Intellectual Property Office

Digital Transformation and Key Challenges from a Data Perspective

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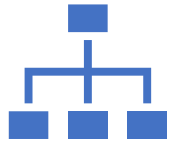
Intellectual Property Office is an operating name of the Patent Office

Background to OneIPO Transformation

The OneIPO Transformation Programme is a £multimillion investment to overhaul the IPO's internal and customer facing digital services across Patents, Trade Marks and Designs, and is the most ambitious transformation in our 170 year history.

It replaces aging systems and digital services that are inefficient, approaching obsolescence and not meeting customer or internal user expectations.

The new Patents service has launched for a sub-set of volunteer customers (Private Beta), with an expected full launch later in 2025, followed by Phase 2 focused on Trade Marks and Designs.



The transformation to date has involved a large overhaul in how the organisation behaves, moving from a Right centric approach to a Customer centric approach. This design includes a single Intellectual Property platform capable of supporting Patents, Supplementary Protection Certificates, Trade Marks and Designs.

An area of criticality was the ongoing Data Migration from multiple Platform Legacy systems to OneIPO; supporting both initial one-off Data Migration and incremental data migration to maintain Legacy and OneIPO synchronously during a period of parallel running.

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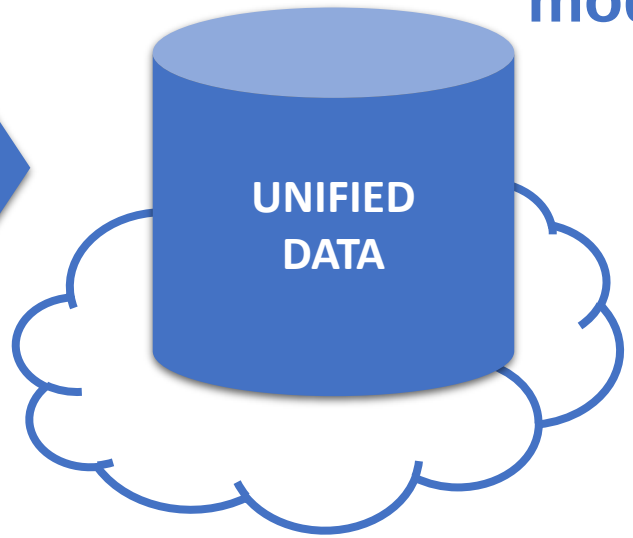
OneIPO Data transformation

From on premises legacy...

DATA MIGRATION



..into a new cloud data architecture with unified data model.

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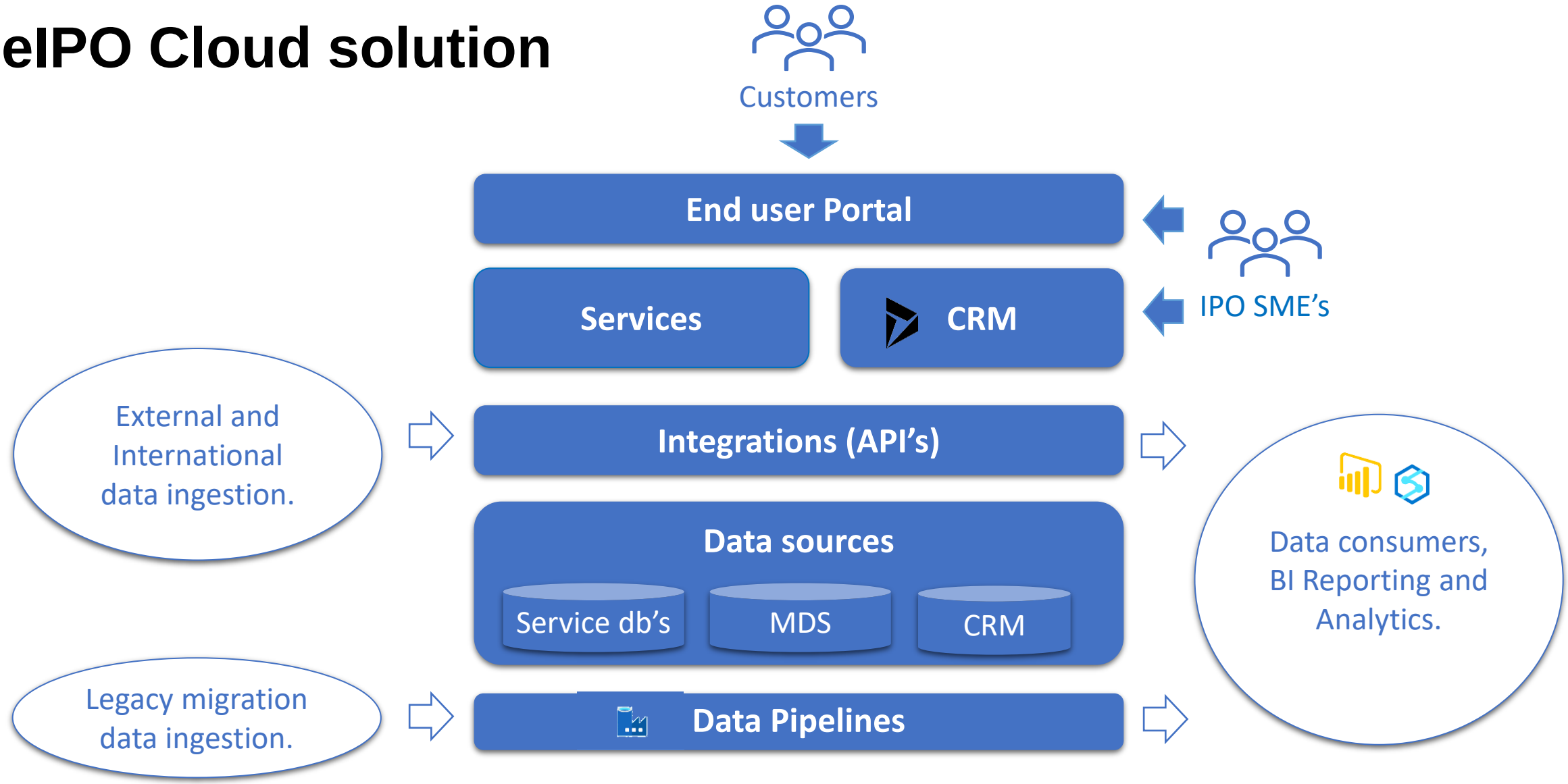
OneIPO Cloud solution



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What were the key challenges?

Migration from a complex legacy landscape within a highly regulated environment posed significant challenges.

Data quality issues within the underlying systems.

De-duplication of names and addresses to create new customer account and portfolio view including.

Legacy world based on complex transformations of the data between storage and presentation layers requiring rebuilding of these transformations within migration pipelines.

Parallel running of OneIPO Services alongside legacy Services – keeping the two in Synchronisation using “Delta feeds”.

Legal framework sets out set of strict requirements of storing and presenting legacy data in the new world.

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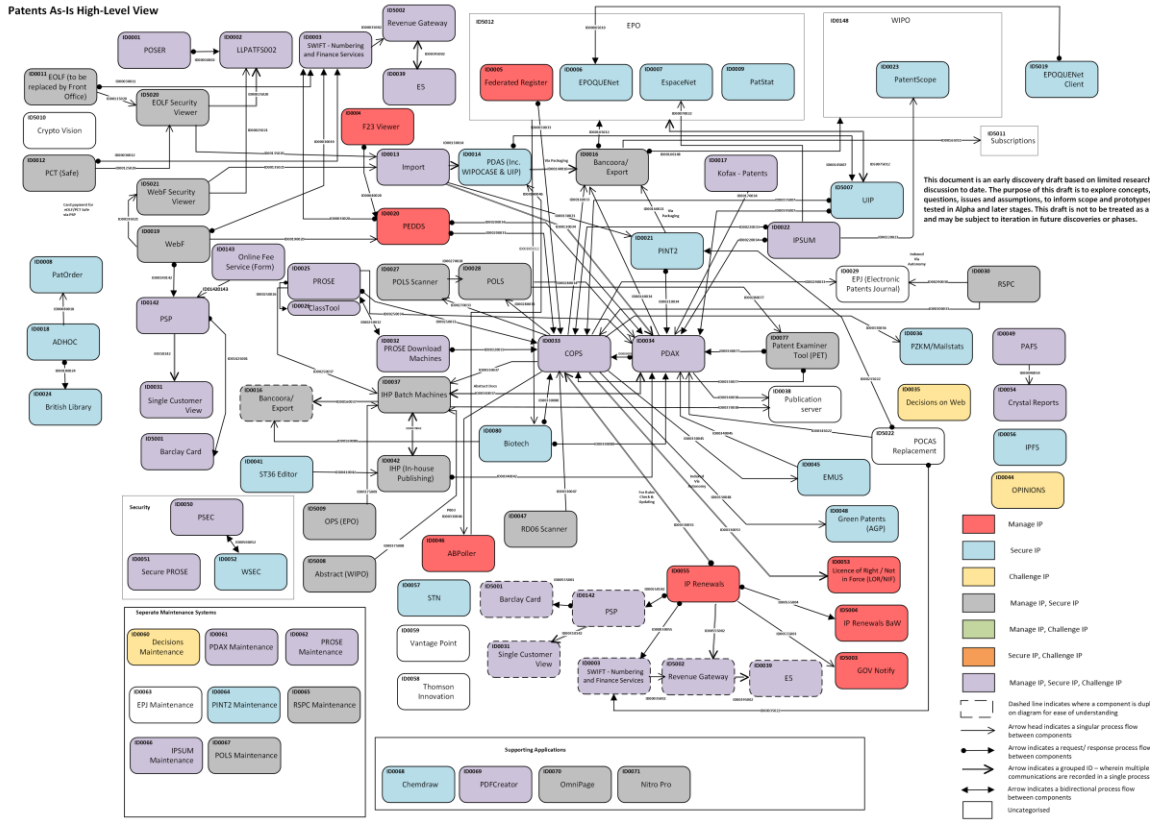
What our estate looked like before!

- Dozens of disparate systems, often storing similar or overlapping information
- Multiple data feeds both inbound and outbound out of most systems, creating a “spaghetti diagram” that the business struggled to maintain and diagnose issues with
- Lots of business-critical legacy systems that were old and starting to become “burning platforms”



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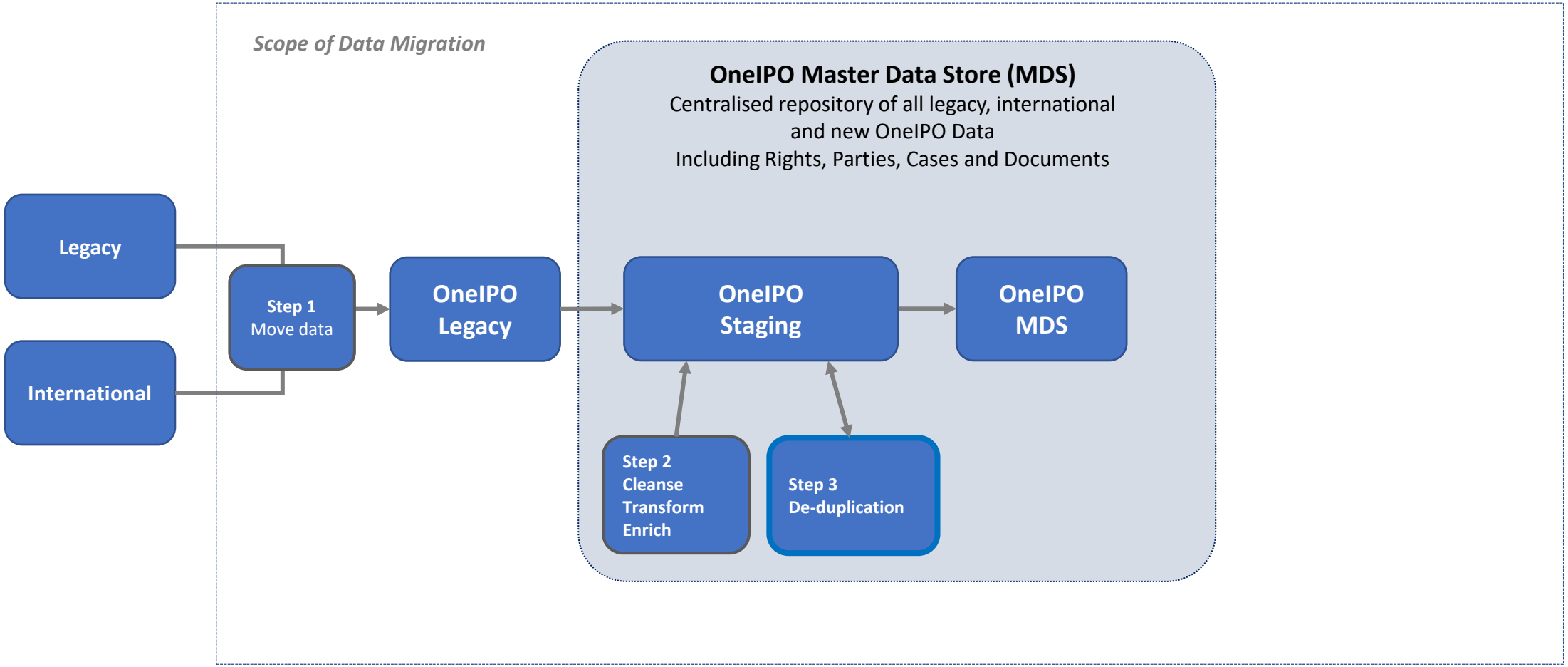
Data Migration Approach



International – Data Source from RD06, Madrid and Hague

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Improving Data Quality

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Business outcomes

80M+ PATENT DOCUMENTS CONVERTED
to a standard PDF format and written to object storage to be retrieved and viewed digitally by internal and external users

50M+ ACTIVE PATENT DATA RECORDS MIGRATED
from six separate legacy databases, remodelled, transformed and consolidated into a single cloud-hosted database

3M+ RIGHTS ARCHIVED AS JSON OBJECTS
preserving the hierarchical schema structure and serving as source data for data feeds and APIs

25M+ PUBLIC REGISTER AND JOURNAL ENTRIES
transformed and loaded into distributed text storage to be displayed on public front end services

30K+ PATENTS OPERATIONALLY TRANSITIONED
seamlessly into the new Dynamics case management platform from legacy systems

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Customer outcomes

Access for the first time ever to the full range of our patents data for over 700,000 UK Patents including that of Supplementary Protection Certificates (SPCs)

Addition of abstract and full-text data to provide enhanced keyword searching; machine learning and query term expansion

New and more powerful tools for visualising and analysing search results

A move to near “real” time publishing including the delivery of a fully customisable journal; Implementation of ST.27 International standard for the representation of journal events

The ability to export search results and to download documents; to monitor patents and to save searches.

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What our customers have said

"You have made the experience of searching where my application was at every point in this process very easy. I would highly recommend everyone to use this source as it has helped me understand your processes. Thank you"

"I have used the new search facility for the first time today. My first impressions are good"

"Thank you for the efforts put into the new search interface. It is impressive. Many thanks for the great effort."

"A great source for information on SPCs"

"very powerful site to locate the document as per its status"

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What our customers have said

Tara Gillam - Innovate UK Business Growth

This is exactly the kind of practical support that can help British businesses move from idea to market more quickly and confidently when looking to innovate and grow.

Feryal Clark - Minister for Intellectual Property

Through One IPO Search, users will have access to all the information they need in a single, easy to use platform – modernising an outdated system which will support our innovators to do what they do best for years to come.

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