

Beyond Building Faster Horses, Changing Defra's Approach to Digital Delivery with CDP

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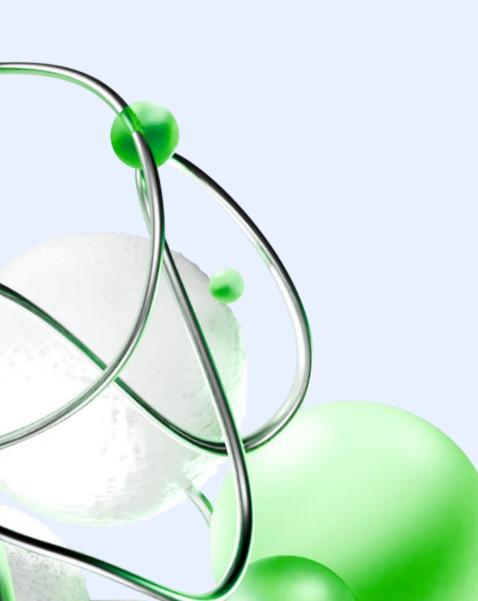


Beyond building faster horses: Changing DEFRA's approach to digital delivery with the core delivery platform

Tim Howard Allen Fensome Ian Williams



Speaker Intros





Tim Howard

Deputy Director Cross Cutting Services, Defra



Ian Williams

Product Owner, Defra Lead Associate, esynergy



Allen Fensome

Platform Architect, Defra Lead Associate, esynergy

Agenda

- Challenges
- Our approach
- Introducing Core Delivery
 Platform
- Successes and outcomes
- Key takeaways

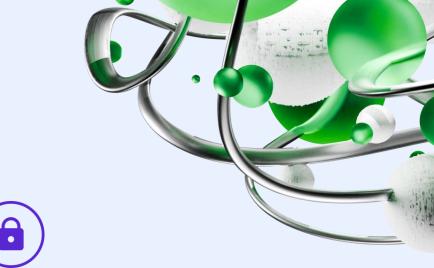
Key challenges



Handover to silo'd teams with distinct functions



Multiple tools to manage deliveries



Overly complex governance



Lack of automation & visibility across teams & processes

Lack of alignment to DEFRA and government standards



Poor ROI

Removing false need



Single delivery team without handoffs



Reusable tools and patterns



Automatic governance



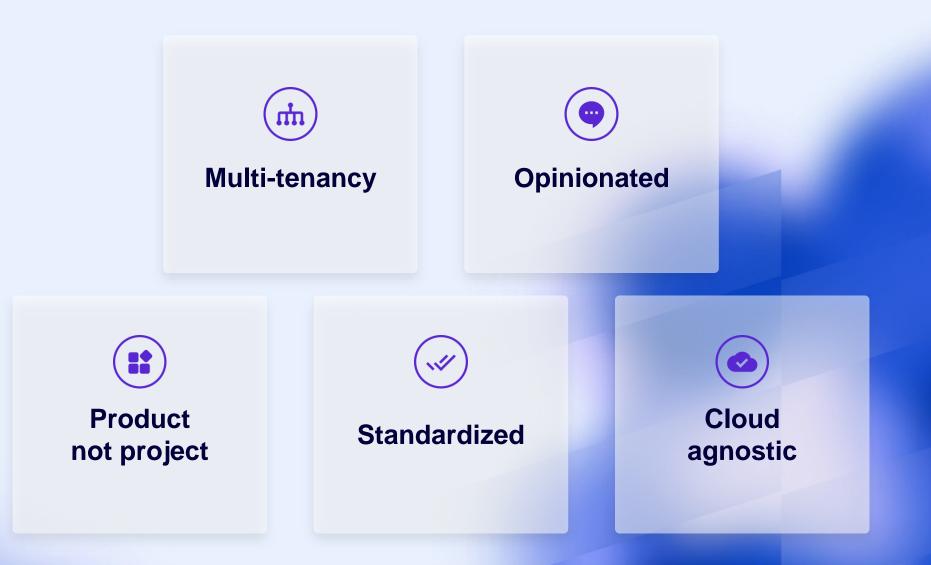
Visibility and automation 'baked in'

Aligned to standards

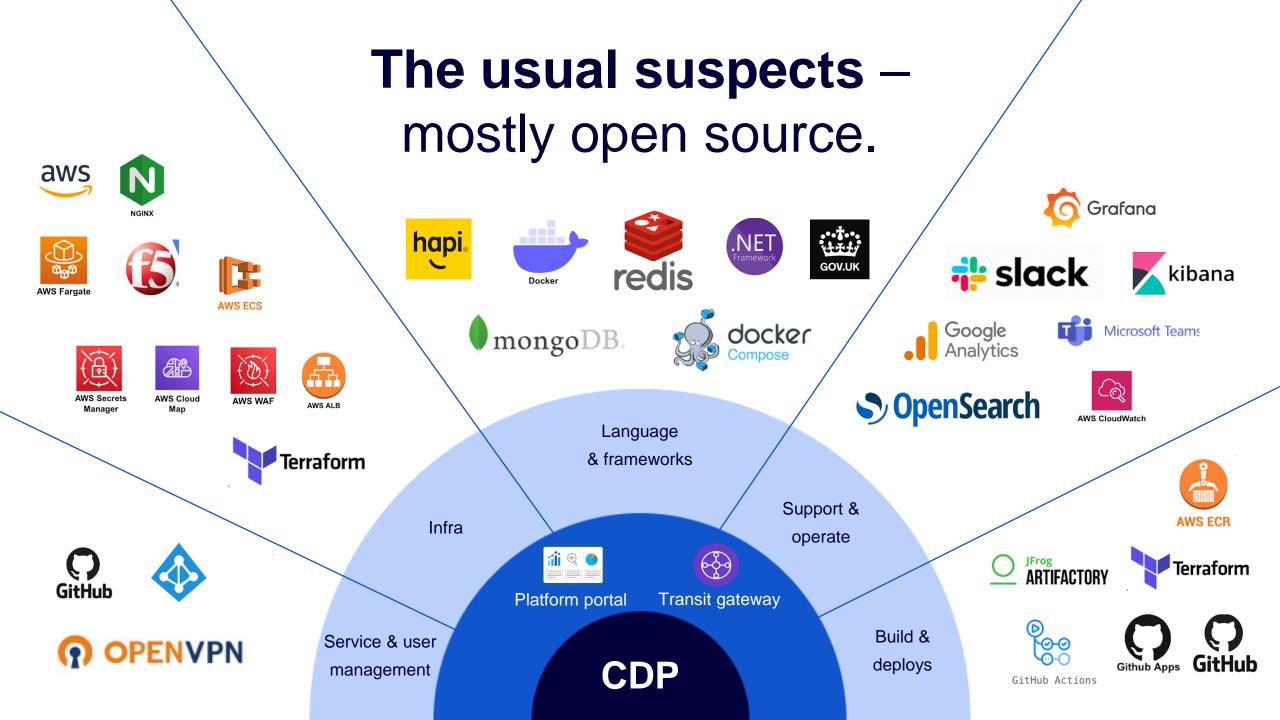


Reduce the barriers to entry

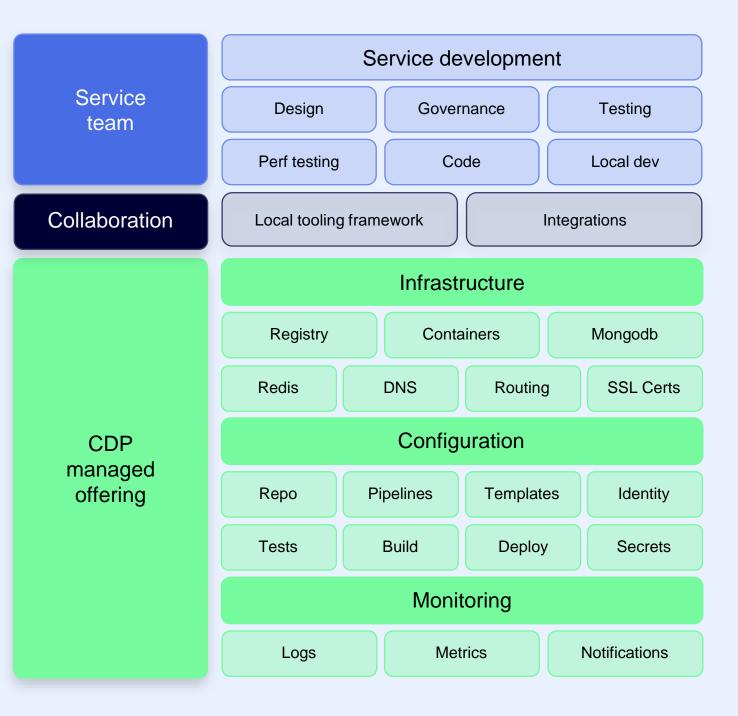
What is CDP ?



What did we build?



Abstract the platform workings away from teams...



Telemetry stack – comes out of the box

				1–50 of 1744	9	<	>
	Time 🗸	container_name	log.level	message	res.	statu	sCode
>	Apr 16, 2024 @ 16:51:37.973	cdp-portal-frontend	info	[response] get / deployments/d ev/61054786-a 3ac-44b9-9feb -51f3f5cde09c 200 (36ms)	200		
>	Apr 16, 2024 @ 16:51:36.972	cdp-portal-frontend	info	[response] get / 200 (5ms)	200		
>	Apr 16, 2024 @ 16:51:36.972	cdp-portal-frontend	info	[response] get / health 200 (2m s)	200		
	Apr 16, 2024 @ 16:51:33.989	cdp-portal-frontend	info	[response] get / deployments/d ev/61054786-a 3ac-44b9-9feb -51f3f5cde09c 200 (89ms)	200		
>	Apr 16, 2024 @ 16:51:33.729	cdp-portal-frontend	info	[response] get / 200 (5ms)	200		
>	Apr 16, 2024 @ 16:51:33.729	cdp-portal-frontend	info	[response] get / health 200 (1m s)	200		

Ø	Q Search or jump to 📾 cmd+k	+ ~	
Home > Dashboards > CDP_Portal > CDP Portal Front End	æ	🗚 Add 🗸 🖺 🎯 🕐 Last 24 hours 🗸 ද	
Service Status	Service Utilisation Metrics		
O Last 5 minutes Running History	Reserved CPU	Reserved Memory	
Running 2	1024		
2	Service CPU utilisation	Service memory utilisation ①	
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O Last 5 minute: Desired History	0 18:00 21:00 00:00 03:00 06:00 09:00 12:00 15:00 Couldiant Last 8 20 Coulderand Last 1024	0 MiB 18:00 21:00 00:00 03:00 06:00 09:00 1 Memory Milliond Last 173 MiB — Memory Reserved Last	
Desired ⁴	- CpuUtilized Last: 8.70 - CpuReserved Last: 1024	— MemoryUtilized Last: 173 MIB — MemoryReserved Last:	
2	Percentage CPU usage ③ 100% 2 50% 3 0%	Percentage memory usage	
20:00 00:00 04:00 08:00 12:00 16:00	18:00 21:00 00:00 03:00 06:00 09:00 12:00 15:00 - cpu_percent_usage Last: 0.850%	18:00 21:00 00:00 03:00 06:00 09:00 - memory_percent_usage Last: 8.45%	
Last 5 minutes Pending History			
Pending 75	Service Disk Read/Write [bytes]	Service network usage	
6 0 2 5	0 B 18:00 21:00 00:00 03:00 06:00 09:00 12:00 15:00	0 B/s + + +	
0 20:00 00:00 04:00 08:00 12:00 16:00	— DiskReadBytes — DiskWriteBytes	- NetworkRxBytes - NetworkTx_Bytes	

CDP Portal Service creation (6 clicks, 6 minutes)

Core Delivery Platform - Portal

Home Services Test suites Utilities Teams Deployments Running Services

Services > agie-front-end

agie-front-end

Information about the agie-front-end microservice.

About

Git repository for service agie-front-end

Application links	🕒 Logs
Access your service in CDP environments.	OpenSearch logs for monitoring an troubleshooting issues.
Dev agle-front-end.dev.cdp-int.defra.cloud Test	Dev logs.dev.cdp-int.defra.cloud
agie-front-end.test.cdp-int.defra.cloud	Test
Prod	logs.test.cdp-int.defra.cloud
agie-front-end.prod.cdp-int.defra.cloud	Prod logs.prod.cdp-int.defra.cloud

Configuration Manage service configuration across CDP environments.

DEFRA/cdp-app-config/agie-front-end

Running Services

GitHub Repository DEFRA/agie-front-end Team Air-Quality

Grafana observability metrics data and graphs. Dev metrics.dev.cdp int.defra.cloud Test metrics.test.cdp-int.defra.cloud

metrics.prod.cdp-int.defra.cloud

C Metrics

Prod

Test, build and publish ready to deploy docker images with GitHub

🕑 Builds

DEFRA/agie-front-end/actions

Actions.

Cdp frontend node service

defradigital/agie-front-end/tags

Repository Created Fri 2nd Feb 2024 at 11:30

Details

Language JavaScript

Docker Hub

Service deployment (11 clicks, 1 minute)

Core Delivery Platform - Portal

Home Services Test suites Utilities Teams Deployments Running Services

Running Services

Sign i

What microservices are running where? and on which environments.

aqie-back-end 0.19.0 0.19.0 aqie-front-end 0.50.0 0.45.0 0.42.0 cdp-defra-id-demo 0.9.0 cdp-defra-id-demo 0.14.0 0.8.0 cdp-example-node-backend 0.31.0 0.9.0 0.9.0 cdp-uploader 0.37.0 forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	Service	Dev	Test	Perf-test	Prod
cdp-defra-id-demo 0.9.0 cdp-example-node-backend 0.14.0 0.8.0 cdp-example-node-frontend 0.31.0 0.9.0 0.9.0 cdp-uploader 0.37.0 forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	aqie-back-end	0.19.0	0.19.0		
cdp-example-node-backend 0.14.0 0.8.0 cdp-example-node-frontend 0.31.0 0.9.0 0.9.0 cdp-uploader 0.37.0 forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	aqie-front-end	0.50.0	0.45.0		0.42.0
cdp-example-node-frontend 0.31.0 0.9.0 0.9.0 cdp-uploader 0.37.0 forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	cdp-defra-id-demo	***	0.9.0		
cdp-uploader 0.37.0 forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	cdp-example-node-backend	0.14.0	0.8.0		
forms-designer 0.33.0 0.1.0 0.1.0 0.1.0 forms-manager 0.25.0	cdp-example-node-frontend	0.31.0	0.9.0		0.9.0
forms-manager 0.25.0	cdp-uploader	0.37.0			****
	forms-designer	0.33.0	0.1.0	0.1.0	0.1.0
· · · · · · · · · · · · · · · · · · ·	forms-manager	0.25.0			
forms-runner 0.33.0 0.29.0 0.29.0	forms-runner		0.33.0	0.29.0	0.29.0

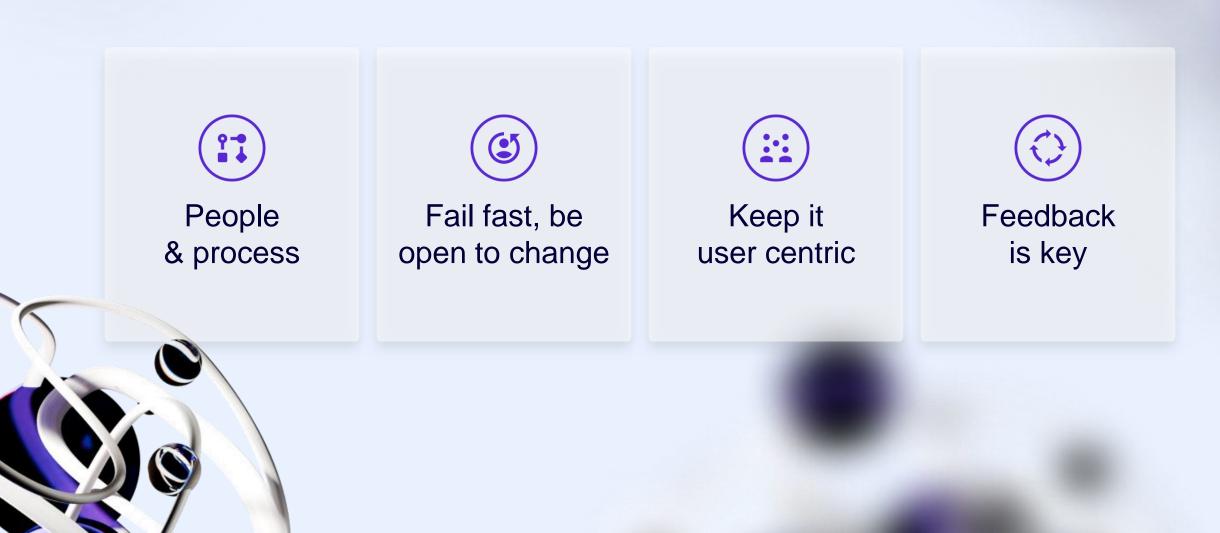
The versions of your service currently running on the CDP environments.

Successes and outcomes

	Current Iandscape	Using CDP
Time to deploy	c.3-6 Months	Hours/ minutes
Time to make changes	c.1-6 Weeks	Hours/ minutes
Team Inumbers	Multiple w/ hand offs	Single delivery team w/ platform support (if required)
Deployment frequency	Weekly/monthly	Self-service & on demand
Service failure recovery	c.1 Week or less	<1 hour, self-healing or rollbacks to previous version

Takeaways

Key takeaways





Thank you Catch esynergy at **Stand C2A** on the exhibition floor to continue the conversation