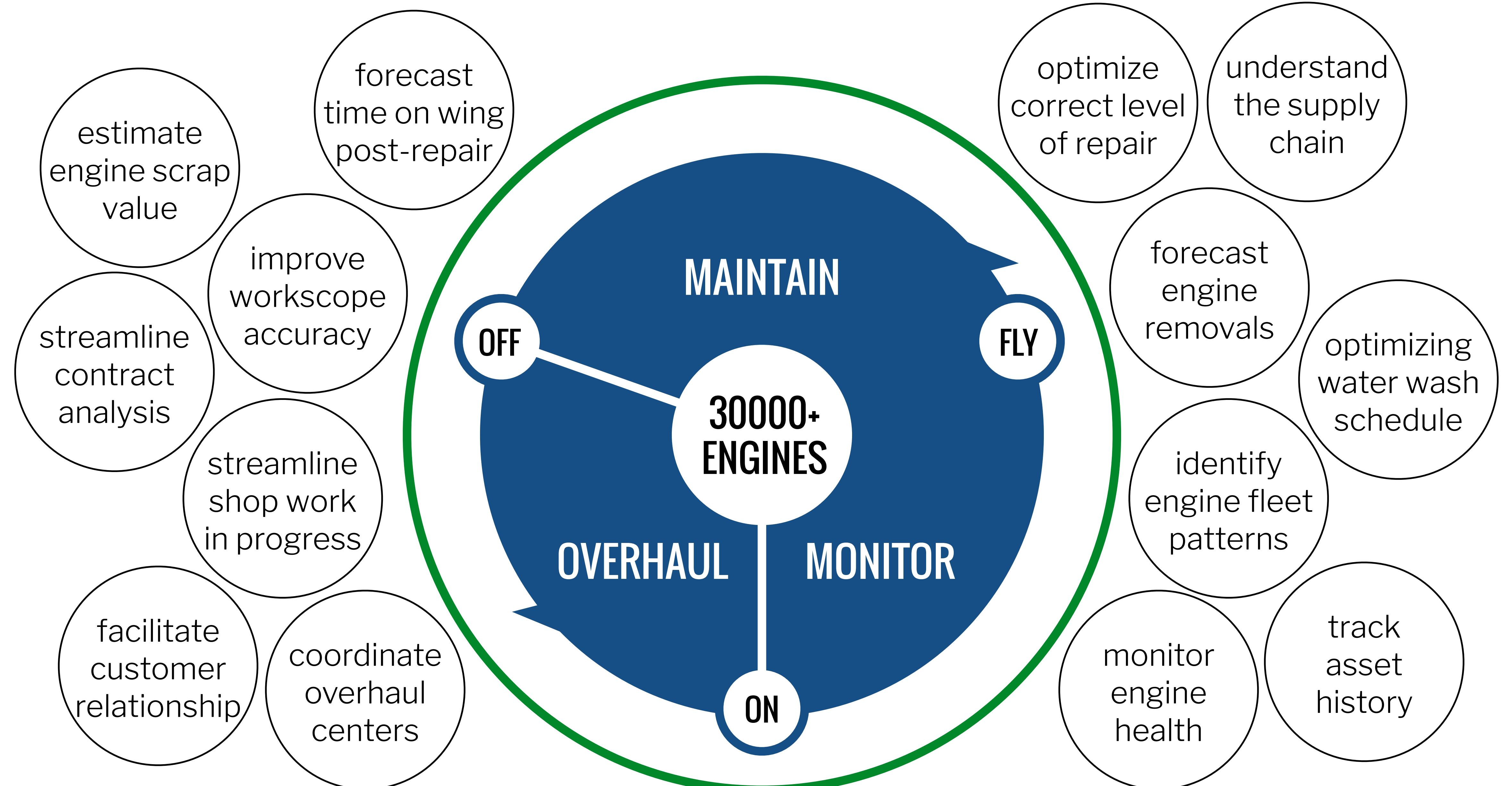
Outcomes

Evolved how GE Aviation conceived of monitoring, from alert queue to fleet health. They even rebranded the group to be Fleet Support.

Simpler system reduced dependence on decades of expertise, which allowed opening more support centers globally and reducing response time.



Built up a solid portfolio across the Aviation business...



...and the system started to sink in

Proposed a new approach to planning

From reactive planning...

A new collection of projects every year that address the current hot topics.

...to proactive planning

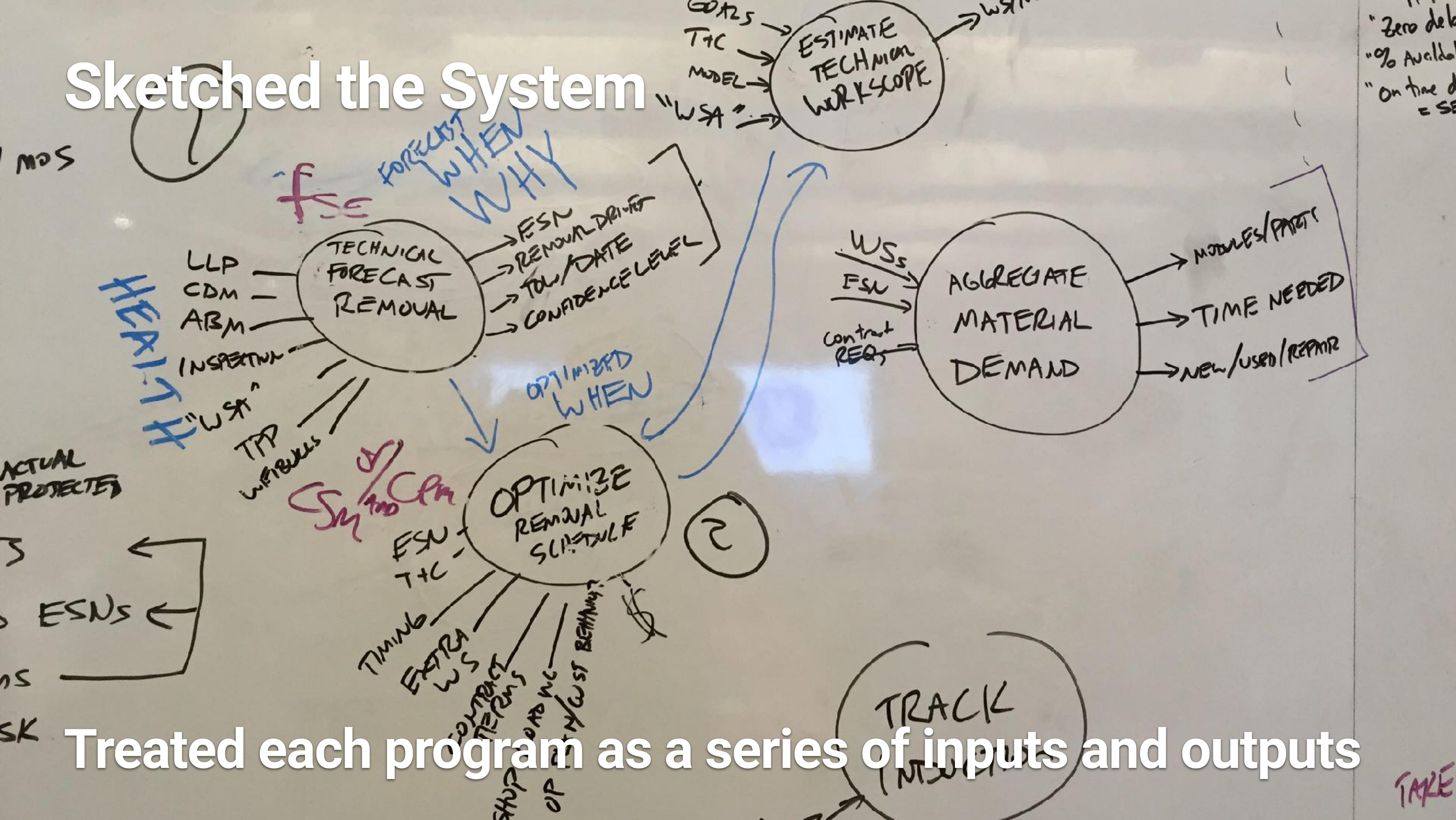
A systemic approach of how all these projects add up together to form a whole.



GE Aviation stakeholders in GE Design Center

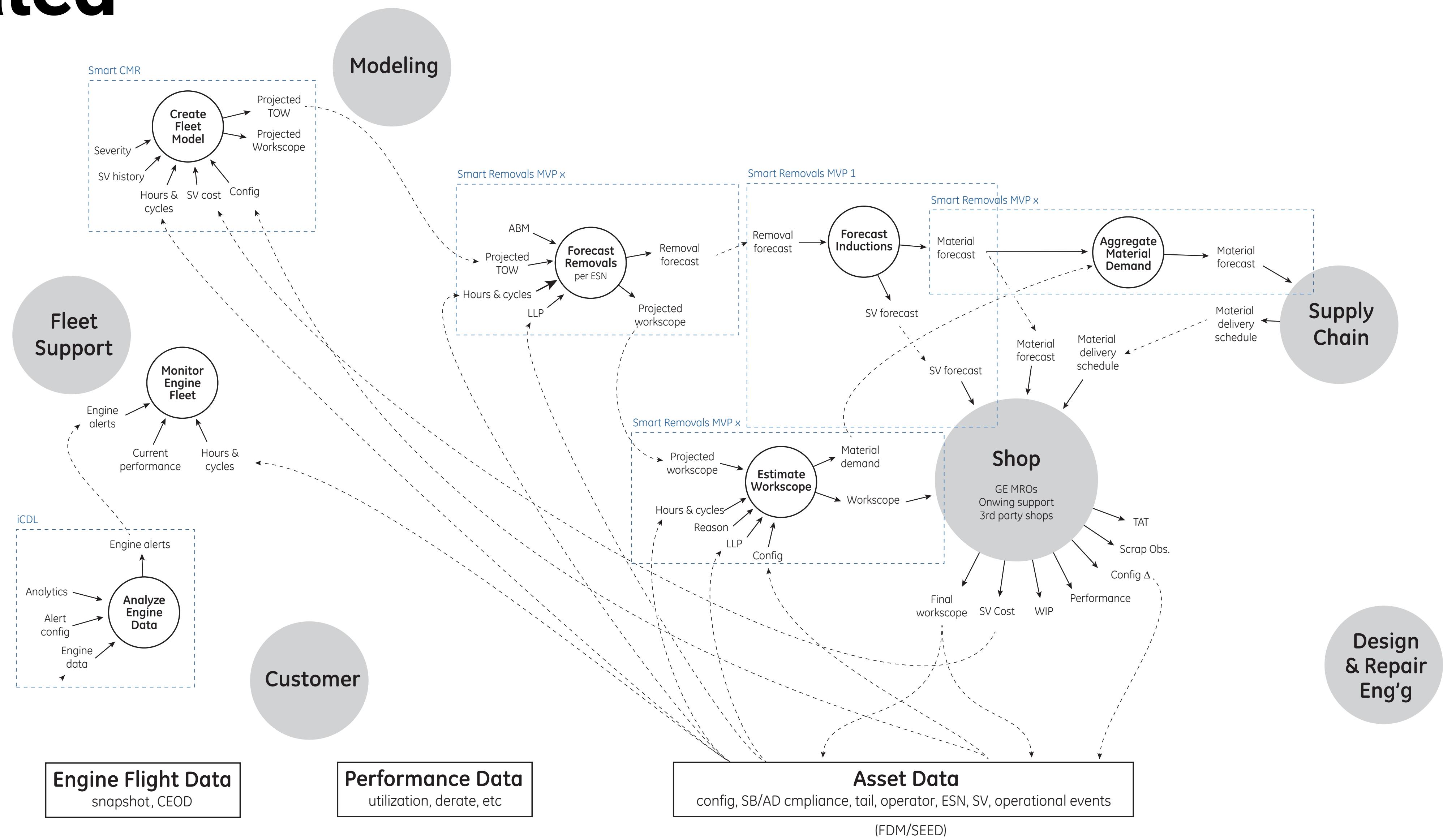
Stakeholder Workshops

Sketched the System

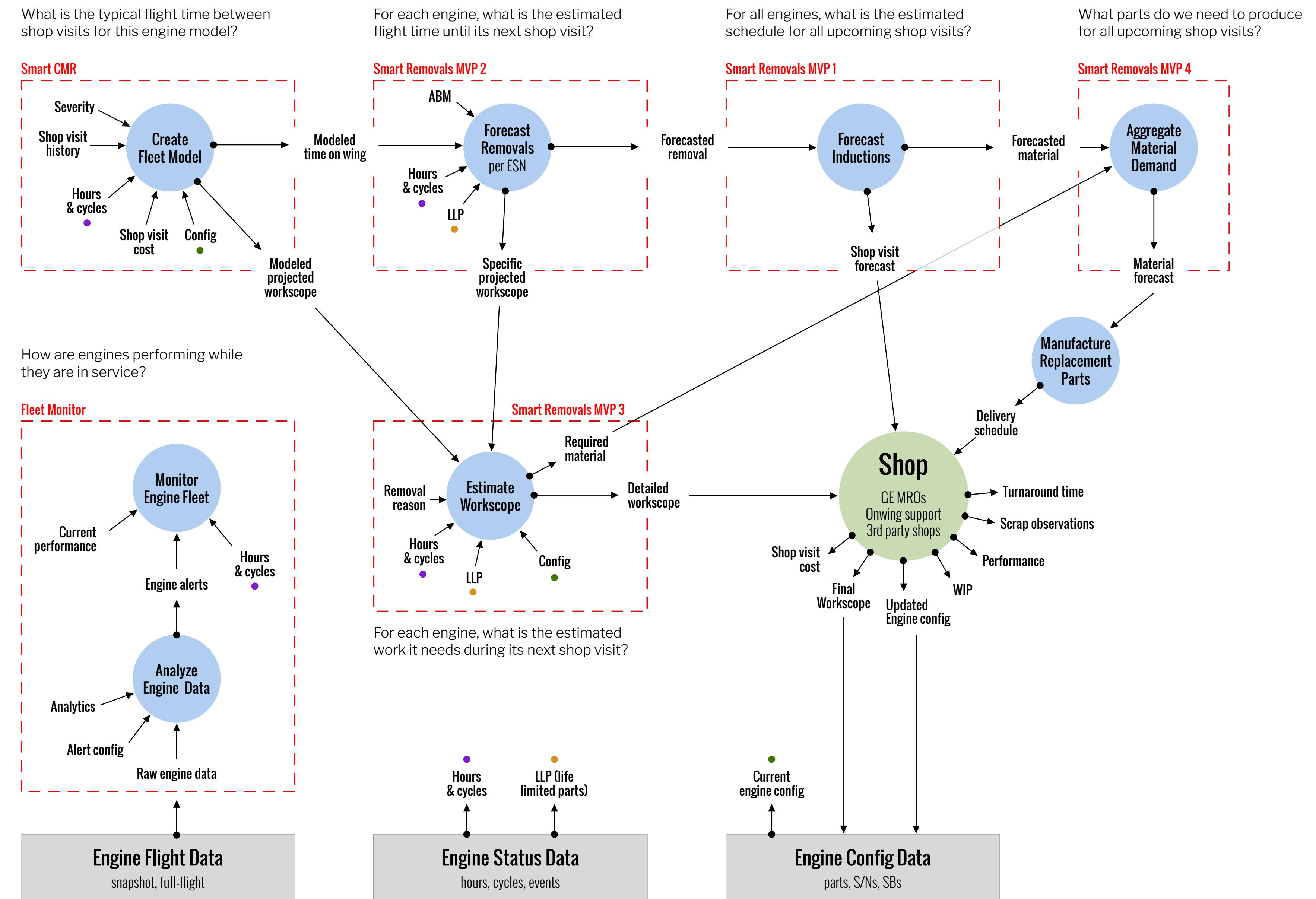


Treated each program as a series of inputs and outputs

Iterated

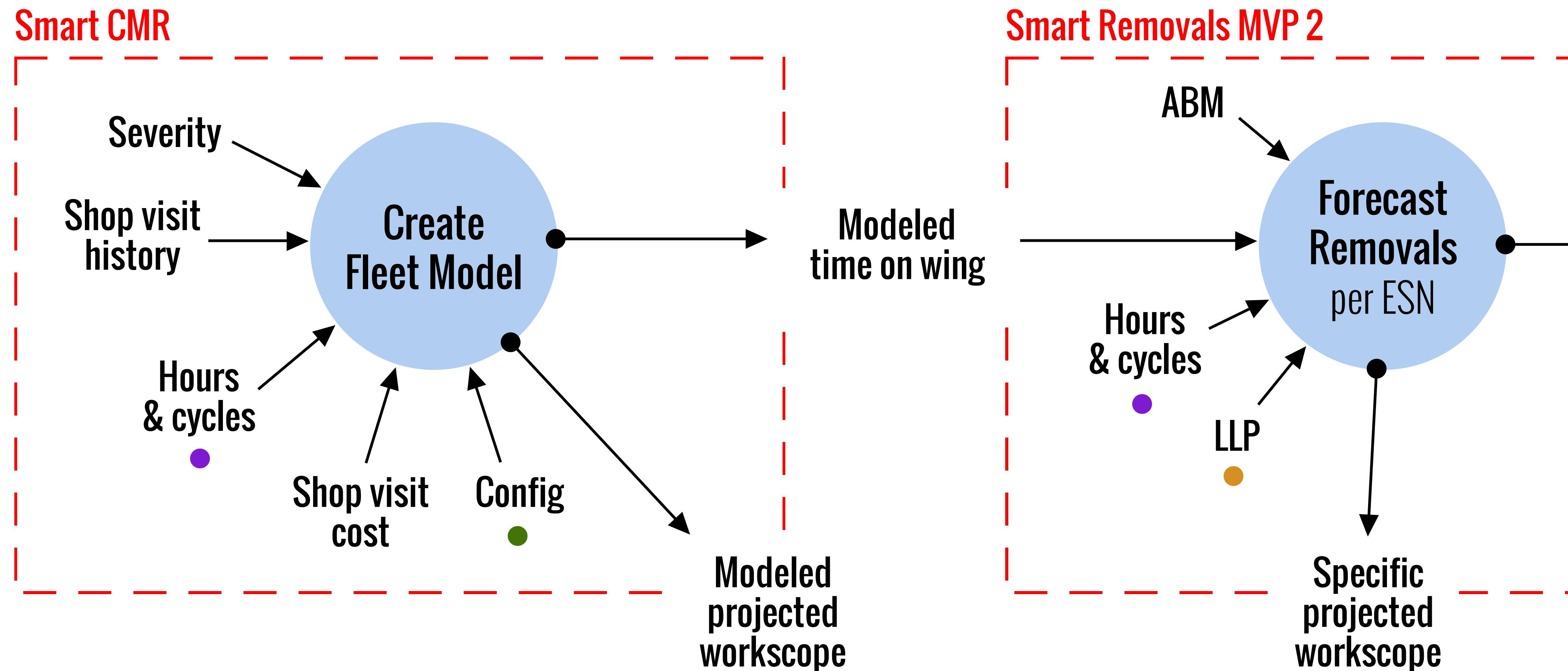


Distilled



What is the typical flight time between shop visits for this engine model?

For each engine, what is the estimated flight time until its next shop visit?

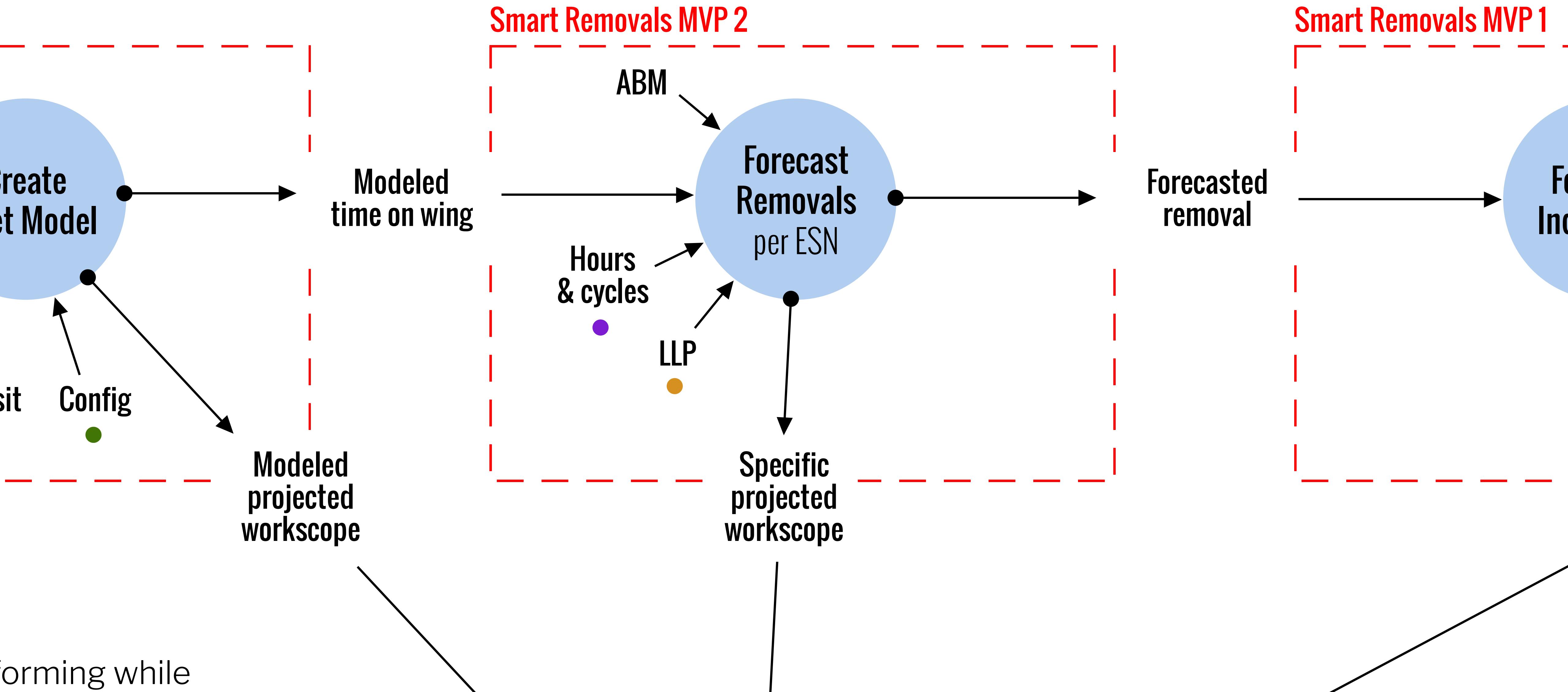


How are engines performing while

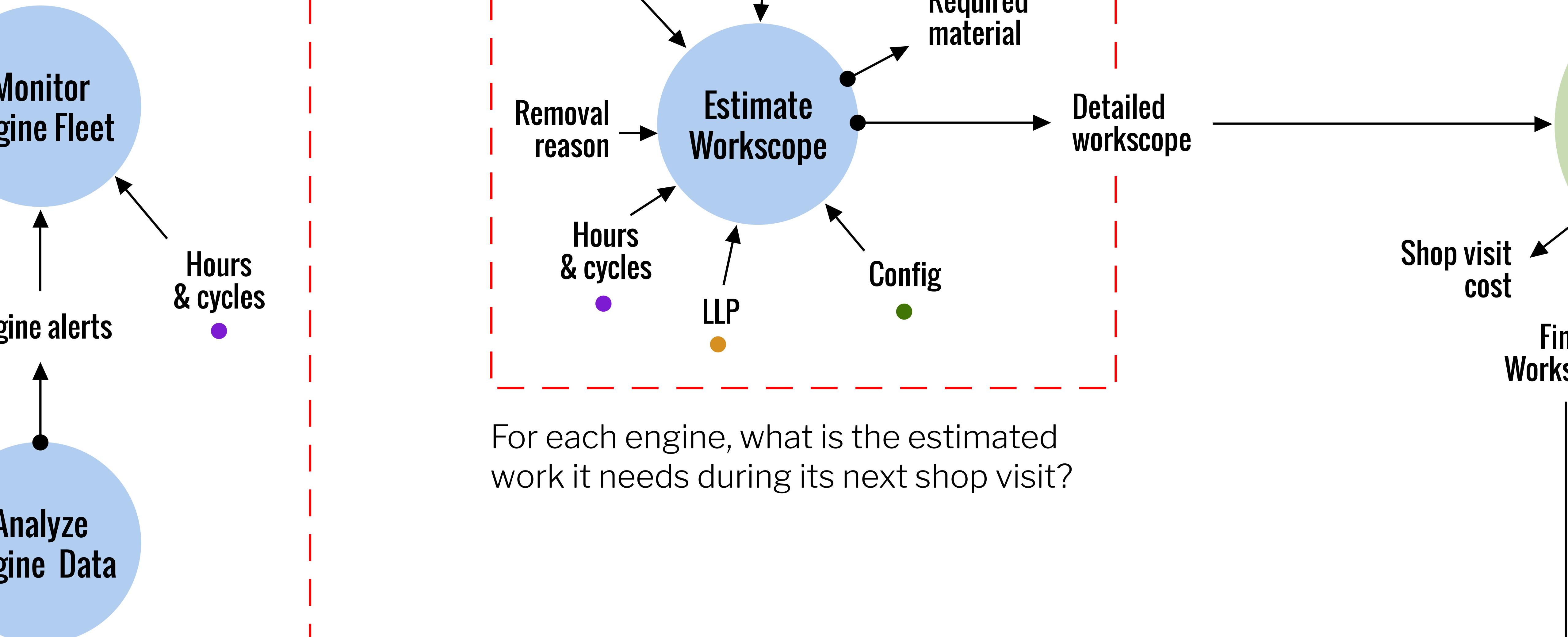
Flight time between
engine model?

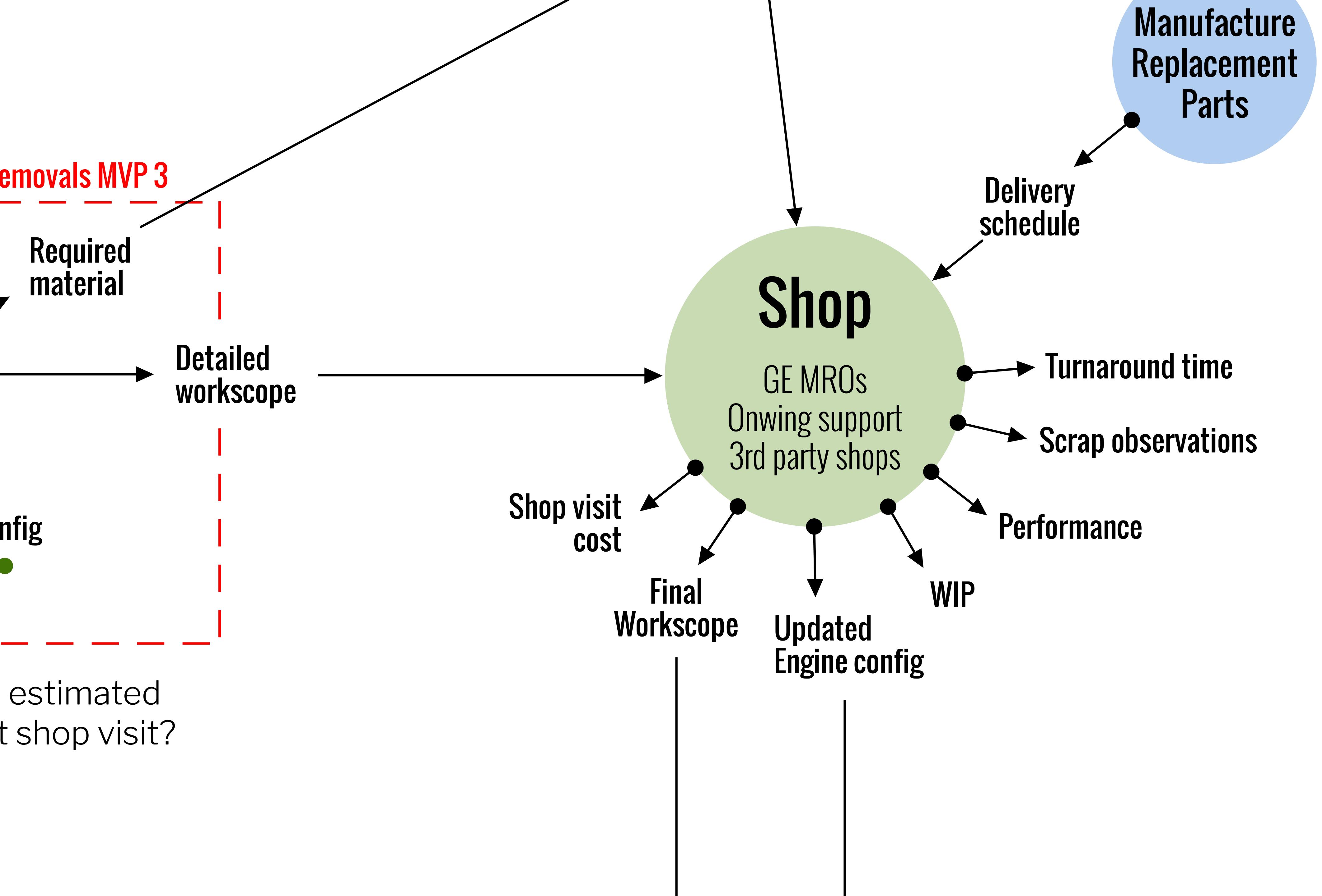
For each engine, what is the estimated
flight time until its next shop visit?

For all engines, what
schedule for all upc



orming while





Sketched the Concept

=CRM (CAL)

FINANCIAL

=REPUBLIC

ONE PLAT

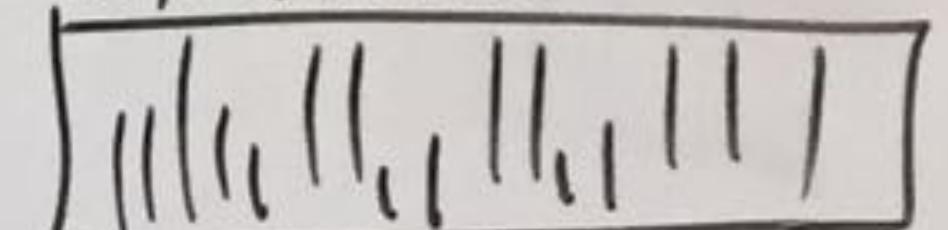
=CF34-8E

REPUBLIC AIRLINES

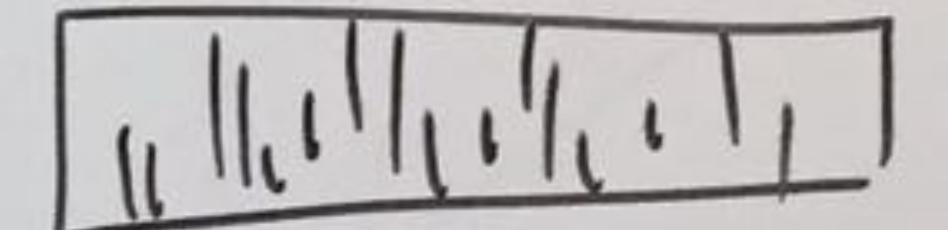
GLOBAL FLEET

129 TAILS 278 ENGINES 20 SPARES 3 OPERATORS

cycles/month



hours/month



IMPACT \$ OM%? BASE?	ON WATCH 42	WIP 12	Available Spares 8	TOW "AUG" HIGHEST	COST RETRO 1.6 BILLING RETRO .45 DEFERRED BALANCE \$1M	Monthly Billing to 4.5M Avg Supplied Up \$1.2 Avg Work
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ESN	MARGIN	WATCH	Δ PREDICTION (150)	CSV 8500	RECOMMENDATION "STR-FWZ2"	CONFIDENCE 20% (0.2%)
123456 ▲3	8.9					
463111 ▼1	14.2		233		CEL-FW31	100% 2.32

RISK

Finance Risk
%

Tech Risk
%

Designed the Vision



REPUBLIC AIRLINES ▾
CF34-8E CSA

OVERVIEW ▾

GE34-8E

	Tails	Engines	WIP	Spares	Op Parameters (by avg)	Fleet hours per month
	176	380	15	13	Hours 2652 Cycles 1890 Flight Leg 1.40	 N D J F M A M J J A S O N D J F M A

Contracts

CONTRACT	2015 CMR	FINANCIAL IMPACT	ON WATCH	FLEET ACTIONS
OM%	73.3%	Cost Retro 1.64	CSA Base \$xxMM	CDM / ABM / CNR 26 2X WW 100%
DB MM	\$159	Billing Retro .41	2015 FM, TOW \$xxMM	Reduced BSI 14 Climb Derate 85%
Past Dues	\$3MM	Shop Visits 23/61	2015 FM, Cost \$xxMM	Performance 3 Hot Spares 70%

Dashboards

REMOVAL RECOMMENDATIONS

ENGINES	RISK ▾	PLAN ▾
ESN 193729 Status: Off-wing LLP Life: 7166	ECSN: 17834 ECSV: 12349	FINANCIAL OPERATIONAL Recommended Remove: IND - Sep 18, 2015 Induct: STR - Sep 25, 2015 Workscope: Heavy Δ OM: 3.5%
ESN 193943		Scheduled

Outcome: A Holistic Initiative

GE Aviation created a multi-year initiative: **DMRO**.
(Digital Maintenance, Removal, and Overhaul)

Four of the applications that we worked on are still in operation today: Global Shop Visit Forecasting, Intelligent Slot Tracker, Enterprise Workscoping Tool, and Material Optimizer



Zendesk

Workflow Experience

About

Customer support SaaS pioneer.

Transitioning from multiple SMB products to an enterprise platform.

Workflow was the original heart of Zendesk, but also the deepest technical and experience debt.



The Deepest Technical Debt



THE ORIGINAL ZEN DESK

It's true that Zendesk was created to bring a sense of calm to the often chaotic world of customer service.

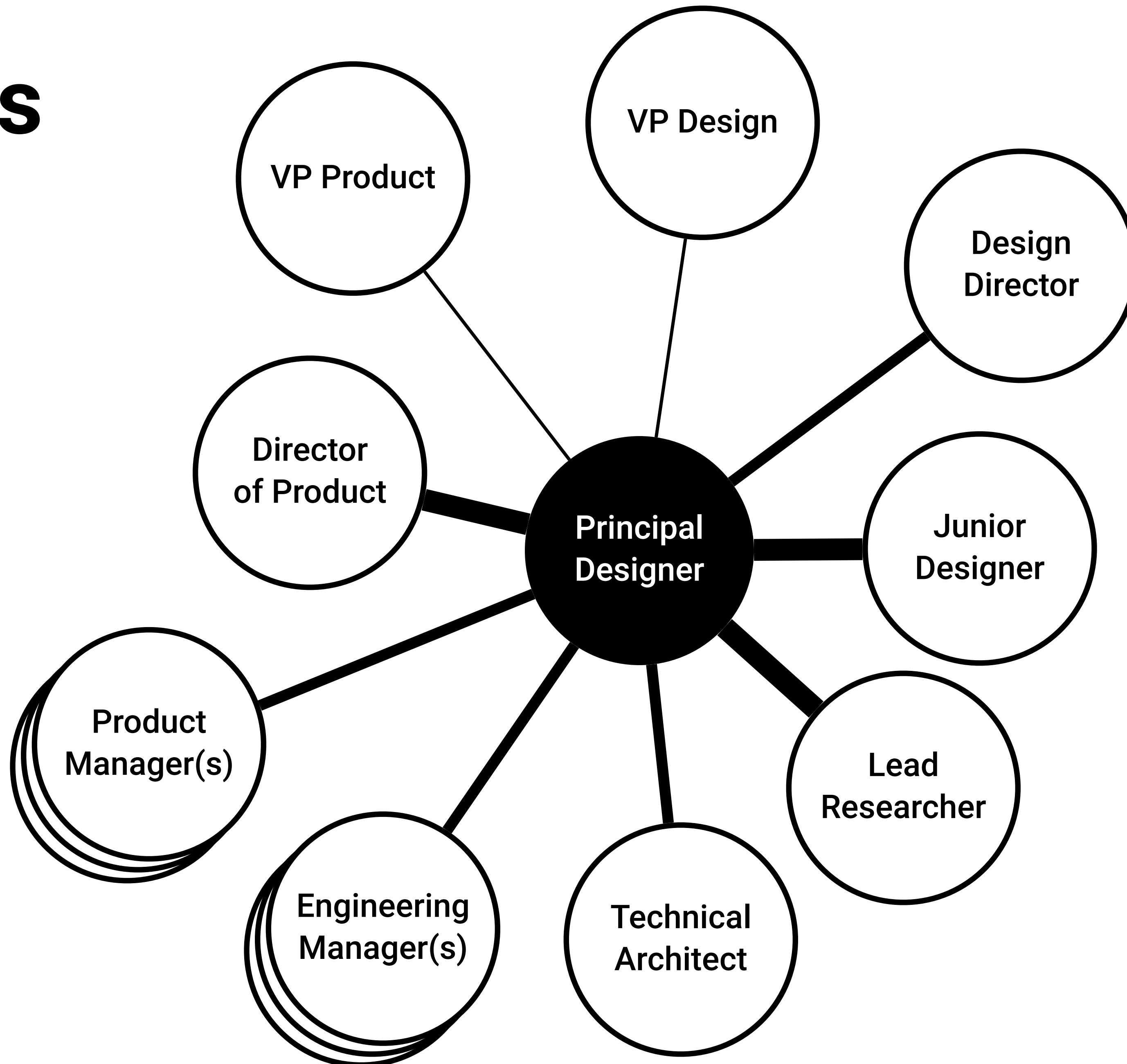
It's also true that Zendesk was born on a literal desk. Well, actually it was a door. And really, it was more of a kitchen table. A lot of beer was spilled on it. Innocence was lost here, direction and purpose found.

You probably don't want to touch it, but if you look close, you'll see the exact spot where Zendesk began.

My Role

Help **Admins** to create workflows that
Help **Customer Service Agents** to
Help **End Customers** solve problems

Partners



Context

- 1 “Triggers” were atomic rules with limited logic capabilities
- 2 ... thus requiring 100s or 1000s of triggers to replicate necessary business logic
- 3 ... and the only management tool offered was searching by title

Triggers

Triggers take action when a ticket is created or updated. For example, use a trigger to send email notifications when an agent adds a comment to a ticket. The order of your triggers is important because triggers can act on changes made by other triggers. [Learn more](#)

Name	Last updated	Usage (last 7 days)
Notify group of assignment	2017-11-10	9
Notify assignee of reopened ticket	2018-01-15	8
Notify all agents of received request	2017-11-02	7
Notify requester of comment update	2018-01-14	6
Notify assignee of assignment	2018-01-15	5
Example Answer Bot trigger for Nicolette Robichaud	2018-01-15	4
Tonkean System Trigger	2017-02-12	3
Ticket Form thing	2017-11-10	2
Set high priority for Nicolette Robichaud	2017-11-10	1

Result

Admins were suffering.

Unsurprisingly, they avoided editing workflows because it was so difficult.

Worse? Nothing had changed in 10+ years.

Customer Research

24-30 admins walked us through their workflows and challenges in managing them

Alex Song
Experience Lead

Bill DeRouche

Fred Bove

Alex Pruzinsky

support.zendesk.com/agent/admin/triggers?active=true&page=2&per_page=100&sort_by=position

Subject	Date	Priority
[Schedule] Default Schedule → Set General SF Hours Schedule on Tickets with No Schedule	Oct 14, 2019	2265
[Ticket Category] Ticket Form is Finding or Purchasing Courses → Ticket Category is S Discovery/Enrollment	Oct 14, 2019	2
<input type="checkbox"/> [Ticket Category] Ticket Form is Student: Payments, charges and receipts → Issue with a charge	Oct 14, 2019	3622
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Payment error	Oct 14, 2019	7105
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Coupon or promotion issue	Oct 14, 2019	2730
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Currency	Oct 14, 2019	1174
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Missing course	Oct 14, 2019	916
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Boleto question or issue (Brazil only)	Oct 14, 2019	670
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Gift or redemption code issue	Oct 14, 2019	210
[Ticket Category] Ticket Form is Student: Payments, charges and receipts → Receipts and taxes	Oct 14, 2019	3031
[Ticket Category] Ticket Form is Issues while Taking a Course → Ticket Category is S Course Taking	Oct 14, 2019	4674
[Ticket Category] Ticket Form is Refund → Ticket Category is S Refund	Oct 14, 2019	127597
[Ticket Category] Ticket Form is Account/Profile Questions → Ticket Category is S Account/Profile	Oct 14, 2019	8801
[Ticket Category] Ticket Form is Account/Profile (Instructor) → Ticket Category is Ins Account/Profile	Oct 14, 2019	901

Data Analysis

Performed the first textual analysis of triggers. First designer to ask for, and get, access to the data lake.

27,000+ accounts, 1,000,000+ triggers

Relearned python to build an analysis tool

```

bin = ','.join(str(e) for e in bin)
print(str(i) + " : " + str(bin[0:5]) + "... " + str(bin[-5:]))
rules_sql = """SELECT id, account_id, definition FROM data_lake_classic.rules WHERE
deleted_at is null"""
sql_str = rules_sql.format(f_ids=bin_string)
rules_df = pd.read_sql(sql_str, conn)
tr1 = rules_df.shape[0]
trt += tr1
print("{} triggers, {} total".format(tr1,trt))
acts_l = []
alls_l = []
anyss_l = []
defs_packed = []
fireOn_l = []

definition_list = rules_df['definition'].tolist()
for definition in definition_list:
    temp_def = process_rule(definition)
    temp_acts = temp_def['acts']
    temp_all = temp_def['alls']
    temp_anys = temp_def['anyss']
    if "onCreate" in temp_all:
        fireOn_tmp = "onCreate"
    elif "onChange" in temp_all:
        fireOn_tmp = "onChange"
    else:
        fireOn_tmp = "onEvery"
    defs_packed.append(item)

```

Tiers of complexity

Triggers	# Accounts	% Total
10-24	18,618	67.3%
25-49	5,083	18.4%
50-99	2,370	8.6%
100-249	1,173	4.2%
250-499	286	1.0%
500-999	101	0.4%
1000+	36	0.1%
Total	27,879	

Or, in terms of thresholds.		
Triggers	# Accounts	% Total
10+	27,879	100.0%
25+	9,061	32.7%
50+	3,966	14.3%
100+	1,598	5.8%
250+	425	1.5%
500+	139	0.5%
1000+	36	0.1%

Highest customer usage

account_id	account_name (not necessarily customer name)	# triggers
2144605		33665
1470967		4820
1906154		3363
888110		3114
34989		3063
9818821		3030
2184366		3026
2046910		2935
9519405		2774
9163788		2679
2363060		2674
1208524		2574
2097762		2192
9114058		2124
761341		2106
5194		1989
2201375		1981

Fields used most often

Source	Count	% Usage
Total	6,046,092	
Custom ticket field	1,050,433	17.4%
Tags	823,491	10.3%
Ticket	598,545	9.9%
Status	532,930	8.8%
Group	459,427	7.6%
Comment text	311,798	5.2%
Assignee	304,887	5.0%
Email user	275,791	4.6%
Subject text	212,875	3.5%
Received at	199,321	3.3%
Target	188,495	3.1%
Form	177,688	2.9%
Organization	139,924	2.3%
Comment Is	136,559	2.3%
Update via	105,570	1.7%
Priority	102,183	1.7%

Field usage by tier

Trigger Tiers	Total	10-24	25-49	50-99	100-249	250-499	500-999	1000+
# accounts	27,879	87.3%	18,618	18.4%	5,083	8.6%	2,370	4.2%
# triggers	1,052,494	25.3%	265,923	16.5%	173,431	15.5%	163,619	16.6%
Ticket status								
Fire on new tickets only	36.3%	30.7%	81707	34.3%	59423	37.5%	61335	40.4%
Fire on updated tickets only	13.7%	13.5%	35858	11.6%	20132	11.2%	18398	13.2%
Ticket status doesn't matter	50.0%	55.8%	1480358	54.1%	93876	51.3%	83886	46.5%
Group (group_id)								
in Actions	22.4%	12.1%	32245	22.1%	38302	24.8%	40539	26.1%
in Conditions All	11.2%	8.4%	22225	10.3%	17889	11.7%	18098	14.0%
in Conditions Any	2.8%	3.4%	8966	2.3%	4045	2.5%	4068	3.1%
Assignee (assignee_id)								
in Actions	9.1%	8.2%	21844	10.7%	18582	11.2%	18381	10.3%
In Conditions All	11.1%	22.1%	58757	11.8%	20413	8.3%	13614	7.0%
in Conditions Any	1.5%	3.2%	8429	1.3%	2280	1.0%	1607	0.8%
Priority (priority_id)								
in Actions	8.0%	5.9%	15814	9.8%	16942	10.5%	17178	9.5%
In Conditions All	1.3%	1.3%	35665	1.8%	3195	1.6%	2609	1.6%
in Conditions Any	0.2%	0.2%	554	0.2%	419	0.2%	388	0.3%
Status (status_id)								
in Actions	9.8%	6.6%	17622	10.2%	17635	11.3%	18494	10.9%
In Conditions All	33.1%	38.5%	102422	34.3%	59567	31.7%	51787	28.4%
in Conditions Any	2.0%	2.8%	7344	2.5%	4292	2.3%	3728	1.7%

Key Insight: Clones

The most interesting insight was discovering “cloned triggers,” triggers that were logically identical and followed the same pattern.

40% of all triggers were clones.

Cloned triggers

account_id	account_name (not necessarily customer name)	# triggers	# unique triggers	% clones
2144605		33685	13	100.0%
1908154		3383	15	99.6%
2019803		152	1	99.3%
874624		999	9	99.1%
9853087		996	9	99.1%
729218		215	2	99.1%
988695		105	1	99.0%
2201375		1981	20	99.0%
2046910		2935	30	99.0%
9660190		708	10	98.6%
0166692		186	3	98.4%
515664		1614	32	98.0%
0242597		396	8	98.0%
2153462		97	2	97.9%

For example,

Company A has 2932 triggers, 99% of which are logically:

```
if (status == X) and (organization == Y)  
    then custom_field.vip = Z
```

Company B has 850 triggers, 40% of which are logically:

```
if (ticket_form == X) and (theatre_visited == Y)  
    then group = Z
```

Company C has 683 triggers, 79% of which are logically:

```
if (recipient == X)  
    then group = Z
```

In these common examples, changing one piece of business logic would require editing hundreds of triggers.

Core Research Insight

We needed to provide **modularity**.

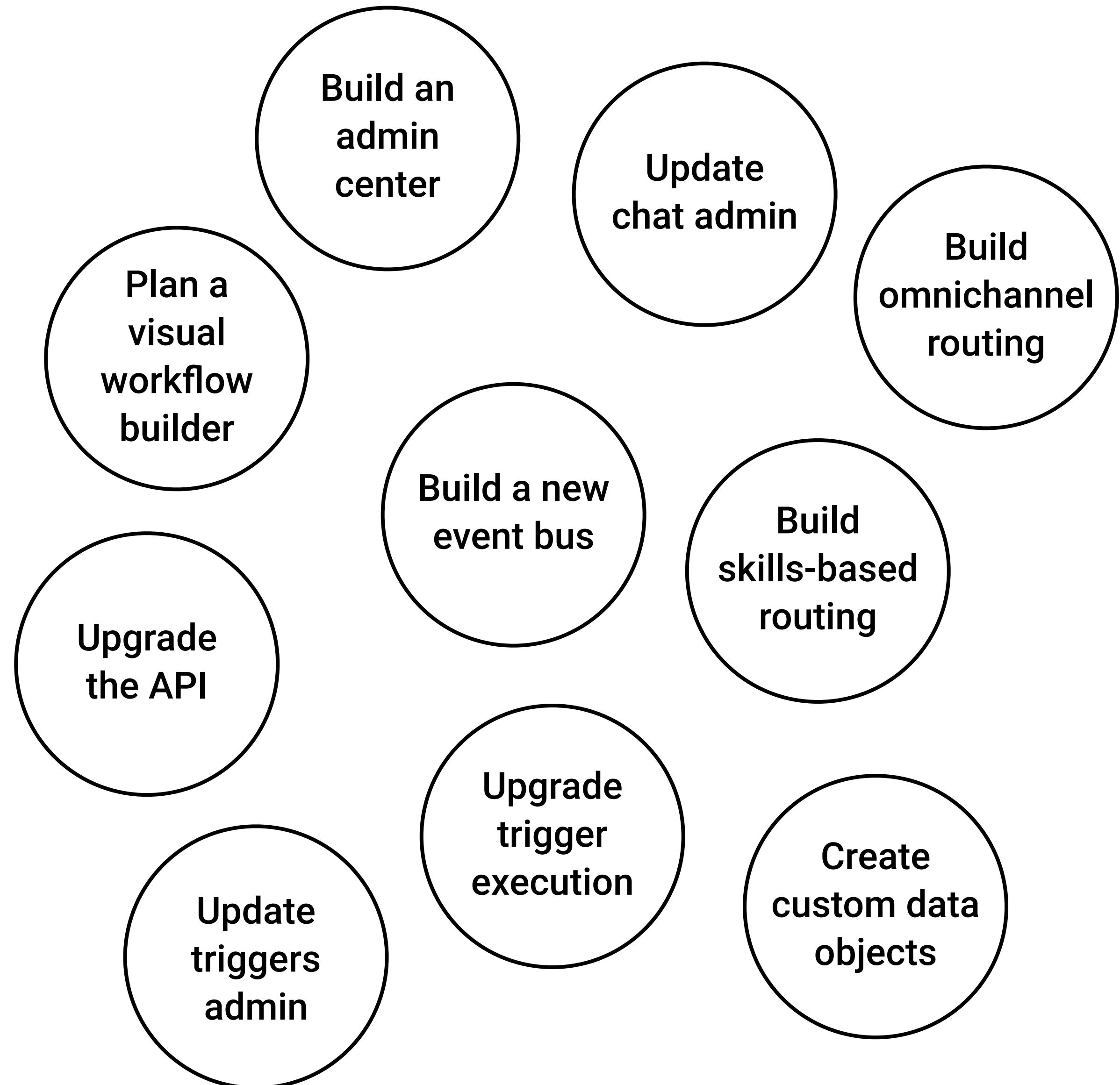
To upscale from SMB to enterprise,
to handle more complex workflows,
to handle more varied channels (messaging, chat, social media...),
to reduce challenges for admins,
and frankly to catch up to the competition,
Zendesk needed to build modularity into its workflow offerings.

Meanwhile...

Several other teams were working on multiple initiatives to tackle different pieces of the overall workflow challenge.

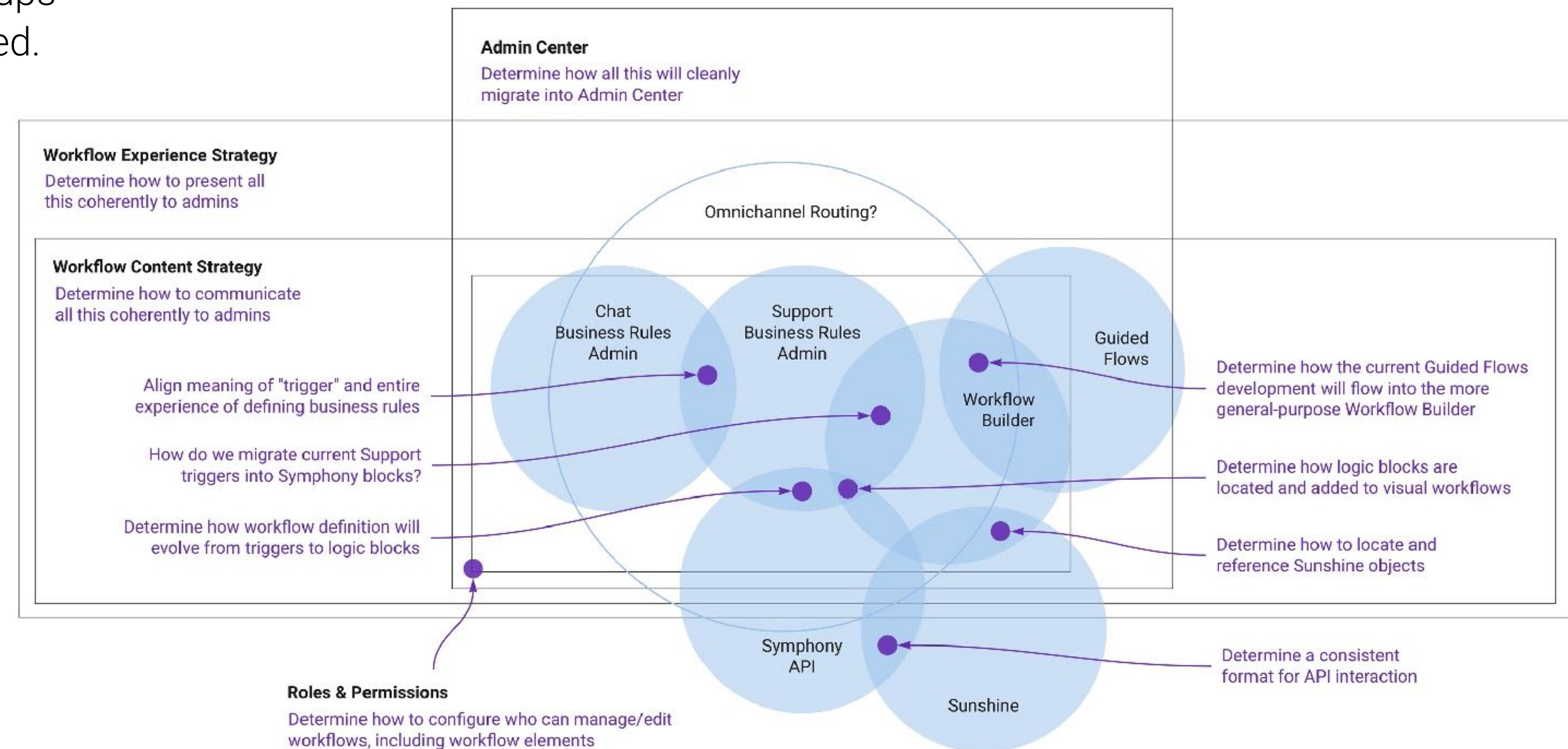
But nobody was talking to each other.

Any piecemeal approach would further complicate the customer admin experience.

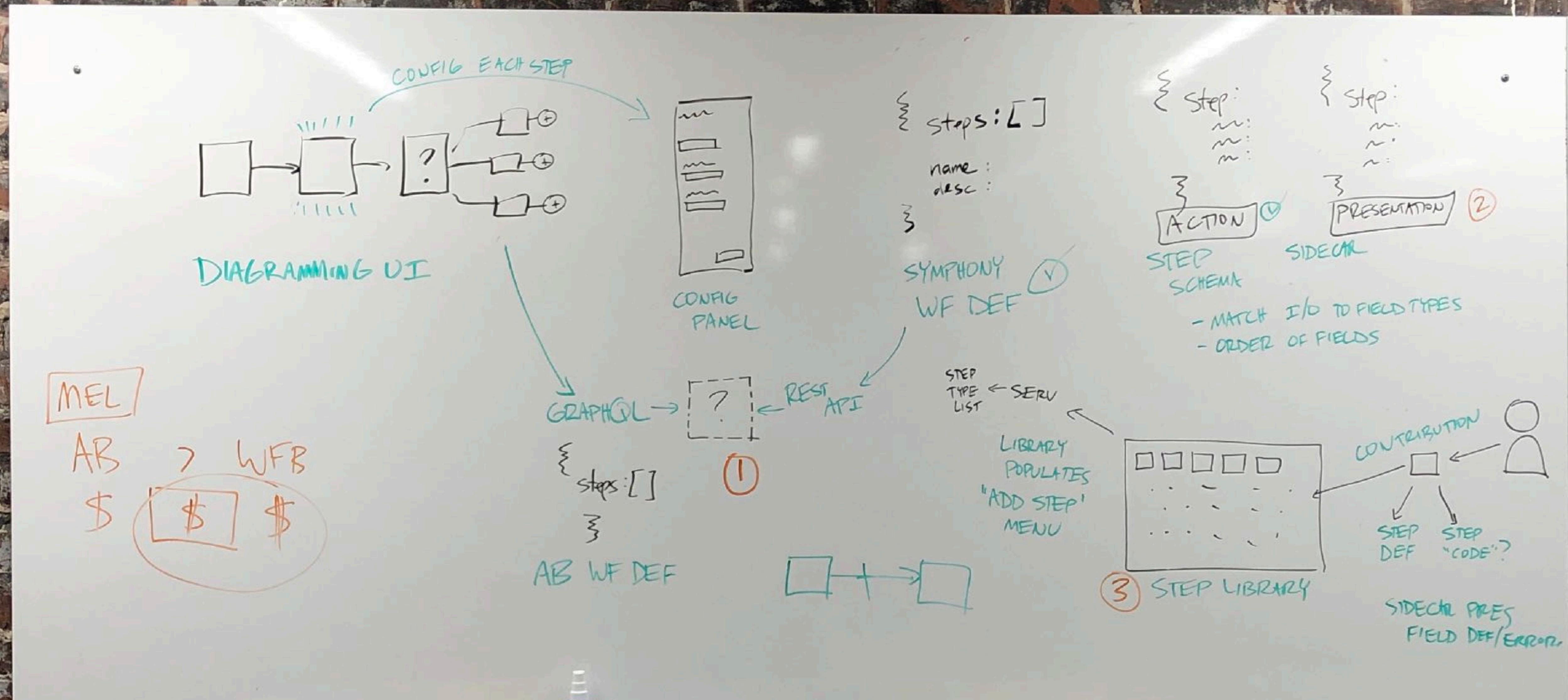


Meanwhile...

Attempted to make sense
of how the different groups
and programs overlapped.

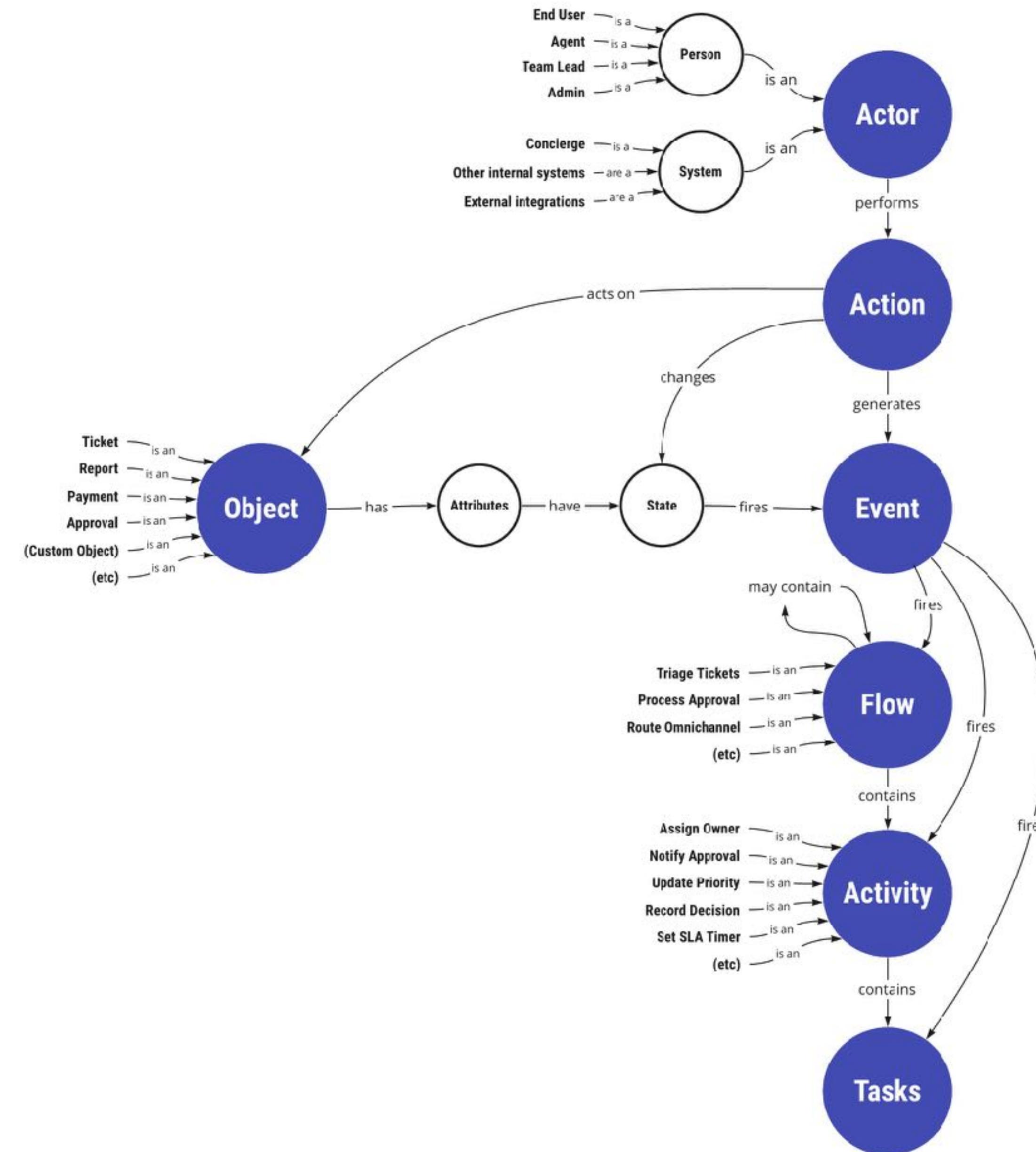


Brainstormed with Architects



Concept Model

Partnered with system architects to create a concept model of their future architecture.



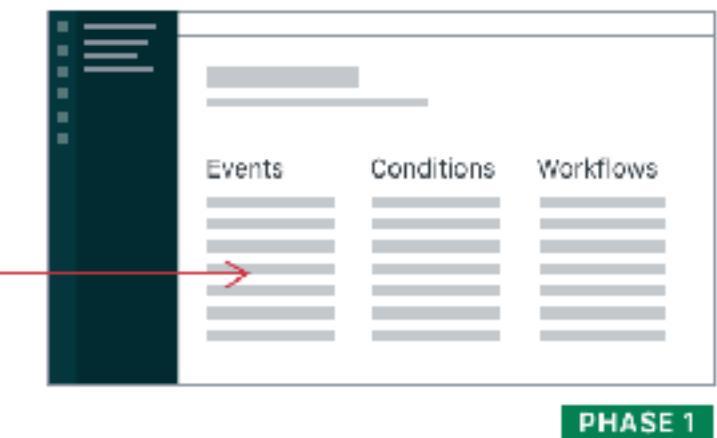
Proposed Initiatives

Proposed a series of initiatives that would lead to a competitive workflow system.

Events



available event types are populated in



Event Maps

Configure how to handle incoming events and determine which workflows they fire.



Admin Center

Access Sunshine Workflows from the Admin Center.

Workflow Dashboard

Dashboard displaying current operational metrics and status of active workflows.



Workflows

View the list of workflows created, their status, and access to create new workflows.



Workflow Builder

Visually build workflows by combining data, conditions and actions.



Support Trigger Admin

admins can use their custom conditions in Trigger admin



Custom Conditions

Create reusable blocks of logic that represent common business concepts.



Workflow Library

Access components pre-built (by Zendesk or partners) to use in creating workflows.



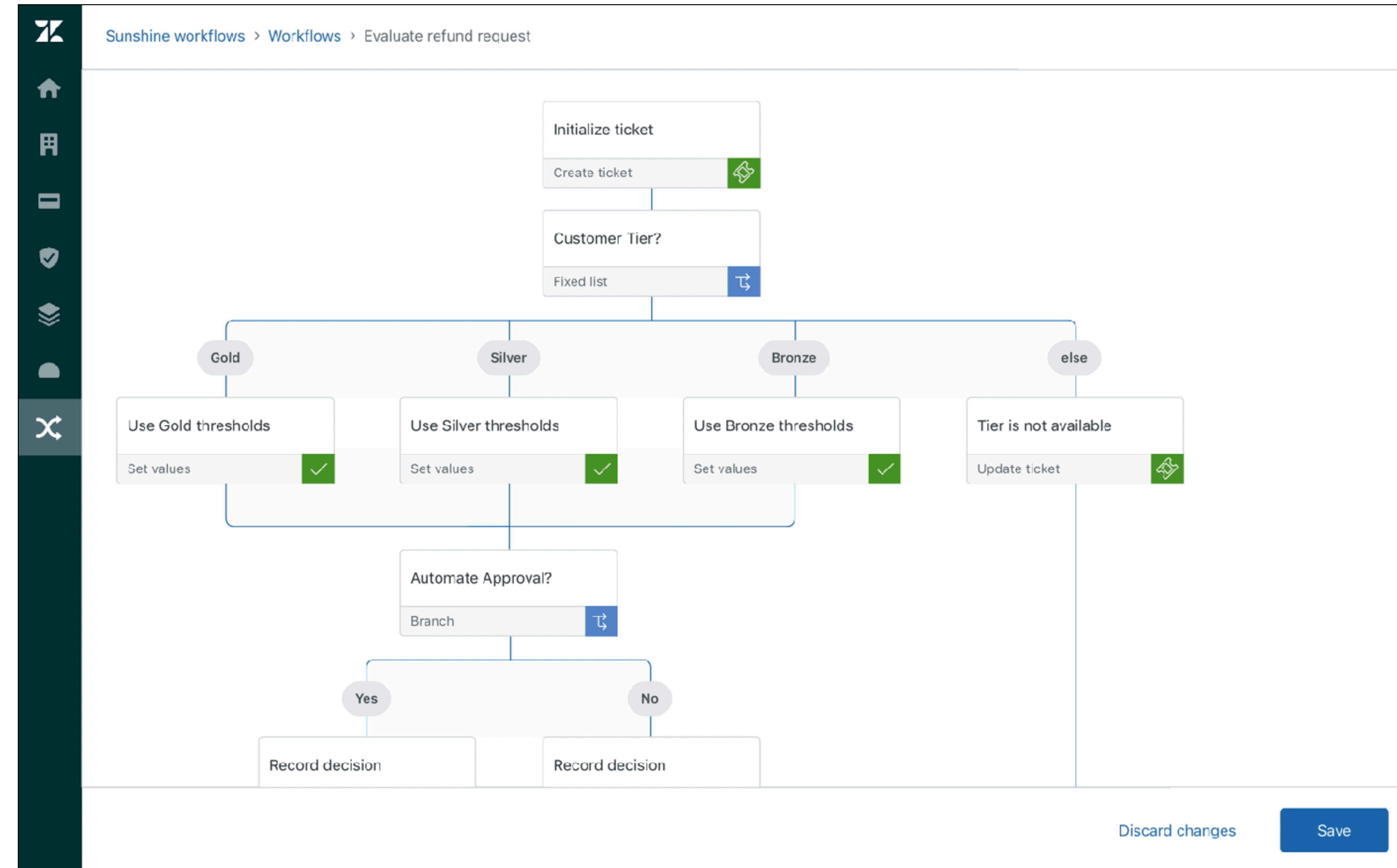
other Zendesk product groups such as Sell contribute to the Library

eventually, partners can contribute steps and templates to the Library

Workflow Builder

Aligned three different product teams on a single approach to a visual workflow builder.

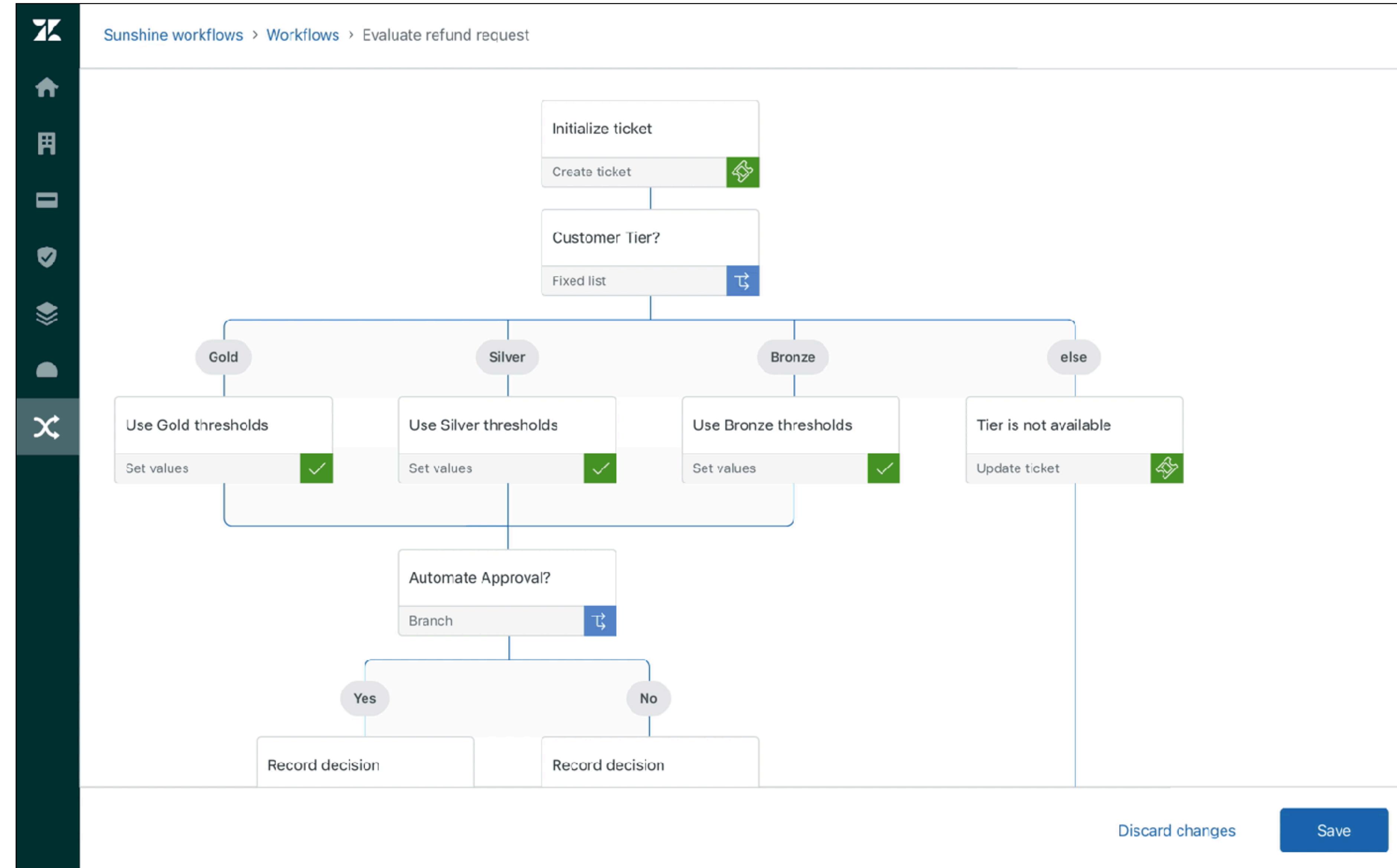
Started with design-only workshops to find common patterns, then worked with product managers to develop a common benefit.



Workflow Builder

Aligned three different product teams on a single approach to a visual workflow builder.

Started with design-only workshops to find common patterns, then worked with product managers to develop a common benefit.



...and then **the pandemic** started.

Every long-term initiative stopped.

It was time to focus on targeted fixes.

Trigger Filters

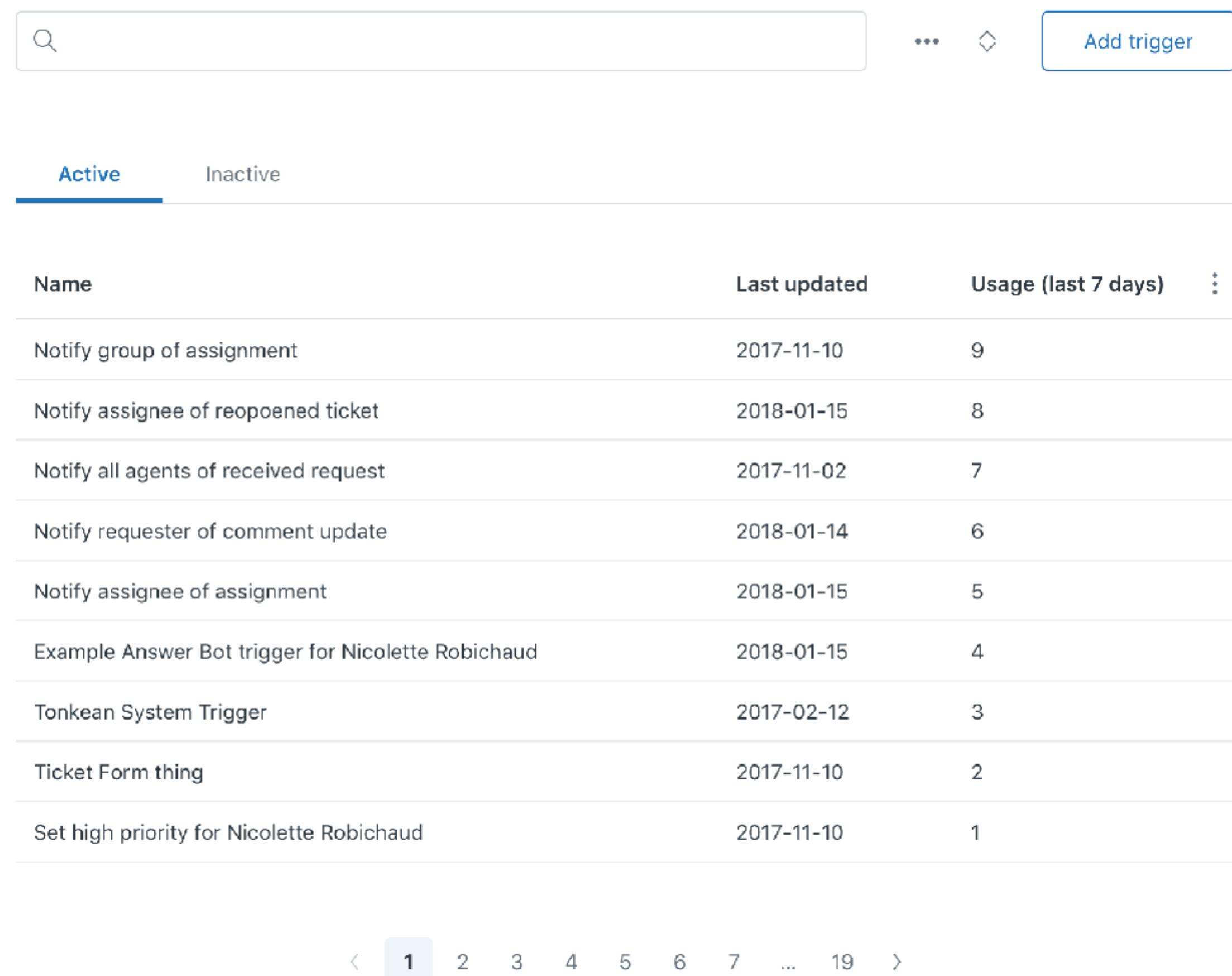
Scaled back to focus on the trigger list.

From our research, we knew admins need to find triggers that check specific fields (conditions) or set specific fields (actions).

Designed and introduced filtering that leveraged existing admin behavior of relying heavily on the search bar.

Triggers

Triggers take action when a ticket is created or updated. For example, use a trigger to send email notifications when an agent adds a comment to a ticket. The order of your triggers is important because triggers can act on changes made by other triggers. [Learn more](#)



The screenshot shows the Zendesk Triggers list. At the top right is a search bar with a magnifying glass icon, followed by three dots, a dropdown arrow, and a blue 'Add trigger' button. Below the search bar are two filter buttons: 'Active' (which is underlined in blue) and 'Inactive'. The main area is a table with columns: 'Name', 'Last updated', and 'Usage (last 7 days)'. The table contains nine rows of trigger details:

Name	Last updated	Usage (last 7 days)
Notify group of assignment	2017-11-10	9
Notify assignee of reopened ticket	2018-01-15	8
Notify all agents of received request	2017-11-02	7
Notify requester of comment update	2018-01-14	6
Notify assignee of assignment	2018-01-15	5
Example Answer Bot trigger for Nicolette Robichaud	2018-01-15	4
Tonkean System Trigger	2017-02-12	3
Ticket Form thing	2017-11-10	2
Set high priority for Nicolette Robichaud	2017-11-10	1

At the bottom of the table is a navigation bar with page numbers from 1 to 19 and arrows for navigating between pages.

Original text

Trigger Filters

We went through a bunch of bad examples.

Triggers

Triggers take action when a ticket is created or updated. For example, use a trigger to send email notifications when an agent adds a comment to a ticket. The order of your triggers is important because triggers can act on changes made by other triggers. [Learn more](#)

The screenshot shows the Zendesk Trigger Filters interface. At the top, there is a search bar with a magnifying glass icon, a 'Move triggers' button, and an 'Add trigger' button. Below the search bar is a filter bar with dropdowns for 'Location' (set to 'Conditions'), 'Field' (set to 'Received at'), 'Operator' (set to 'Any'), and 'Value' (set to 'Any'). A 'Clear filters' link is also present. The main area displays a table of triggers. The table has two tabs at the top: 'Active' (which is selected) and 'Inactive'. The columns are 'Name' and '(column)'. There are approximately 15 rows of trigger entries, each represented by a redacted name and a redacted column value. In the bottom right corner of the table area, there is a diagonal callout box with the text 'Bad example!'.

Trigger Filters

We went through a bunch of bad examples.

Triggers

Triggers take action when a ticket is created or updated. For example, use a trigger to send email notifications when an agent adds a comment to a ticket. The order of your triggers is important because triggers can act on changes made by other triggers. [Learn more](#)

The screenshot shows the Zendesk Triggers list page. At the top, there is a search bar, a 'Reorder page' button, and an 'Add trigger' button. Below the header, there is a filter section with a 'Filter' dropdown set to 'Uses "Priority"' and a 'Value' dropdown set to 'High'. There are also two checkboxes: 'In conditions' (unchecked) and 'In actions' (checked), followed by a 'Apply filter' button. The main content area displays a table of triggers. The columns are 'Name', 'Last updated', and 'Usage (last 7 days)'. The table contains the following data:

Name	Last updated	Usage (last 7 days)
Notify assignee of reopened ticket	2018-01-15	8
Notify assignee of assignment	2018-01-15	5
Set tags 2/3		
Set high priority for Nicolette Robichaud	2017-11-10	1
Check location 13/22		
London	2017-11-10	1
Miami	2017-11-10	1
Rio de Janeiro	2017-11-10	1
Houston	2017-11-10	1

At the bottom of the table, there is a navigation bar with page numbers from 1 to 19.

Bad example!

Trigger Filters

From this live example, we can see how the feature works.

People can still simply start with the name of the trigger to find matches. However, they can also now enter the text of the description, or the details from the conditions or actions entered.

The feedback from this was huge.

(Categories were also included, although that was a related effort in which I had professional say, yet another designer worked on it.)

Triggers

Set up event-based rules that run every time a ticket is created or updated. Popular triggers include notifying customers when a new comment is added to their ticket or an out-of-office reply. [Learn about triggers](#)

Edit order

Add trigger

The screenshot shows the Zendesk Triggers list interface. At the top, there is a search bar labeled 'Filter' with a dropdown set to 'Name' and a magnifying glass icon. Below the search bar, it says 'Showing 318 triggers'. There are two tabs: 'Active' (which is selected) and 'Inactive'. The main area is divided into sections:

- Name**: A list of triggers starting with 'Notifications' (7 items) and 'Categories' (34 items). Each item has a checkbox next to it.
 - Notifications: Notify assignee of assignment, Notify assignee of comment update, Notify assignee of reopened ticket, Notify requester and CCs of comment update, Notify requester and CCs of received request, Notify requester of new proactive ticket, Notify all agents of received request.
 - Categories: Check if 265/35ZR22, Check if 235/55R20.

Live example

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Triggers

Set up event-based rules that run every time a ticket is created or updated. Popular triggers include notifying customers when a new comment is added to their ticket or an out-of-office reply. [Learn about triggers](#)

Edit order

Add trigger



Filter Field Operator

Conditions Comment text (any)

Add another filter Showing 8 triggers

Active Inactive

Name :

- Check if 225/60R18
Categories
- Check if 235/55R19
Categories
- Check if 235/55R20
Categories
- Check if 245/45R20
Categories
- Check if 255/45R20
Categories
- Check if P255/45RF20
Categories
- Check if 265/35ZR22
Categories
- Check if 265/40ZR21
Categories

Live example

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Triggers

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The screenshot shows the Zendesk Triggers configuration page. At the top, there are filter options: 'Filter' set to 'Actions' and 'Field' set to 'Location'. Below these, a search input field is highlighted with a blue border. To the right of the input are 'Edit order', 'Add trigger', and a dropdown menu. A modal window is open over the main content, titled 'Showing 7 triggers'. It has tabs for 'Active' (selected) and 'Inactive'. Under the 'Name' column, there are seven entries, each with a checkbox and a 'Locations' button:

Name	Locations
Direct to Topeka	Locations
Direct to St. Louis	Locations
Direct to Fayetteville	Locations
Direct to Austin	Locations
Direct to San Antonio	Locations
Direct to Denver	Locations
Direct to Cheyenne	Locations

A dropdown menu is open next to the 'Value' input field, listing the locations: Topeka, Denver, Fayetteville, Cheyenne, Austin, San Antonio, and St. Louis. The 'any' option is selected with a checkmark. The modal has a close button 'X' in the top right corner.

Live example

Trigger Filters

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Filter

Name

Showing 873 triggers

Filter

Name

notify

Add another filter

Showing 8 triggers

Filter

Conditions

Field

Status

Operator

Is

Value

|

Add another filter

Showing 144 triggers

✓ (any)

New

Open

Pending

Solved

Closed

Filter

Actions

Field

Priority

Value

|

Add another filter

Showing 67 triggers

✓ (any)

Low

Normal

High

Urgent

Live example

Custom Ticket Status

Another deep technical debt problem with a very tight set of constraints.

Customers had complained for over a decade that they needed more than the fixed list of ticket statuses.

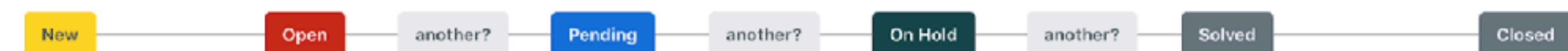
Led research and mentored a designer to work through the problem. Talked with 12 admins to diagram out how they would use custom ticket statuses.

Explored how adding custom statuses would affect several areas of the product, the agent experience, editing views, admin experience, and more.

Original fixed list



Did customers need additional statuses in the sequence?



Or did they need variations for describing the core statuses?



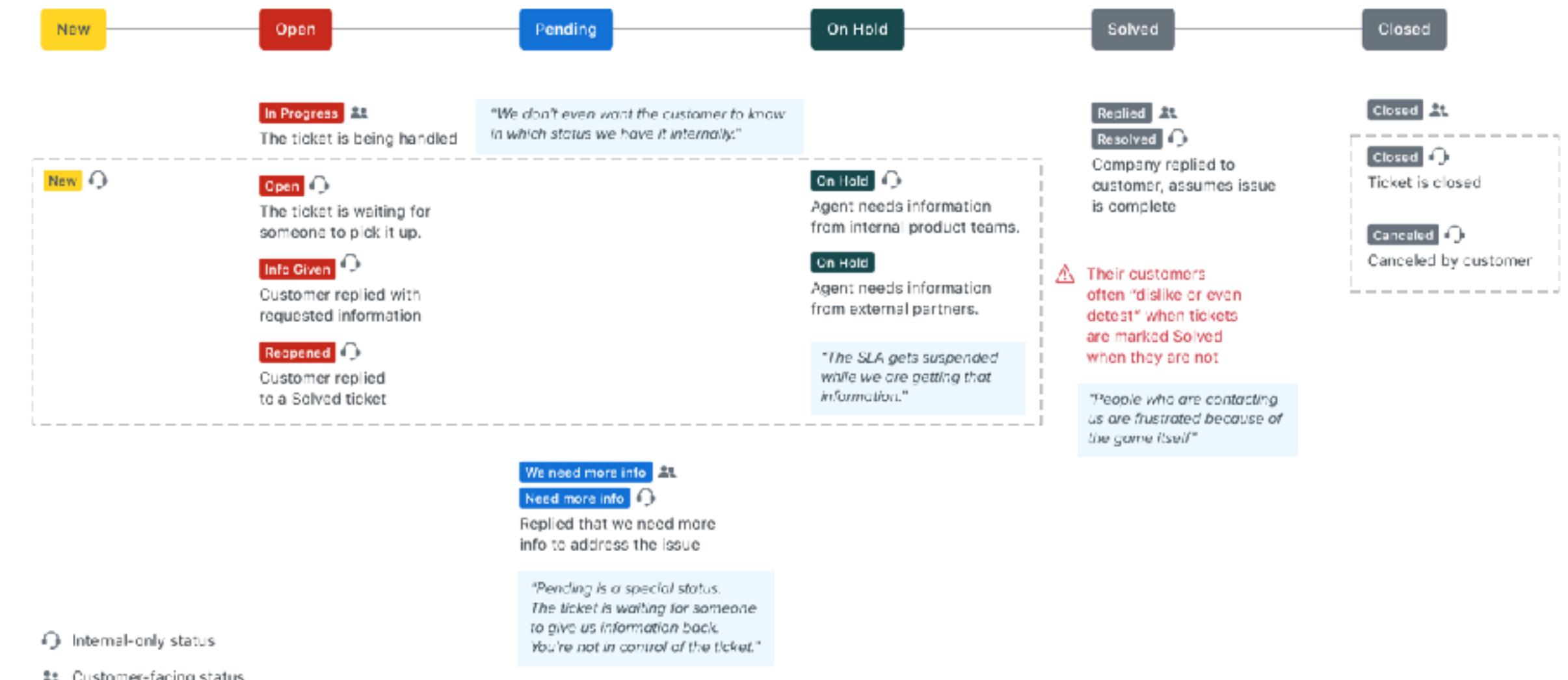
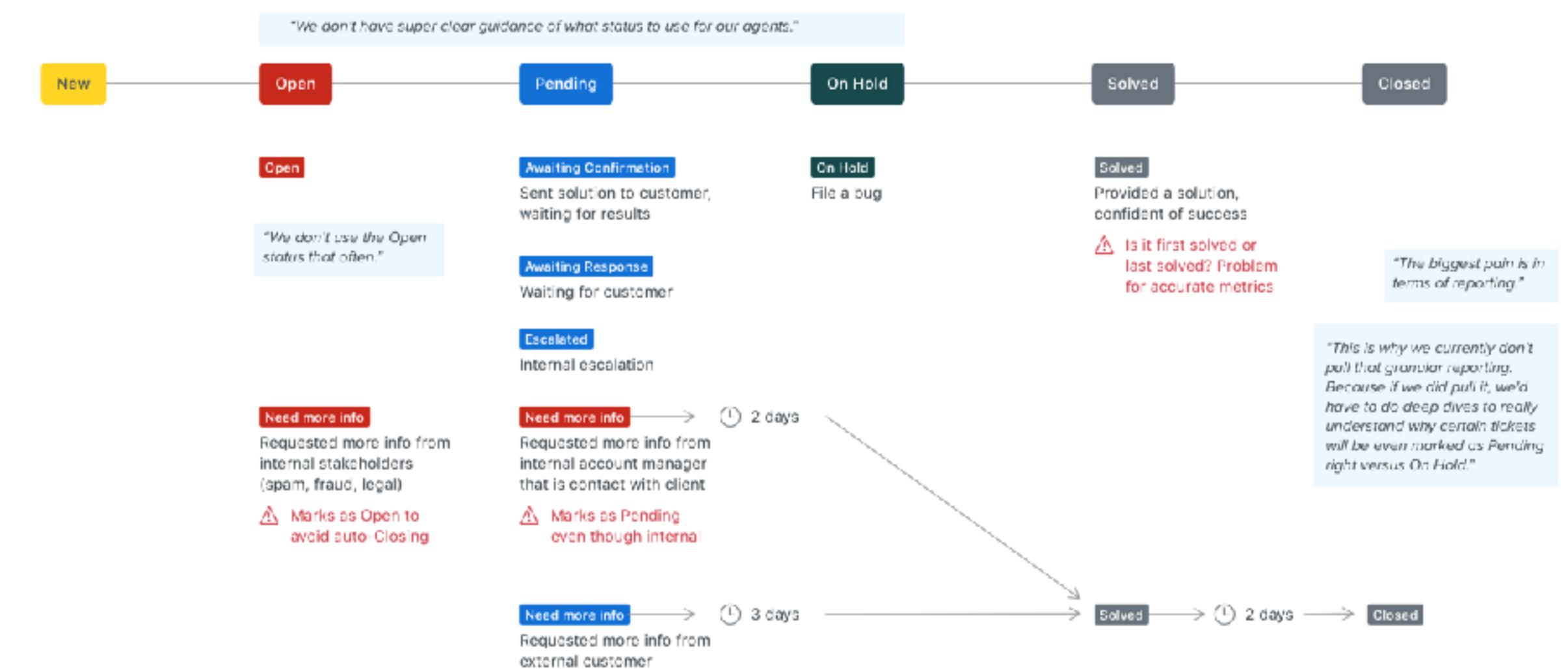
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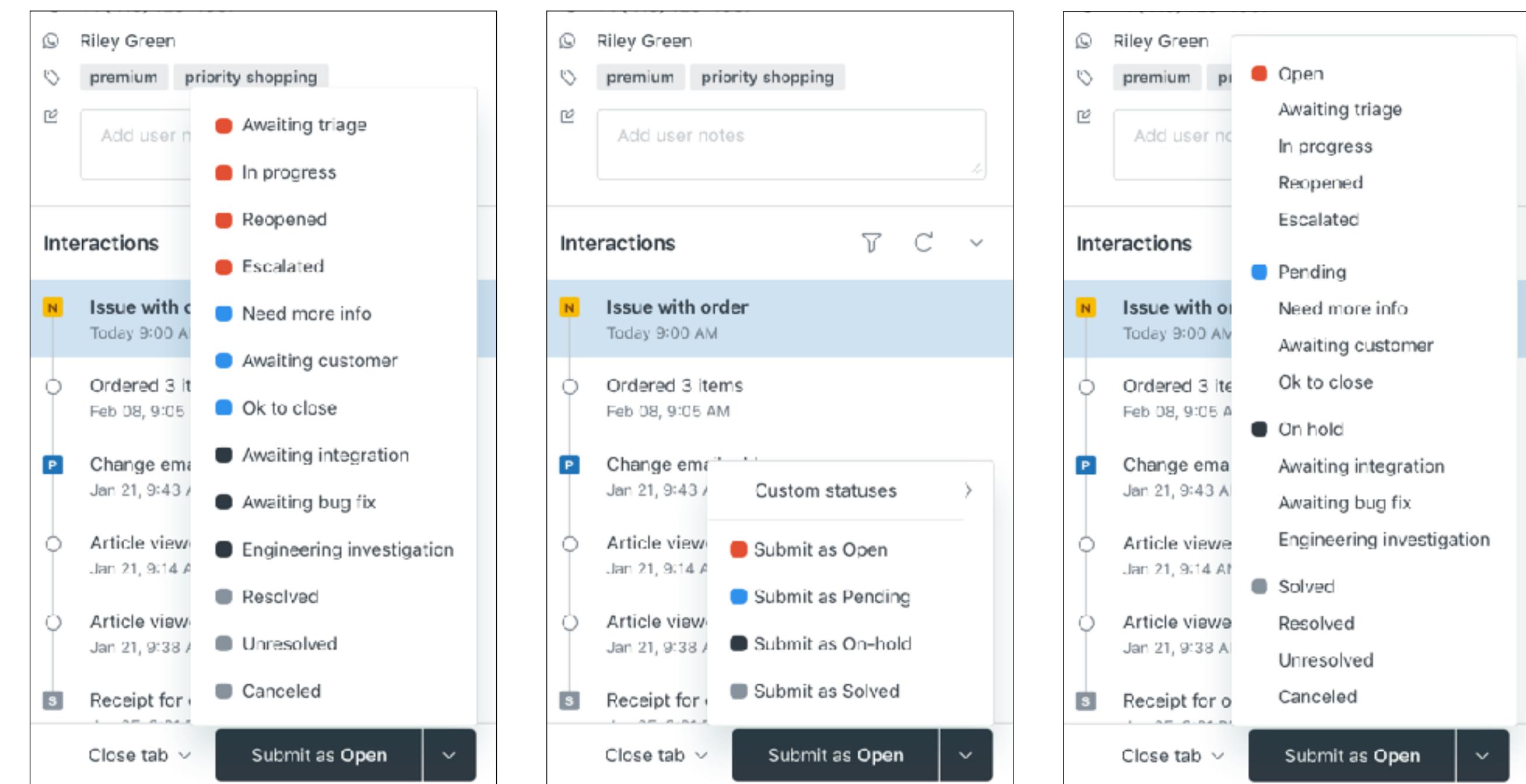
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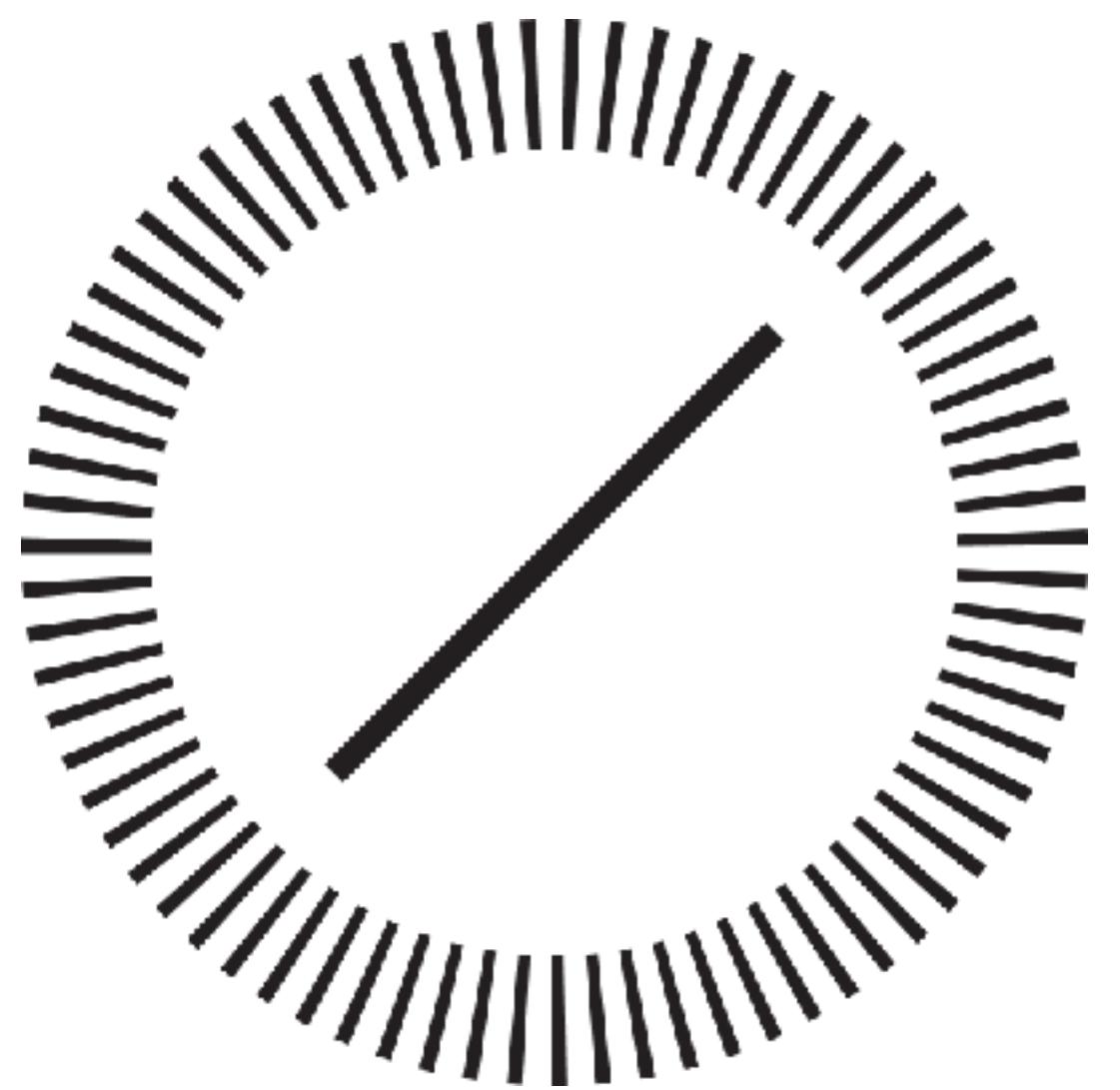
Explored how adding custom statuses would affect several areas of the product, the agent experience, editing views, admin experience, and more.



Outcome: Product Momentum

Several product features that I kicked off have continued to be developed and hopefully will address admin pain.

Visual workflow builder, custom ticket status, custom conditions, and the general push to make workflow more holistic.



Compass Realty

Agent Jobs & Tasks

About

High-end real estate company

Goal is to be the industry platform
for real estate transactions

Struggling to incorporate two
key acquisitions made in 2021

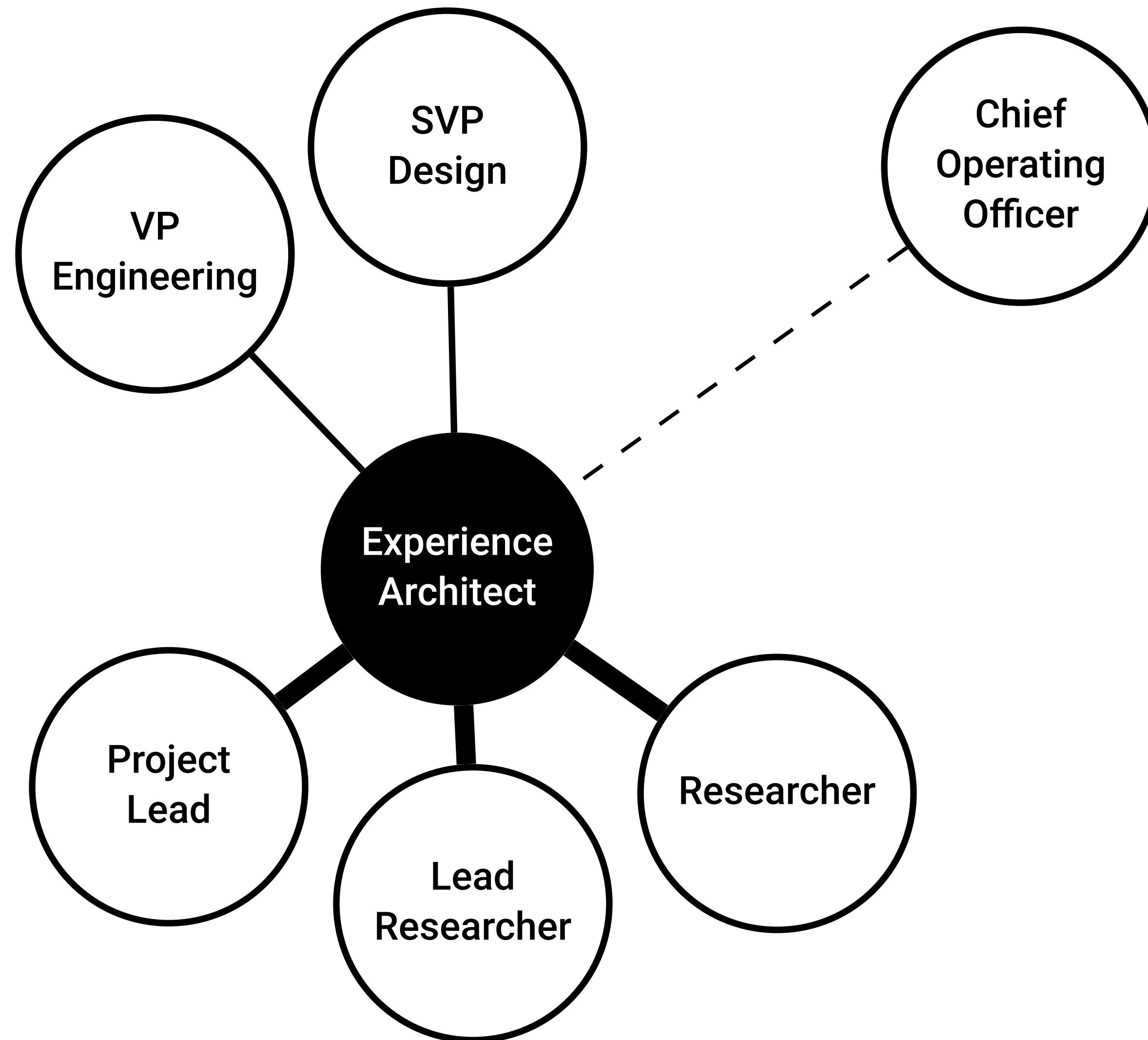


Situation

They asked for two things:

1. Map the customer journey of real estate agents
(via the design leader)
2. Data for prioritizing the development roadmap
(via the engineering leader)

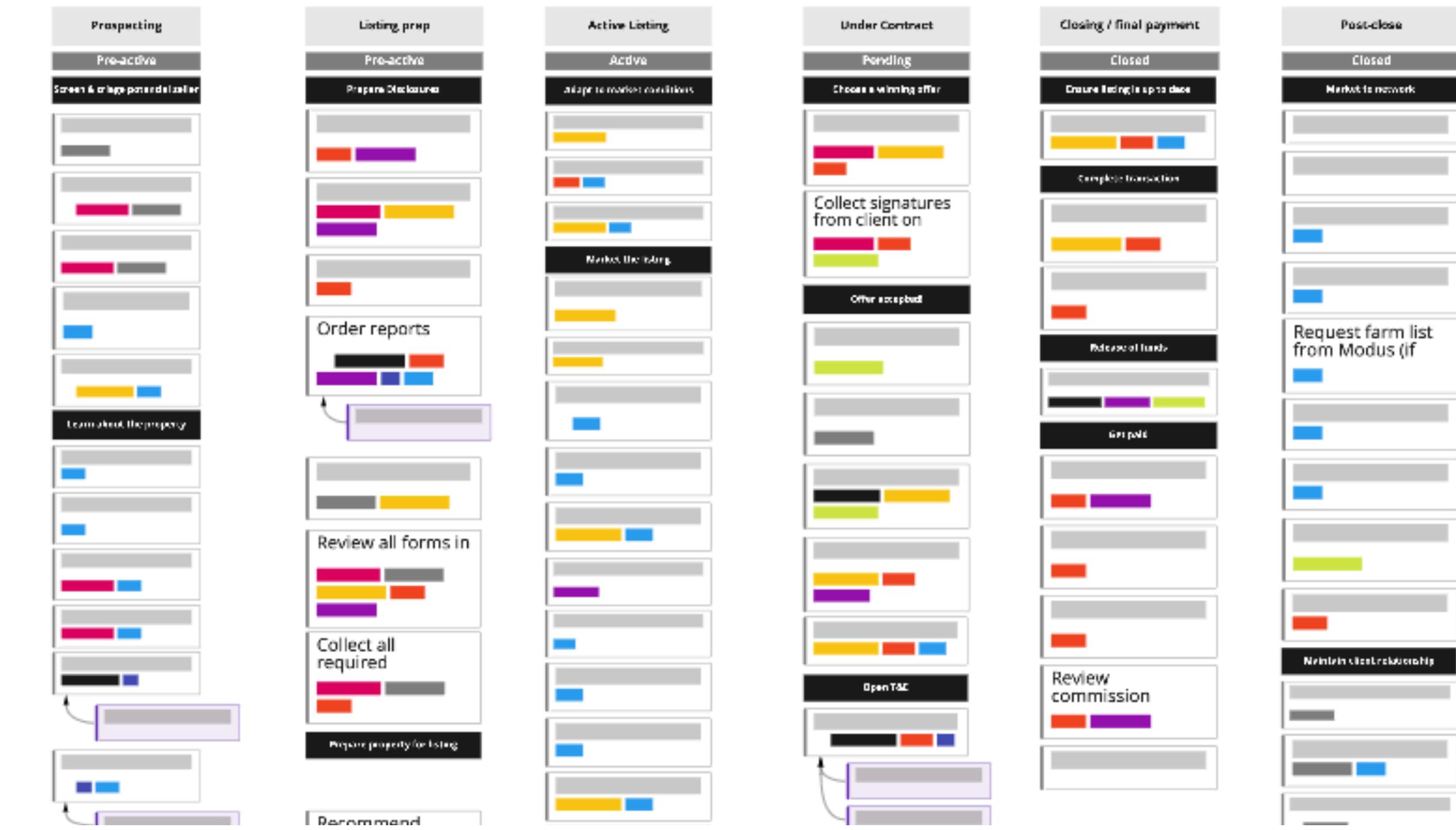
Partners



Prior Research

This was not the first attempt at mapping an agent's journey. Most of this research already existed, just not coherently.

Also, the results were too overwhelming for colleagues outside the research team to easily consume or act upon.



Insights

They suffered from a lack of single source of truth. Nobody was wrong but they had too many versions of “right”.

They weren’t speaking the same language.
Even “transaction” had 3-4 different meanings.

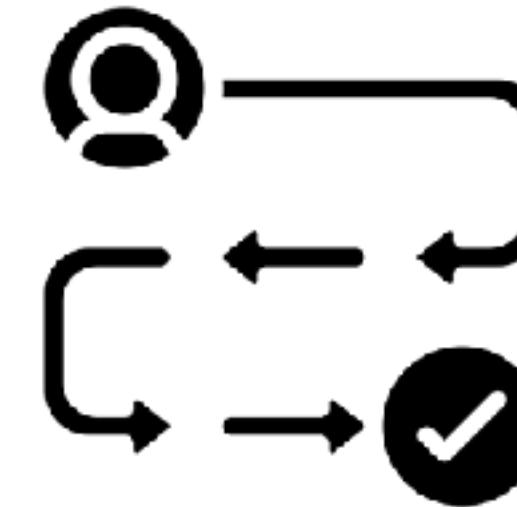
Without a shared framework, they were perpetuating knowledge silos.

Project Pivot

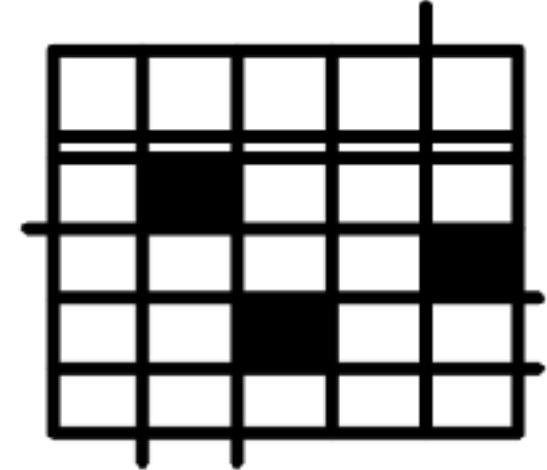
Let's clean up what we already know.

Use this as a project to unlock collaboration and address their culture of knowledge silos.

What is the canonical list of jobs that defines the journey of real estate agents?



Customer journey map of agents



Data for roadmap prioritization



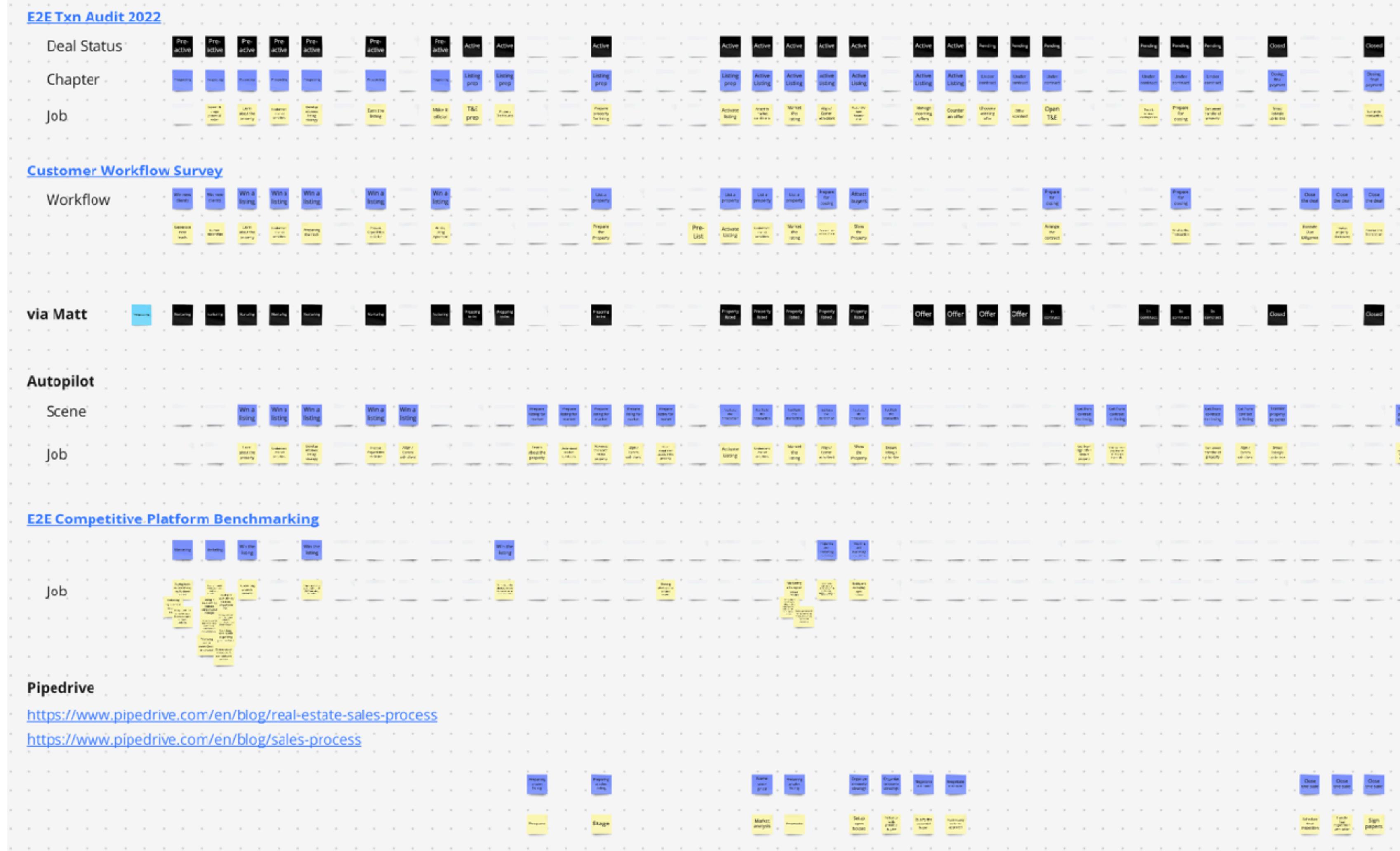
Canonical list of jobs to be done

“Chapters” in the journey

Framework for features

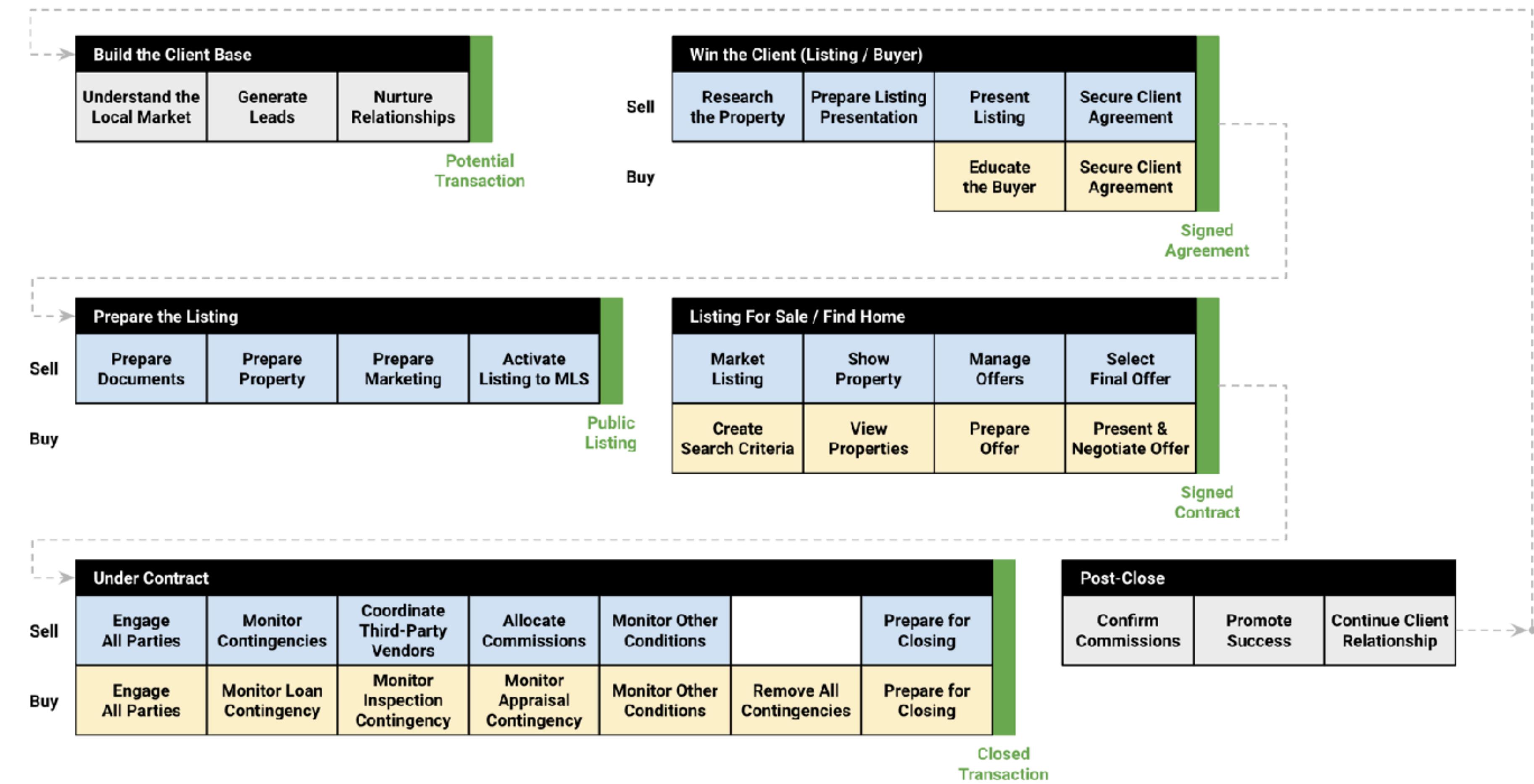
Synthesis

Dissected, overlaid, and collated prior research efforts to discover gaps, overlaps, and how they phrased jobs and tasks.



Proposed List: Jobs to be Done

Distilled the prior research plus agent feedback into this simple list of agent jobs to be done.



Proposed List: Tasks per Job

Documented the list of tasks per job, also iterated based on agent feedback.

SELL - Listing For Sale				BUY - Find Home			
Market Listing	Show Property	Manage Offers	Select Final Offer	Create Search Criteria	View Properties	Prepare Offer	Present & Negotiate Offer
Market to Compass Private Exclusive members	Coordinate availability and preparation with seller	Review and organize received offers	Discuss final decision with seller	Learn the buyer's preferences (location, schools, attributes, etc)	Learn the buyer's availability	Review market conditions	Alert listing agent of offer
Share listing with network	Prepare materials for open house	Communicate offers to seller	Collect seller signatures on offer (or copy and send to buyer)	Schedule a home tour	Create competitive analysis	Submit offer, cover letter & buyer finance qualifications	Sign seller disclosures
Market listing to team members	List open house on the MLS	Strategize with seller whether to accept, reject, or counter each offer	Receive executed offer package from buyer agent (counter)	Coordinate with listing agents	Discuss price and terms with buyers	Review and respond to counter offer (if receive)	Receive & review seller executed agreement
Run advertising campaign (social media, digital ads, regional ads)	Coordinate and host broker tours	Inform buyer agent that you're making a counter offer	Attach counter offer document to compliance	Obtain property access information	Reach out to listing agent for any conditions and to establish connection	Review seller disclosures	Attach completed offer documents to compliance checklist
Monitor buyer interest levels	Host (or delegate) open house(s)	Complete counter offer forms	Update MLS status	Create tour itinerary	Tour listings	Draft offer	
Strategize with client to adjust pricing or marketing strategy, if needed		Review counter offer package with seller and collect signatures		Send buyer sample listings that match their preferences	Capture and review buyer's feedback	Draft cover letter	
		Submit counter offer to buyer agent and confirm receipt		Receive feedback from client and adjust search criteria as needed	Contact listing agent for additional information	Review offer with buyer and obtain signatures	
				Curate initial listings to showcase	Learn if buyer wants to submit an offer		
				Set up automated searches	Share newly matching listings		

Proposed Data Model

Developed a data model of information that they needed to capture about each job and task.

Identity. General metadata about this job.

- **job-ID.** Each job will need a unique identifier at a system level.
- **job-name.** Short 2-4 word phrase, starting with an action verb, written from an agent's perspective. For example: "Generate Leads"
- **job-desc.** One to two sentences that further describe this job.

Ownership. Who internally is responsible for this job?

- **flow-team.** The team responsible for improving this task for agents, clients and staff.
- **flow-contact.** Primary point of contact from Flow Owner to support data collection.

Flow. Where does this job sit in the flow?

- **job-side.** Sell side, buy side, or both?
- **job-stage.** A higher-level phase of the process where this job happens, such as Prospect, Nurture, Prepare listing, In Contract, Closed.
- **job-previous.** Job(s) required to be completed in order to start.
- **job-next.** Job(s) blocked until this job is complete.
- **job-inputs.** List of items that are required to start this job.
(Need to work out how to handle regional differences here.)
- **job-outputs.** List of items that this job produces.
(Need to work out how to handle regional differences here.)

Current State. How are we delivering right now?

- **coverage.** (high/medium/low/none) How much does Compass already cover this job?
- **mobile coverage.** (high/medium/low/none) How well do we support this job on mobile today?
- **web coverage.** (high/medium/low/none) What functionality do we have available today (if any)? How well do we feel that technology is meeting the needs of transaction participants? If functionality is forthcoming, what is the timeline for delivery?
- **service desk.** (high/medium/low/none) How extensive do we offer help with our paid services?
- **platform engagement.** (high/medium/low/none) How often are agents using the Compass platform as part of their workflow for this item

Research. What have we learned about this job?

- **roles.** (multiple) List of roles typically involved in achieving this job. Buyer agent, seller, agent, transaction coordinator, buyer, seller, mortgage broker. (Another deep complicated section, likely needing its own data model. For now, a list of sample roles is enough.)
- **insights.** (multiple) Things we've learned about this job.
- **opportunities.** (multiple) Product concepts we have to improve this job.
- **documents.** (multiple) Links to documents about this job.
- **frequency.** (high/medium/low) How often do agents do this job? (likely more task than job)
- **complexity.** (high/medium/low) How difficult is this job to perform?
- **impact.** (high/medium/low) How much would improving this impact an agent's workflow?
- **entitlement.** (high/medium/low) How much do agents expect Compass to provide this (vs readily-available solutions like calendaring)
- **mood.** (high/medium/low) Can we capture an agent's mood about this job?
- **primary competing process.** What are the most common ways agents complete this task today and what are the primary general purpose and real-estate specific tools used to assist in the completion of this task?

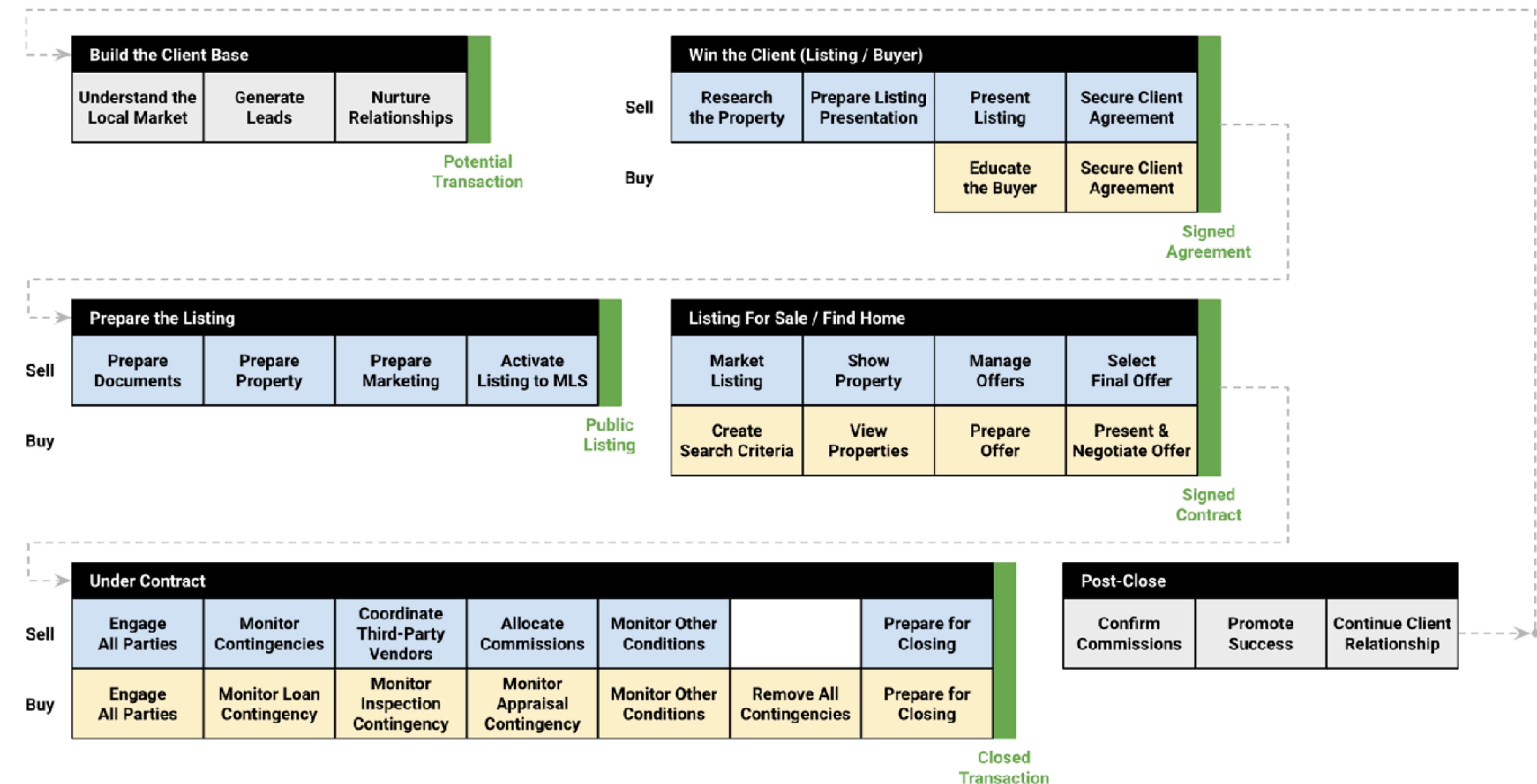
Opportunity

- **potential value-add.** (high/medium/low) How strong is our conviction that technology can positively impact this task? Do we have specific ideas on how this might be done?
- **effort.** (high/medium/low) What is the relative size of the development effort? Is there legacy tech debt to overcome?
- **platform integration.** (high/medium/low) Would improving this job also contribute to a platform effort, improving other jobs as a side benefit?
- **third-party integration ease.** (high/medium/low) How effectively could we provide coverage of this task more via a third-party integration? Are there any third-party tools we should prioritize integrating due to their popularity? (e.g. DocuSign)
- **mobile.** (high/medium/low) Where should this task fall in our priority list

Outcome: A Shared Language

They never had had a simple list like this.

Several leaders said this framework should be used in annual planning, performance monitoring, and new agent training.



Final Thoughts

Overall Theme

**If you want to create coherence,
you have to act coherently.**

The organization is the system.
A disjointed organization will
output a disjointed experience.

**For me, information architecture is
much more than just the product.**

Focusing on a common internal
language and helping people visualizing
the larger system helps to unlock the
collaboration necessary to deliver a
coherent experience to customers.

Thank you!