



opentextTM

Digital Innovations in Capture

Solutions Overview

April 2018 | Thomas Woppmann

OpenText digital mailroom solutions and technologies



Distributed and multichannel capture

- OpenText Capture Center
- OpenText Captiva Cloud Capture Toolkit
- OpenText Captiva Mobile SDK
- OpenText TeleForm & Liquid Office
- OpenText LEAP Snap



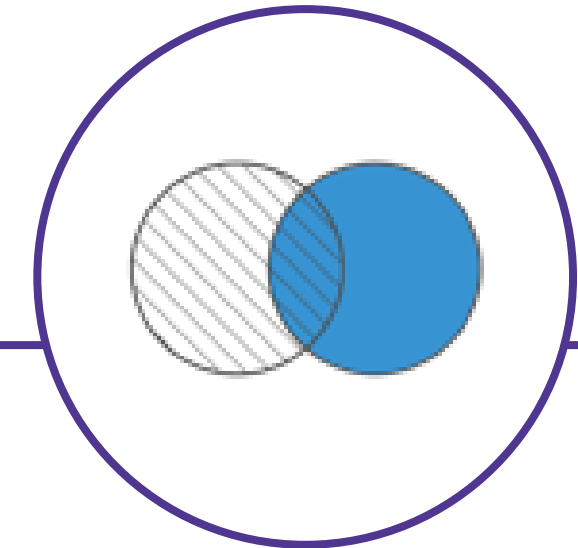
Automated document and data recognition

- OpenText Captiva
- OpenText Capture Center
- OpenText Capture Document Recognition
- OpenText Capture Recognition Engine
- OpenText TeleForm
- OpenText LEAP Snap



Enterprise scalability

- OpenText Captiva
- OpenText Captiva Real-Time (REST APIs for capture services)



Embed within business process

- OpenText Captiva
- OpenText Captiva Real-Time (REST APIs for capture services)
- OpenText LEAP Capture Services

Enterprise capture figures



30 billion images
captured per year

Covering a range of industries and geographical locations. OpenText is a market leader



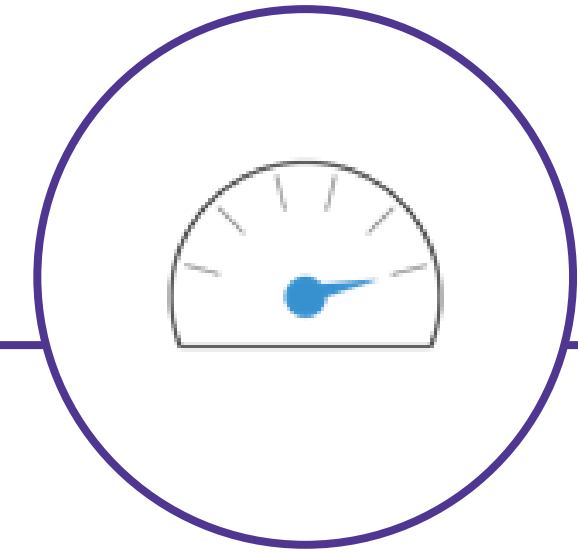
13 of top 20 banks
run OpenText capture

Seen as the capture platform of choice for many FSI customers. OpenText is critical to many processes for the top banks



7 million images
per day by one customer

Our largest customer consistently captures over 7 million pages per day at a single site



1,000,000s of mobile devices

First released in 2014, and now on version 2.6, Captiva's mobile SDK is embedded within a number of consumer-facing mobile applications

What do people look for?



Omnichannel

- Centralized capture
- Remote branch capture
- Mobile devices
- White mail
- Electronic documents
- Web portals
- Web services
- Email
- File drop
- Fax
- Chatbots
- Twitter



Turn unstructured into structured

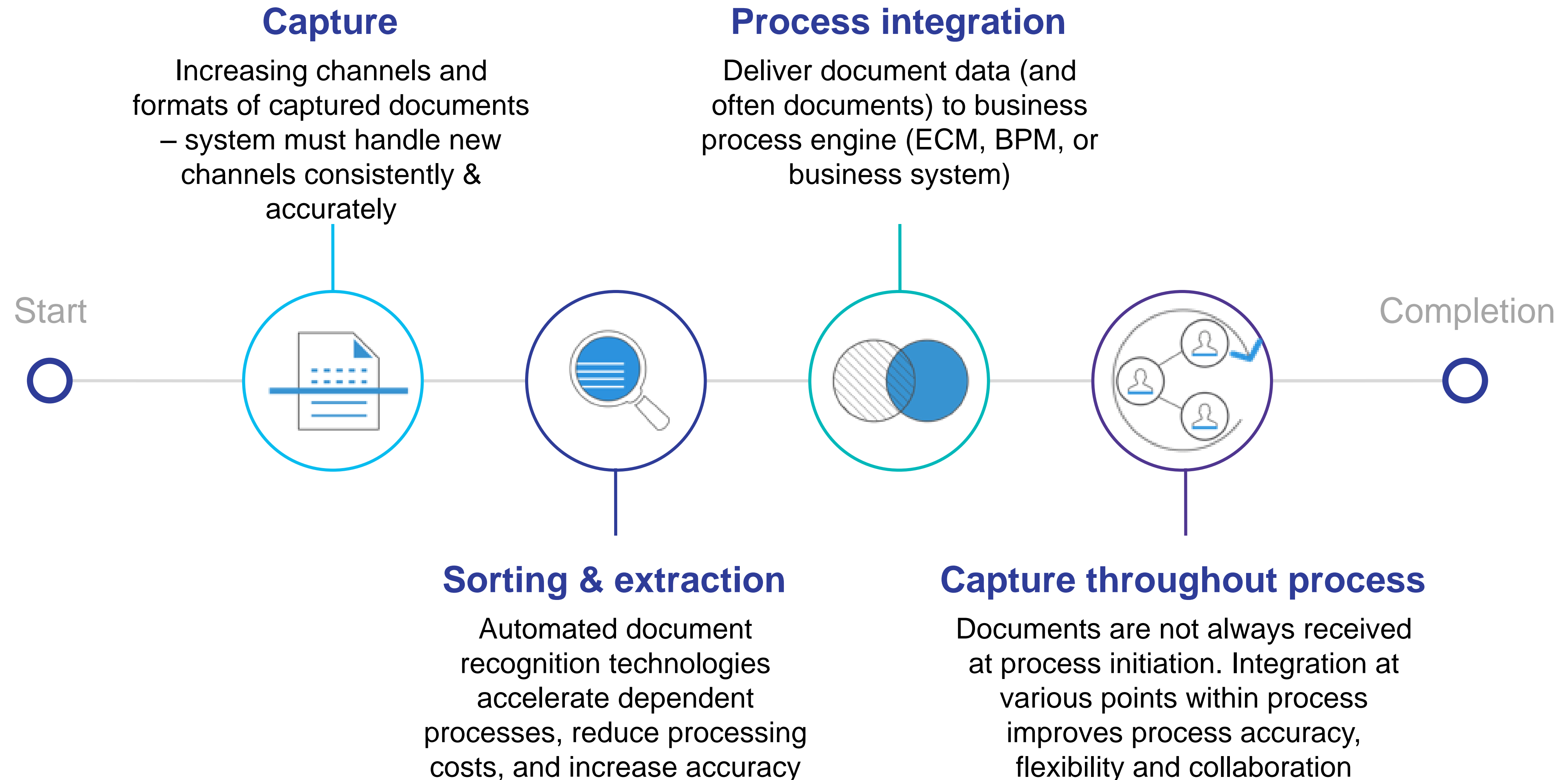
- Invoice details
- Cheques
- Trade confirmations
- Sanction compliance
- Names
- Addresses
- Account information
- Tax details
- Medical records
- GDPR compliance
- PPI



Machine automation

- Fraud detection
- Credit checks
- Invoice payments
- Mortgage approvals
- Insurance claims
- Liability
- Money deposits
- Consumer loans
- Expense payments
- Account amendments
- Tax returns

Capture Processes

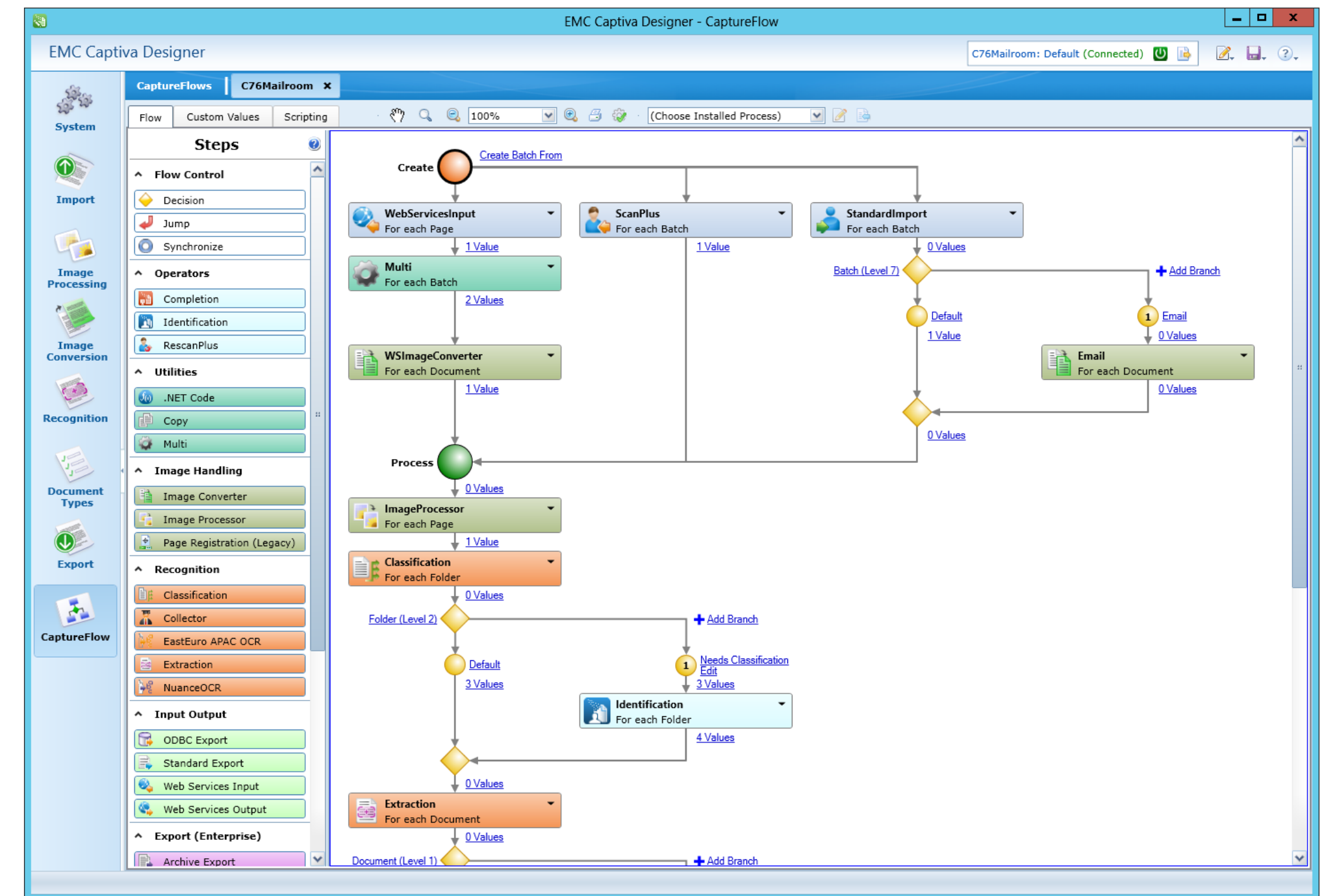


It's about the “3A's”

Automation, APIs & AI

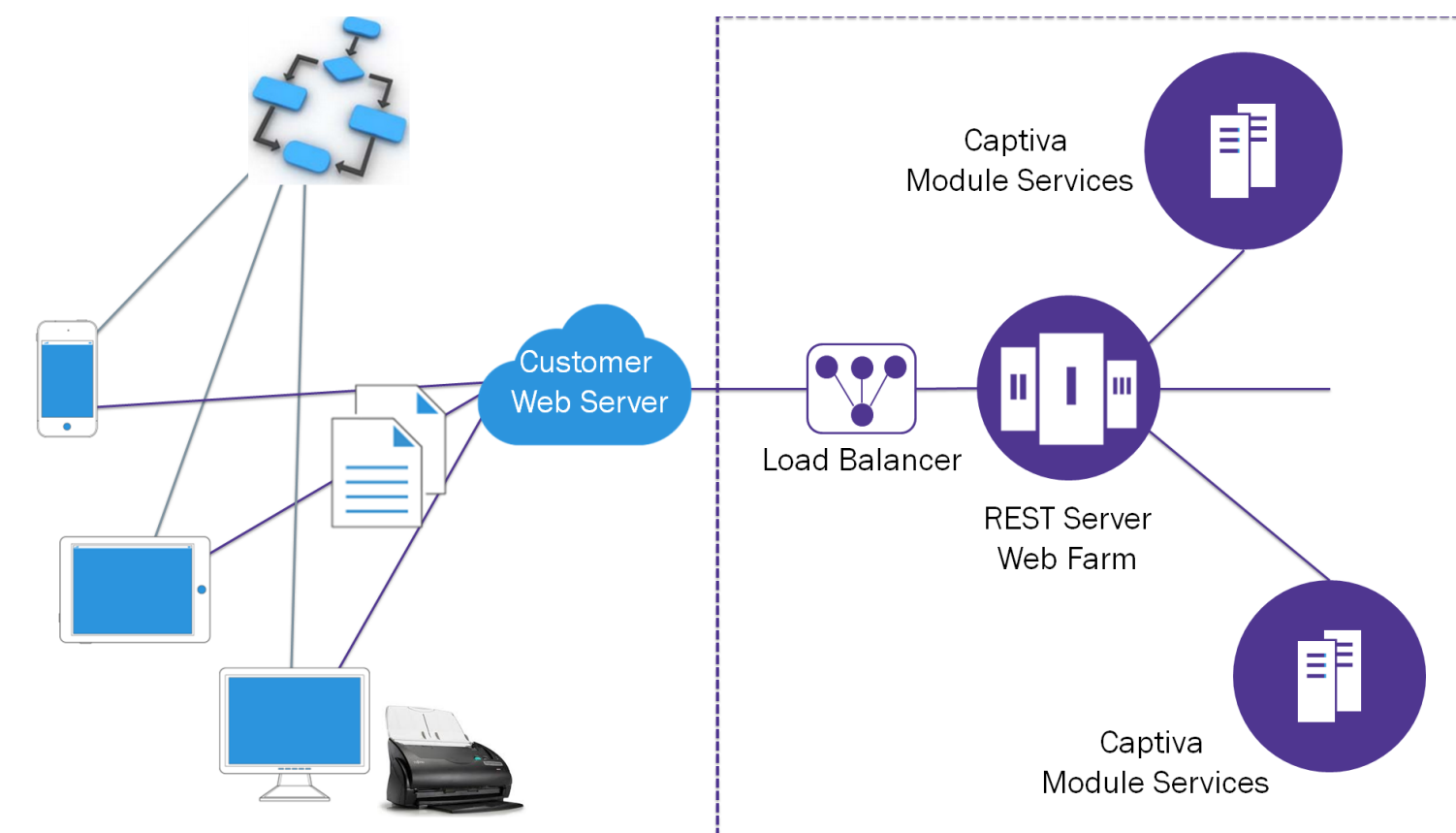
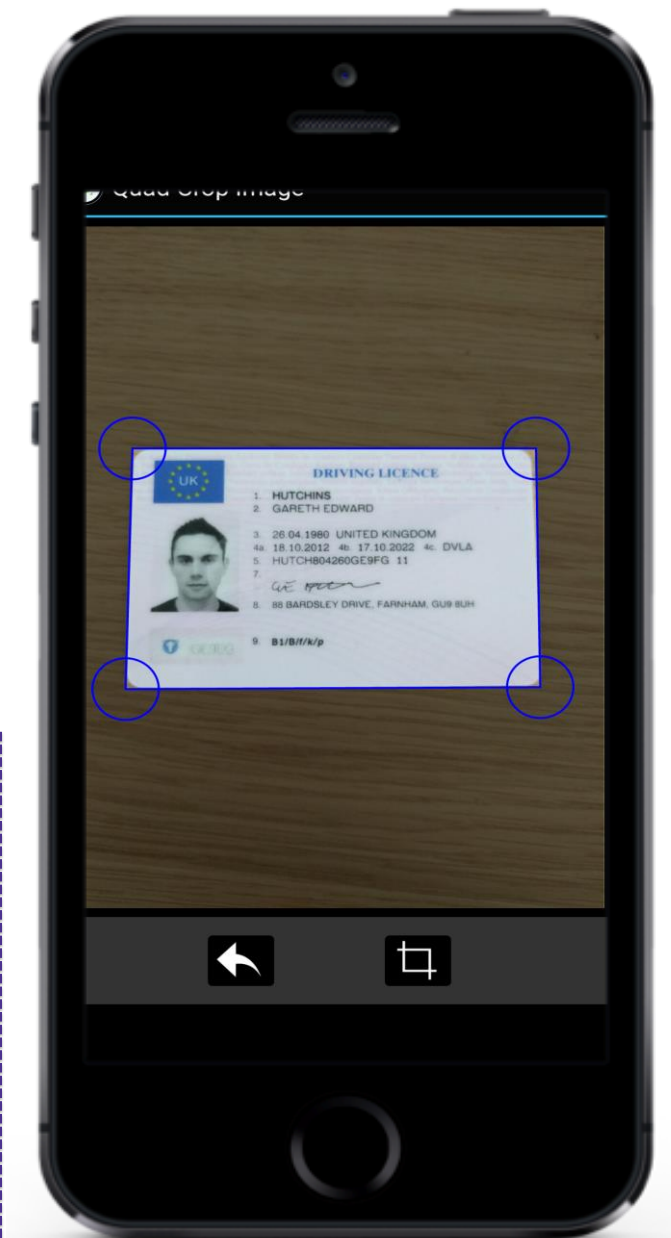
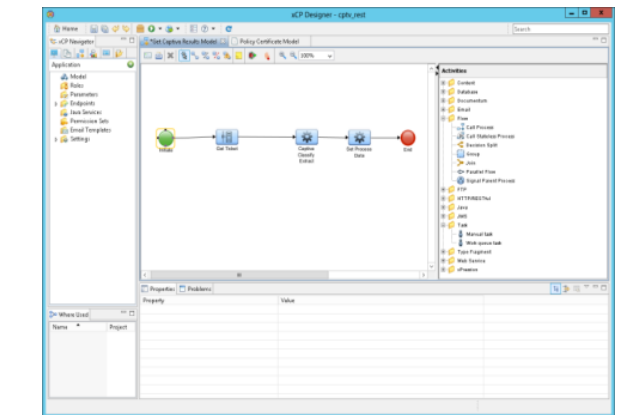
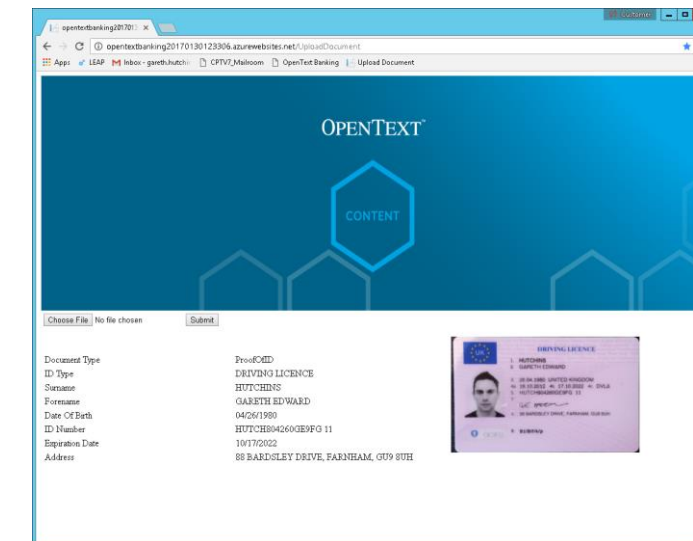
Automation

- Automate business processes for faster response time
- Humans manage exceptions, robots do the rest
- Integrate with 3rd party systems
- Automate complex business rules for data integrity
- Can model very complex processes



Application Programming Interfaces (APIs)

- APIs provide ubiquitous access to capture functionality
- Expose mailroom knowledge base to new channels
- Discrete REST services for specific tasks
- OpenText has a broad range of APIs, including on-device and scanner controls, which are also OEM'd by our competitors



Customer Onboarding Automation

- Mobile SDK & Captiva Real-time services
- SDK provides feedback on the device
- Captiva Real-time provides intelligent document recognition techniques
- Embeds into customer's existing mobile application



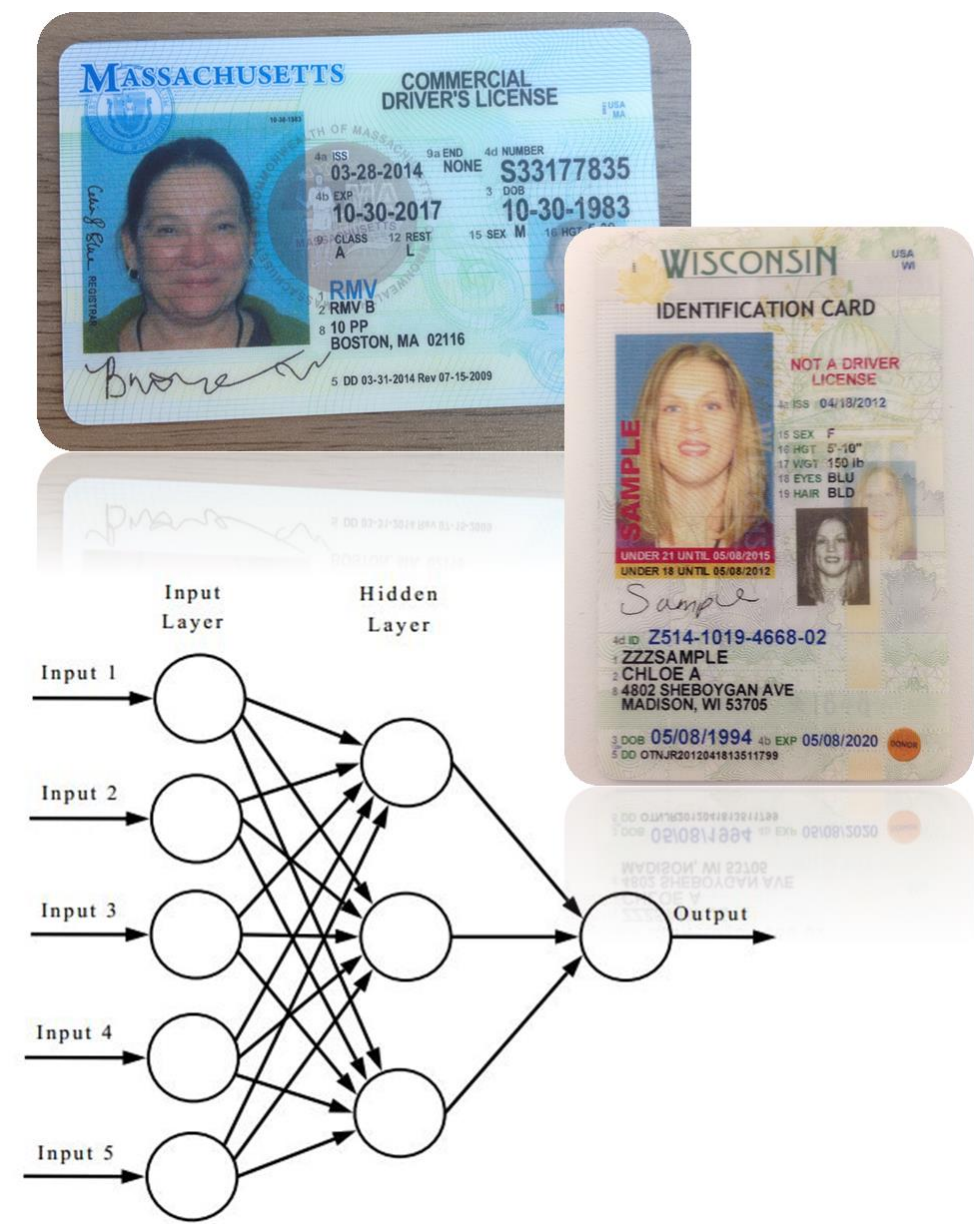
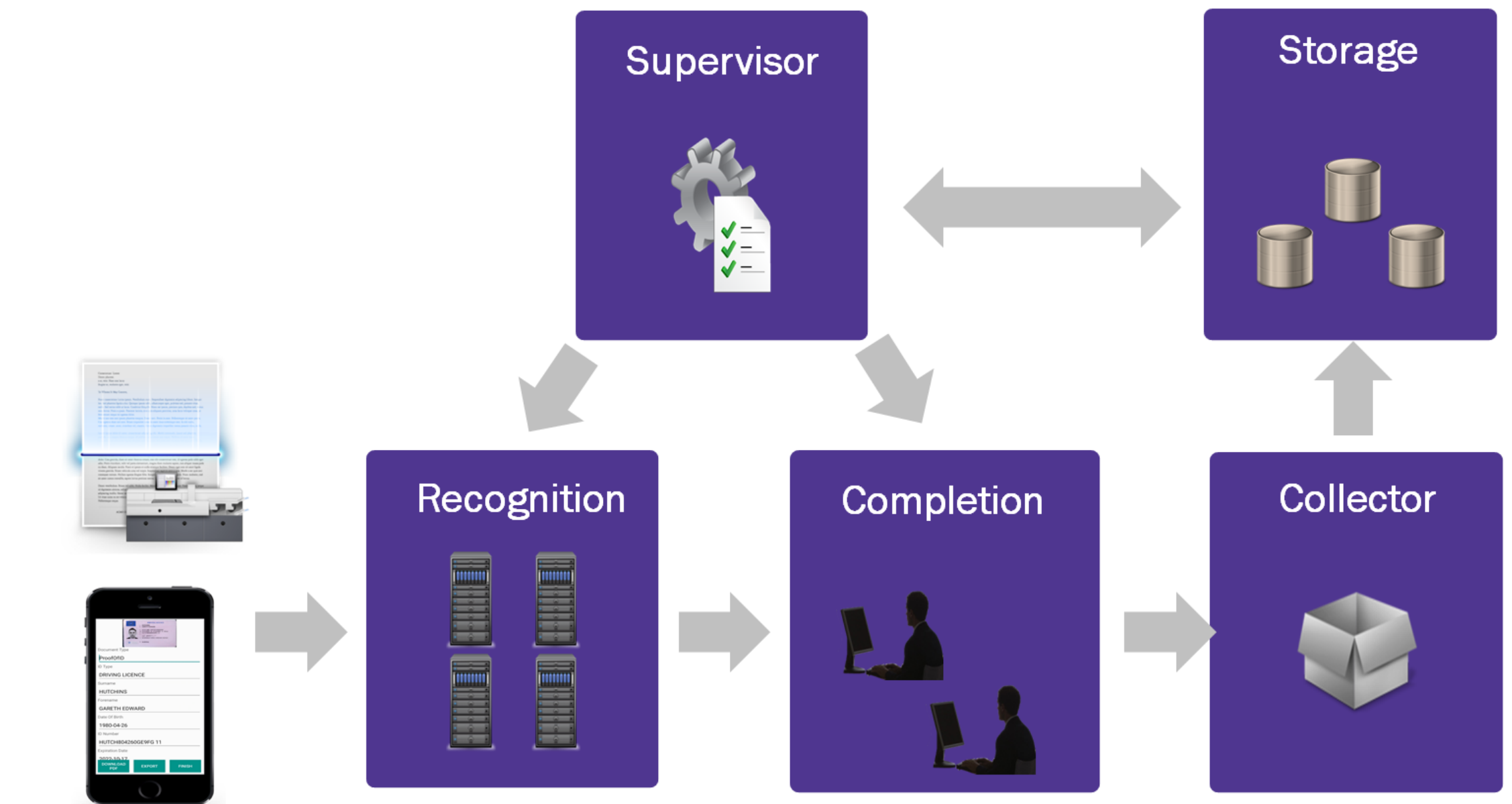
Automation of Taxation, Fees & Contribution Payments

- Captiva Real-time services
 - When capture functionality is needed outside a mailroom (batch) system
 - Accelerates transactions by literally an order of magnitude
 - Seconds, instead of minutes or hours
- Real-time automated processing of documents from:
 - ATMs
 - Mobiles
 - Web portals
- Multiple variations of documents

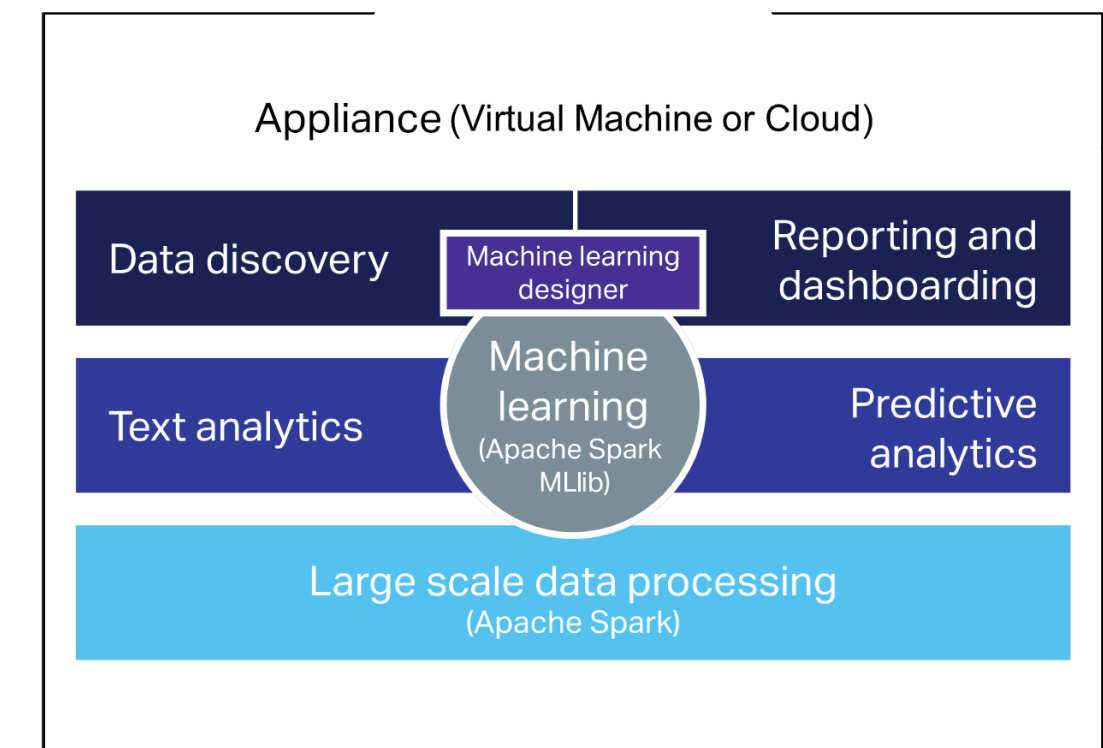


Artificial Intelligence (AI)

- Techniques to improve accuracy and speed by learning document layouts
- Neural networks to improve automation from documents that are difficult to process by other means
- Add Magellan for advanced analytics and Natural Language Processing (NLP)



opentext™ | Magellan



Using Content Analytics for Data Extraction

- Can help us improve recognition of Proper Nouns
- Reduce TCO of Capture solutions
- Automated & Assisted learning
- Normalisation of Data
 - Town > Borough > County > Country > Continent

`</>`
METADATA

Structure to the Unstructured

`<topics/>` `<organizations/>`
`<concepts/>` `<locations/>`
`<people/>` `<sentiment/>`

Content Analytics uses **semantic** technologies to **unlock business value** from **unstructured content** and applying inferred metadata on the content

opentext™ | Magellan



opentext™ | Captiva

For

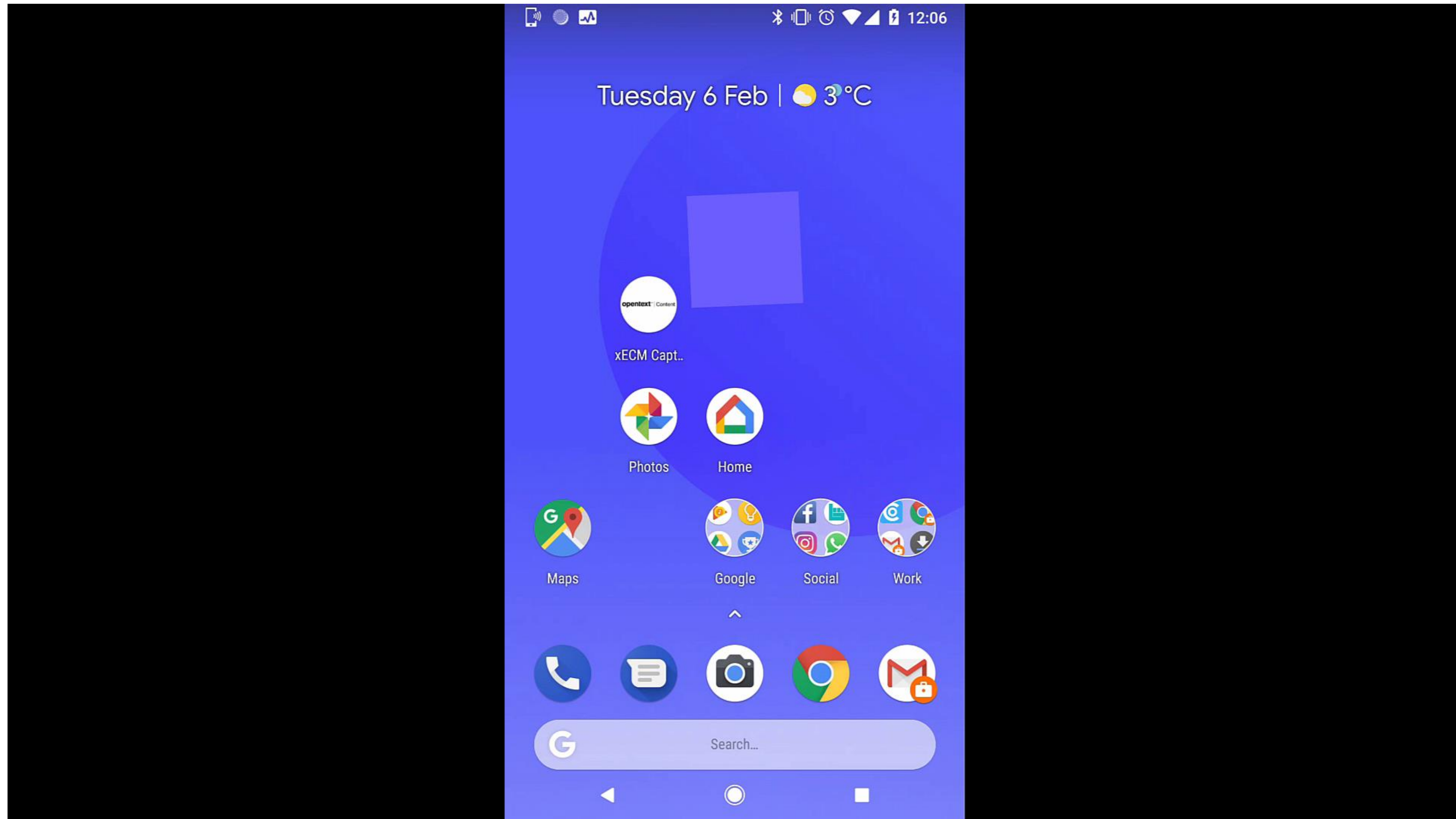
AI-Augmented Capture

- Process documents during capture
- Use Advanced Recognition for structured and semi-structured documents
- Use AI for unstructured documents and named entity extraction
- Automate routing and processing

Leveraging AI to
enhance
document capture

Provides insight
on unstructured
data

Captiva + Real-Time + Magellan + xECM



Captiva Updates

Captiva Mobile SDK 2.6

Captiva Mobile SDK Overview

- Enables mobile applications to take optimal pictures for OCR
 - Photos can be a little blurry; document images must not be
 - SDK provides feedback to user on the device
 - Software waits to take pictures until the device is stable and focus is locked
 - Auto-reject low-quality images
- Self-contained APIs
 - Customers need not know anything about document capture
 - Extensible UI for visual alignment with the application
 - Also allows automatic multi-page capture using video feed from mobile camera
- Supports Captiva Real-Time Intelligent Document Recognition
 - Classification and data extraction in real-time while your customer is holding their phone

Captiva Mobile SDK



APIs for mobile image capture

- Light sensor
- Autofocus
- Motion sensor
- Torch control
- Image stabilization time control
- Document size
- Automatic multi-page capture
- **Preview image quality scoring**
- White balance
- Perspective
- Glare
- Image guides
- Visual quality indicators
- Labels
- Replaceable UI
- **Resizable preview pane**

APIs for on-device image enhancement

- On-device barcode recognition
- Orientation correction
- Distortion correction
- Gray-scale & adaptive binary conversion
- Automatic cropping
- Resizing
- File format conversion

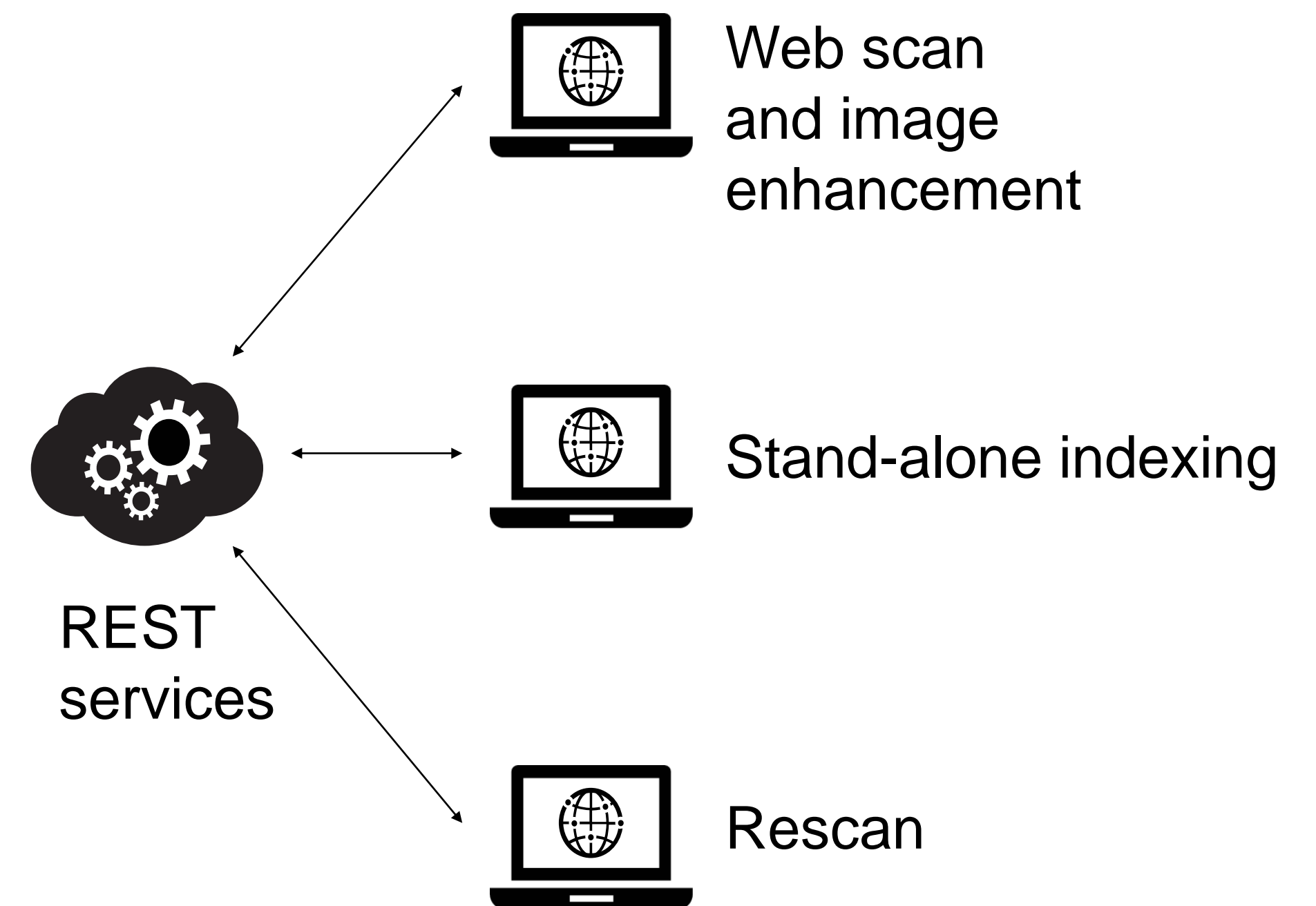


Captiva Updates

Captiva 7.7

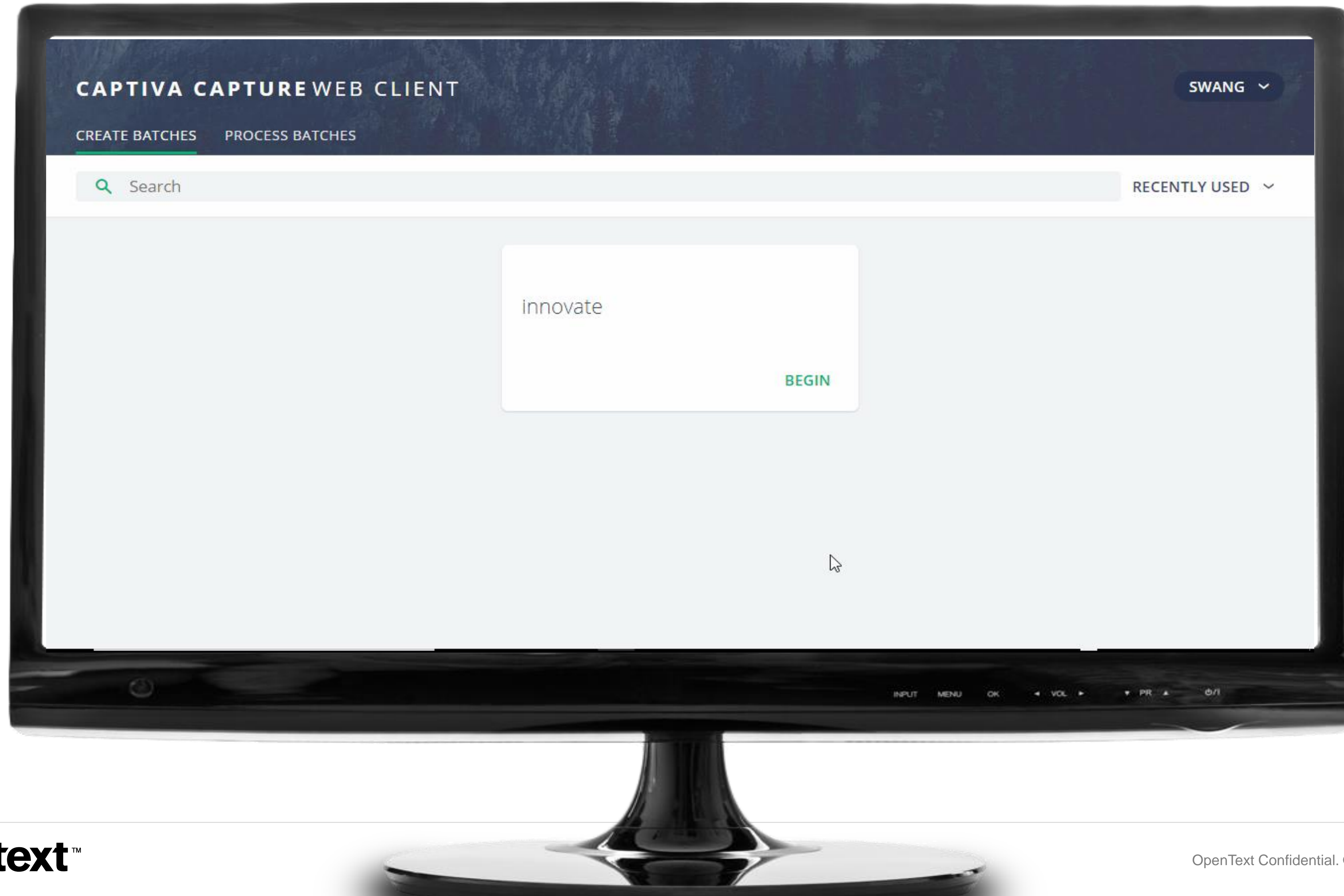
Captiva Web Client

- Knowledge-worker capture
- Real-time automated classification & extraction
- Common UI for:
 - Scanning
 - Indexing/data validation
 - Rescanning
- Called mid-process
 - Indexing/validation
 - Rescanning
- Same UI used for LEAP Snap product



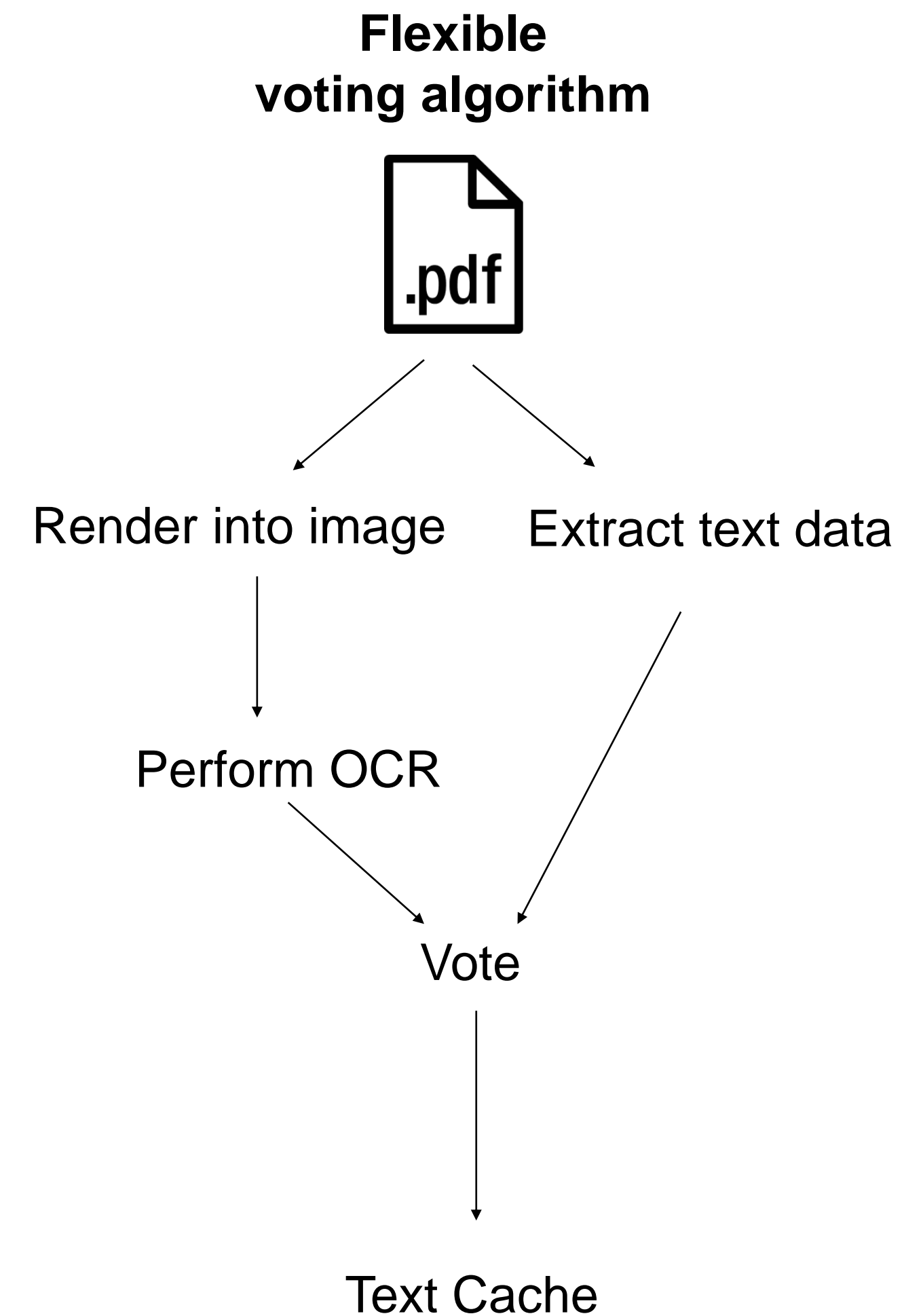
Updated

Captiva Web Client



Advanced PDF Processing

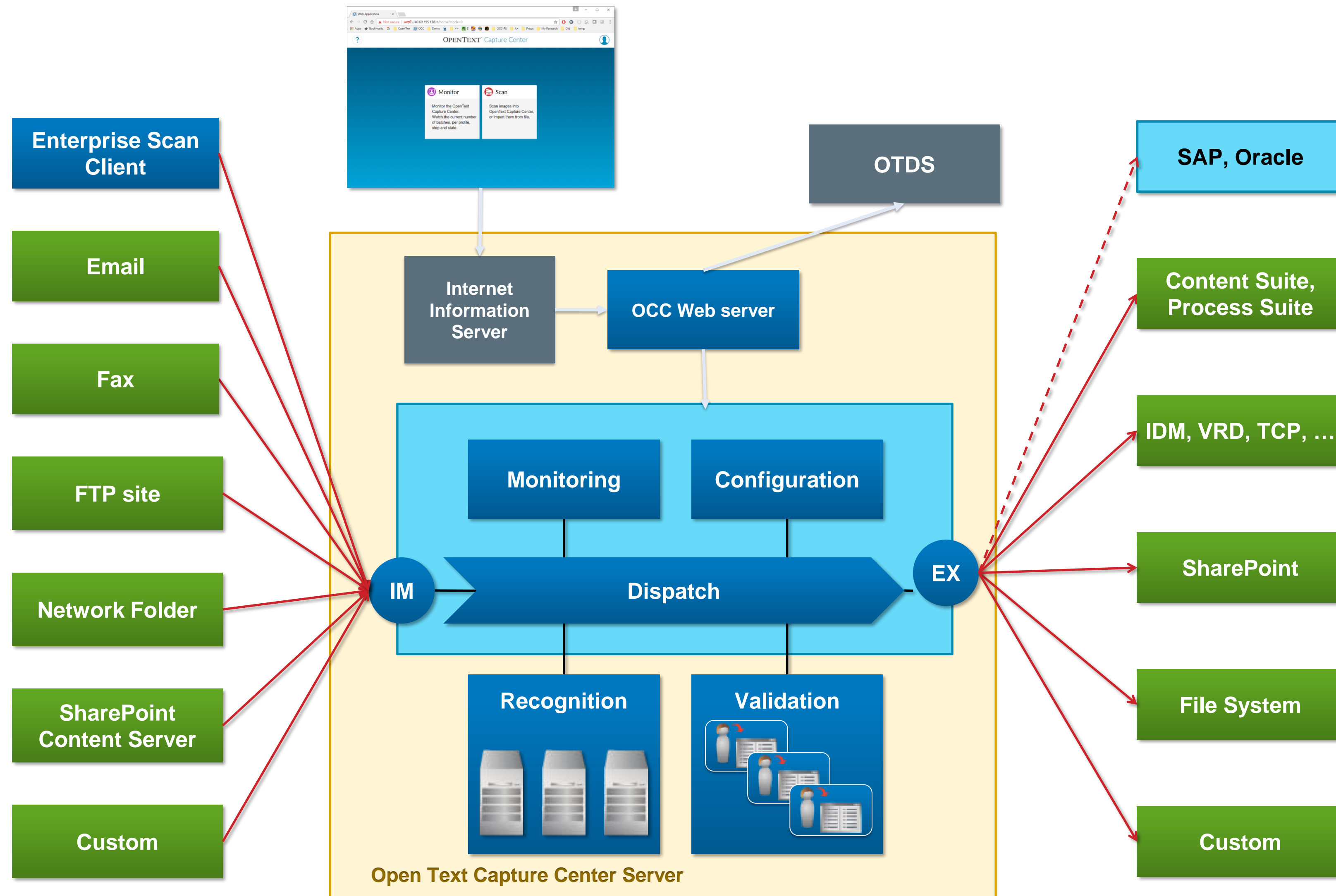
- Our customer are seeing large increases in born-digital documents
- Direct data extraction for text-based PDF documents
 - Improved accuracy
 - Higher throughput
- Special handling for PDFs with both text and images
 - Use text only
 - Use image only
 - Voting algorithm between text and image



Capture Center Update

OCC 16.4

Capture Center: Combining any input and any output



New in OCC 16.4

- Highlights
 - Support for tabular data, lookup lists and scripting in web validation
 - Improved adaptive recognition
 - Mobile scan client
- Other function
 - Process Suite export now supports new Content Building Block
 - REST API to load documents into OCC
 - Improved Real-time response
 - More cluster node management tools
 - Logging and history view for changes in user / task management
 - Function to process only a subset of a PDF

Web validation: New features

The screenshot shows the OpenText Capture Center Validate interface. The browser address bar indicates the URL: 40.69.195.138/#/Validation;taskName=Semi.Automatic;taskProfileName=Semi.Automatic;taskStepId=Semi.Automatic--Validation. The page title is "opentext | Capture Center Validate". The document being validated is "Semi.Automatic: Invoice01 (30001)".

The document content includes:

- Invoice date: **June 30, 2016**
- Invoice number: 470011
- Invoice date: June 30, 2016
- Invoice total amount: \$5,010.64
- Invoice order number: 4500017405
- Vendor: C.E.B. BERLIN
- Company: C.E.B. BERLIN
- Street: Kolping Str. 20
- City: Berlin
- Zip: 10115

The line items table is as follows:

Quantity	Unit	Description	Price	Total
2	PC	Netbook	\$1,340.00	\$2,680.00
5	PC	23-Inch	\$288.40	\$1,442.00
8	PC	External	\$89.90	\$719.20

The purchase order table is as follows:

Quantity	Unit	Description	Price	Total
2	PC	Netbook 10.1 inch -1 GB RAM -Clear Black	\$1,340.00	\$2,680.00
5	PC	23-Inch Widescreen LCD Monitor with Speaker, Shiny	\$288.40	\$1,442.00
8	PC	External Hard Drive - 2 TB USB 3.0 Ultra	\$89.90	\$719.20

The total amount is \$5,010.64.

Tabular data



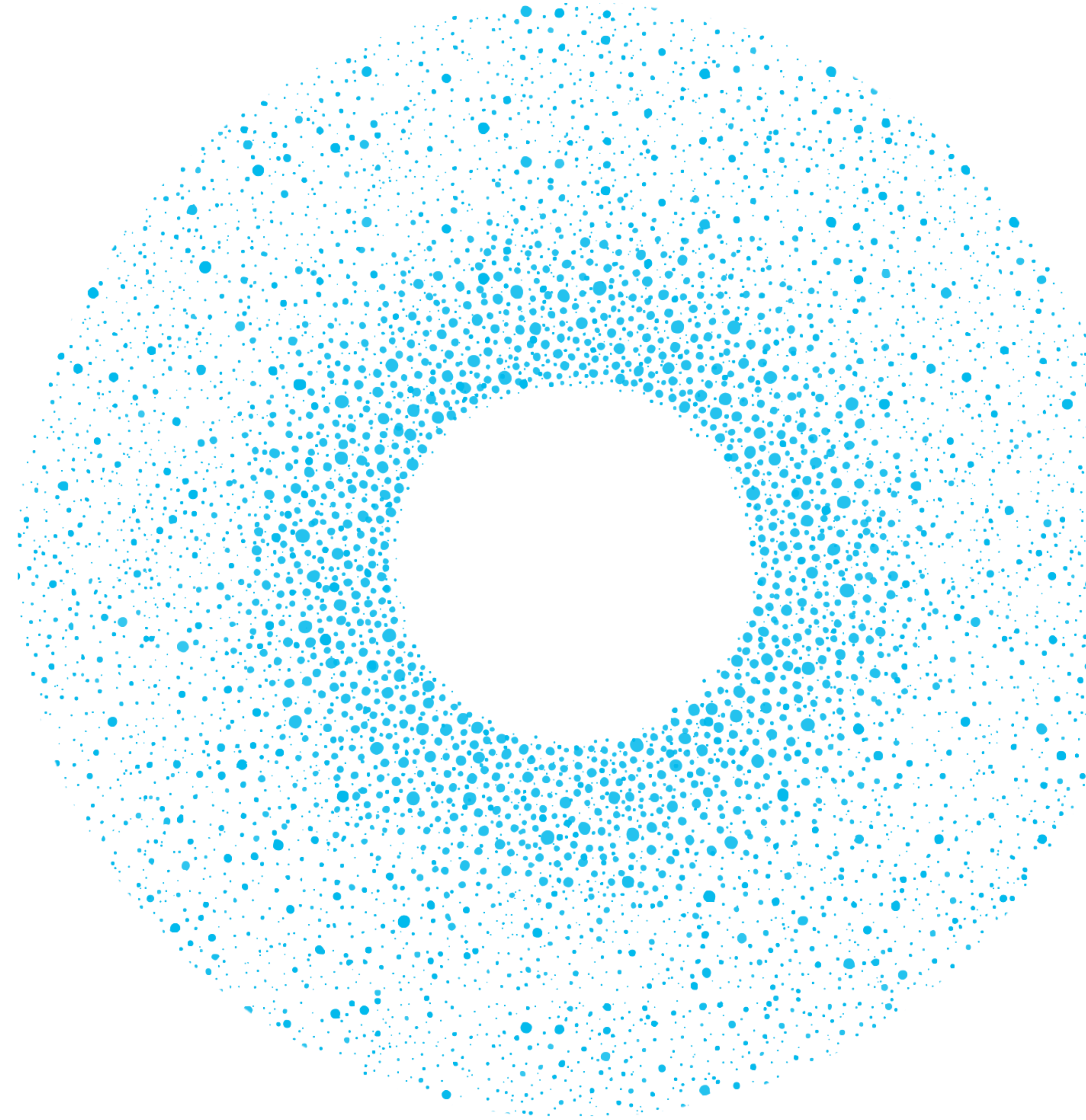
Lookup list



The background of the slide is a dark blue field filled with a complex network of glowing light blue lines and dots. The lines are of varying thickness and curvature, some forming loops and others extending across the frame. Small, bright blue dots are scattered throughout, often appearing at the intersections of the lines, creating a sense of a dynamic, interconnected system or data network.

Thank you

Leftover slides



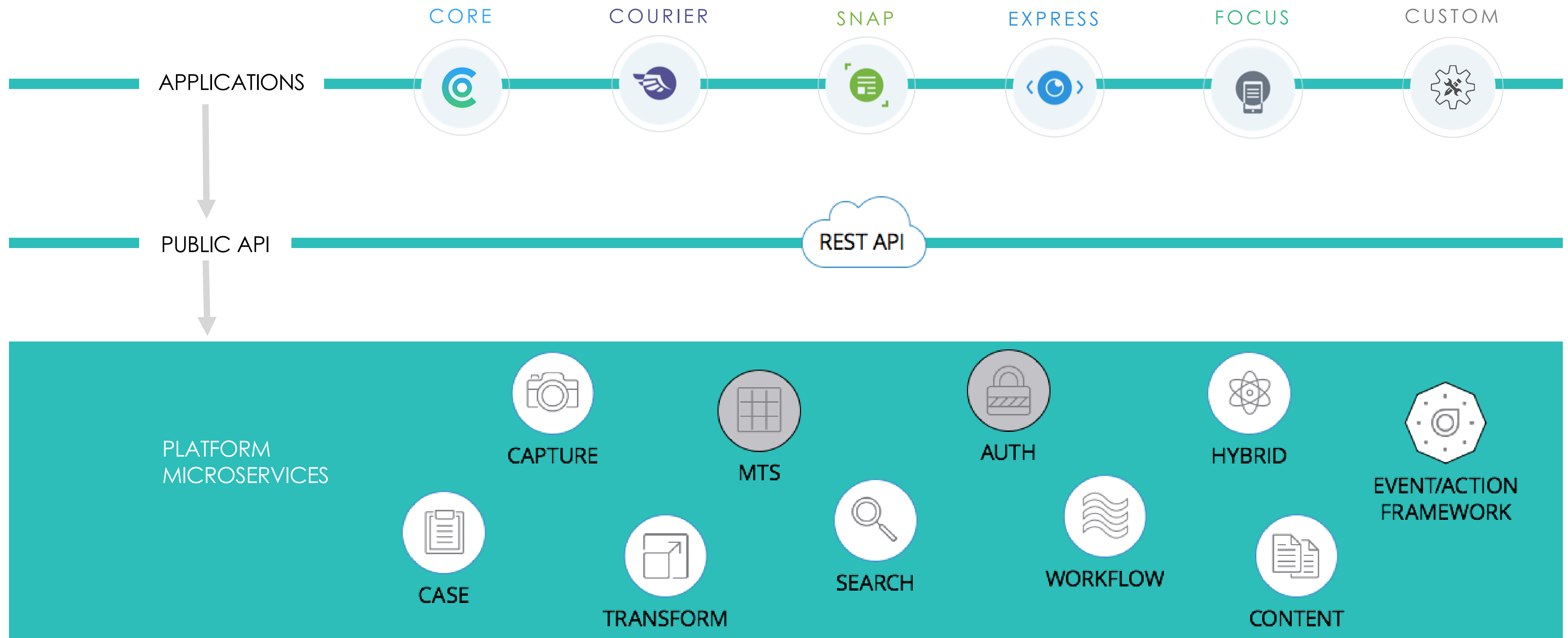
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Innovation Tour Amsterdam

LEAP Snap & LEAP Capture Services

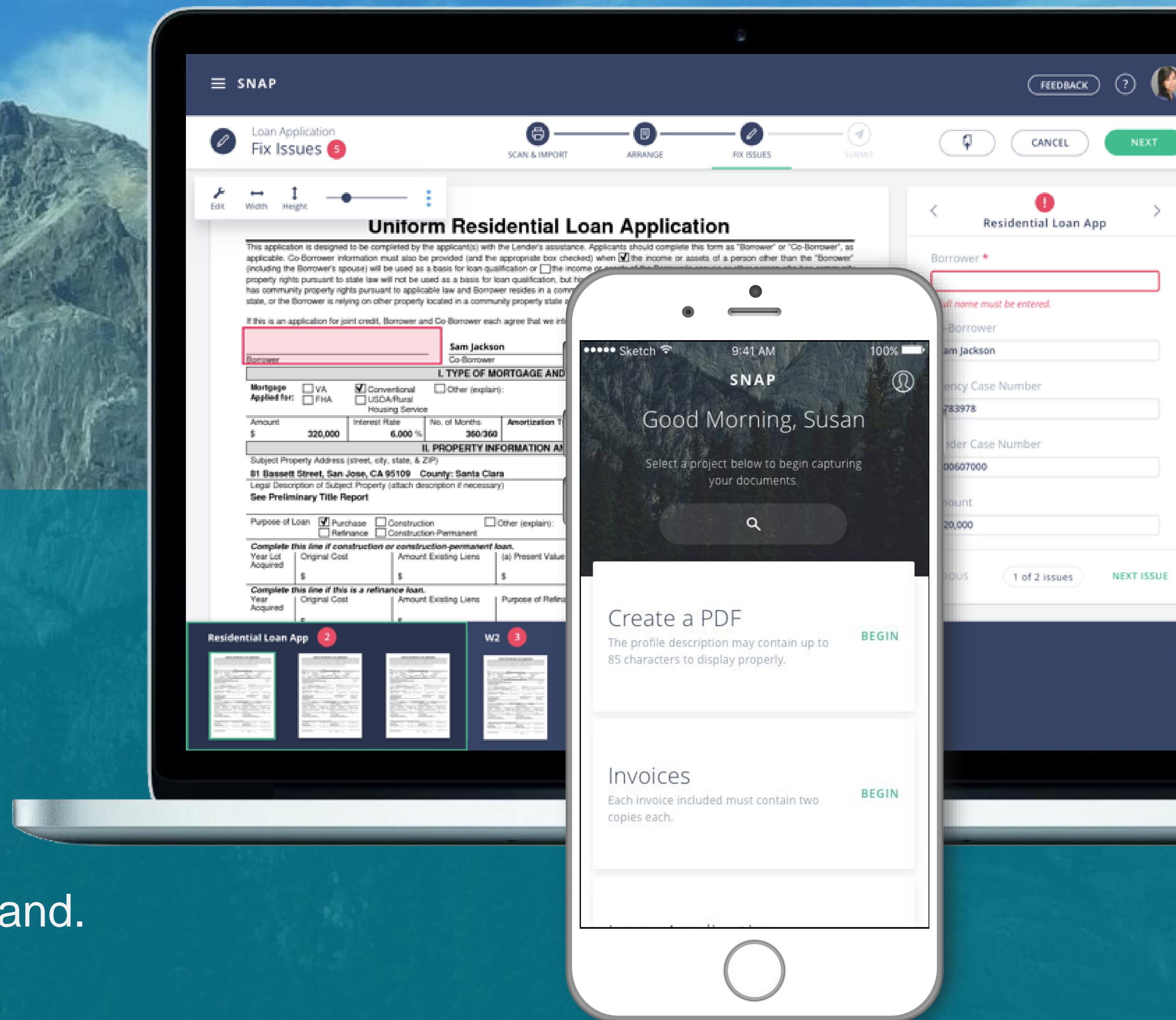
SaaS Capture

LEAP overview

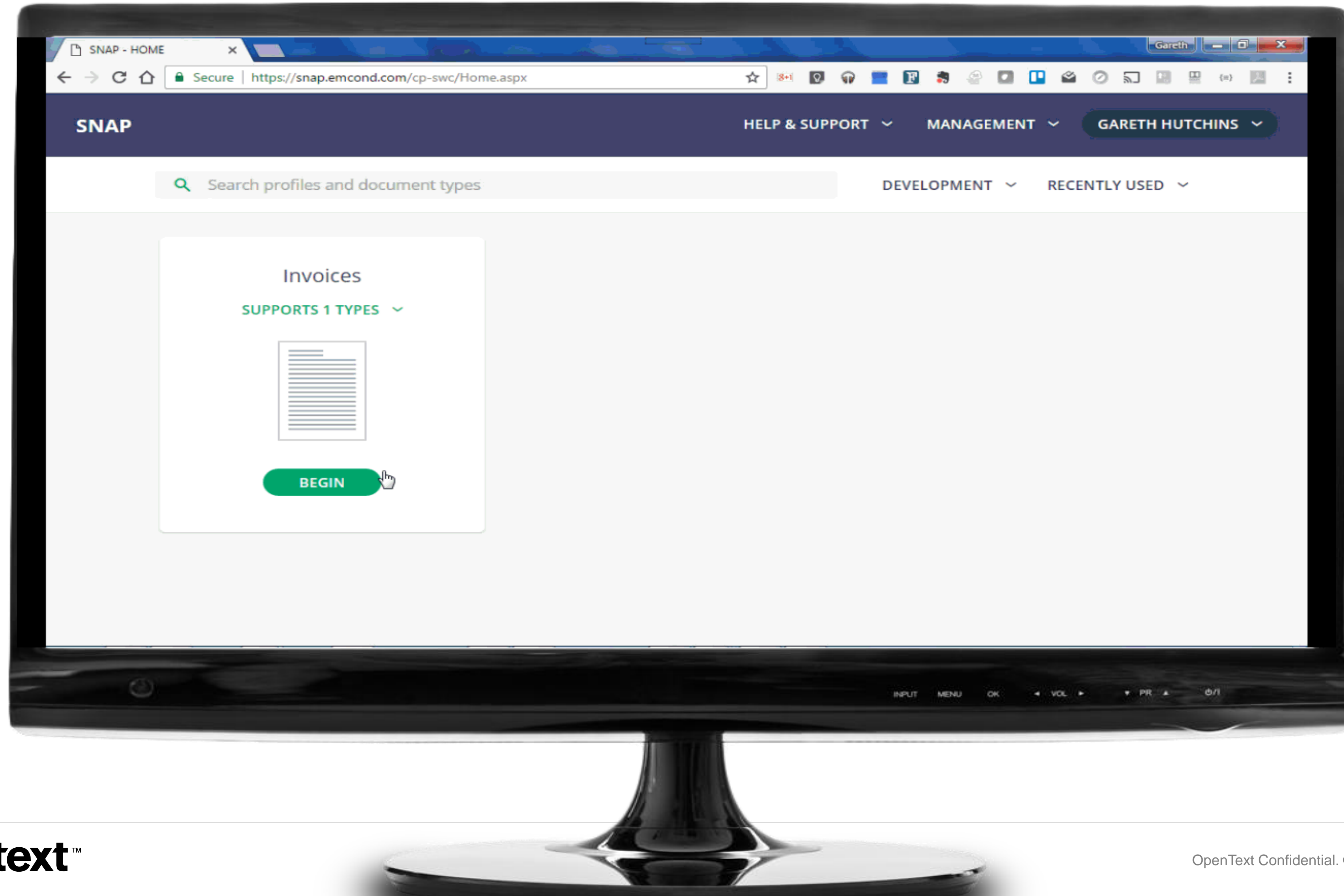


SNAP

A simple, powerful app to quickly convert documents into actionable data to automate your business. Capture content on the go with a mobile app, packing real-time advanced recognition in the palm of your hand.



Snap SaaS capture



What makes **SNAP** different?

Advanced recognition

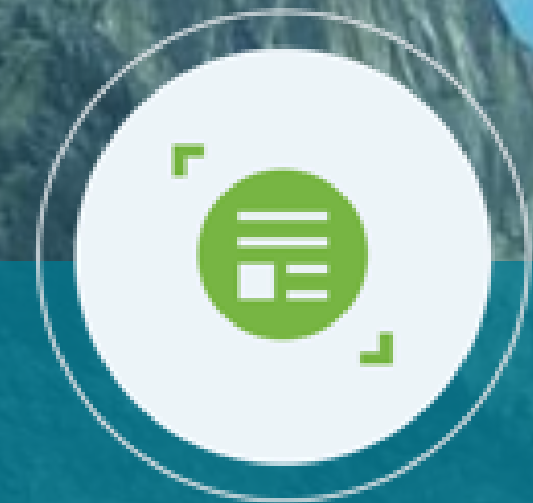
- Intelligent auto-classification of any document, in real-time
- Automatic data extraction to quickly turn unstructured content into actionable information

Easy & intuitive

- Enterprise-grade advanced recognition with consumer-grade user experience
- Visual cues and a guided experience make it quick and easy to capture data and handle any exceptions

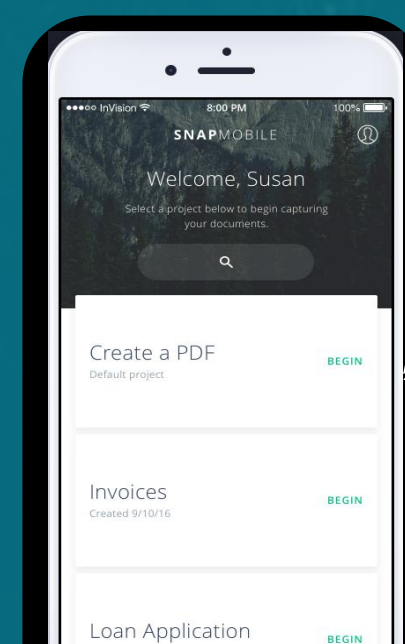
Simplified set-up

- Spin up new capture environments in minutes
- Design-as-a-service offering simplifies the development of new document templates
- Repository-agnostic with CMIS compatibility



LEAP Capture Services

A set of hosted JSON REST micro services allowing Developers to quickly enhance custom content-centric apps with advanced document & data recognition



Basic Imaging Services

- Validate data
- Image processing
- Barcode Detection
- Create Full Page OCR + Convert to PDF
- Export Services

+

Advanced Recognition Services

Customizable & Automatic

- Classify Document
- Extract metadata from documents

Capture Development Focus



Distributed Capture

Capture Anywhere

- Mobile
- Browser
- Cloud
- Real-Time



Advanced Recognition

Automatic and Effortless

- Accuracy
- Classification and Extraction Automation
- Machine Learning



Enterprise Platform

Trust and Scale

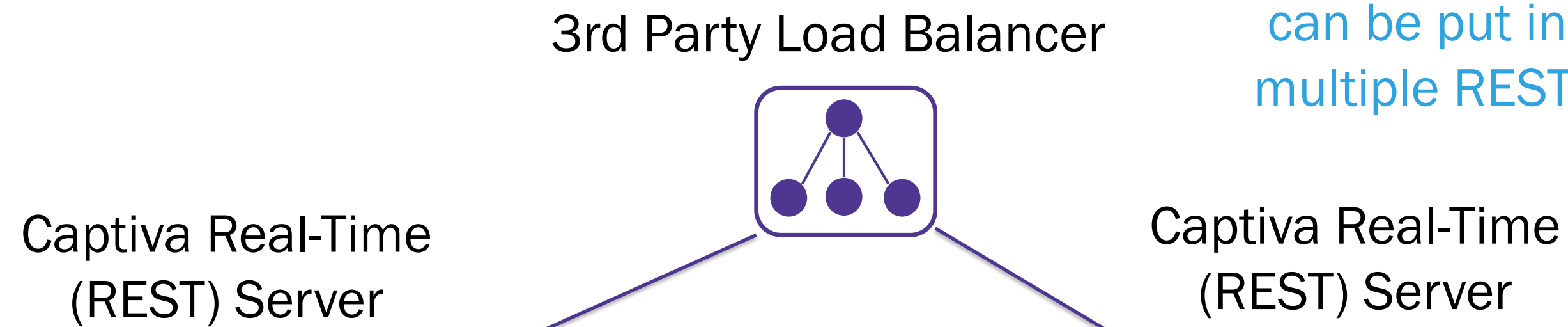
- Lower TCO
- Security
- Configuration & Deployment

Captiva Real-Time – how it works

A 3rd party load balancer can be put in front of multiple REST Servers

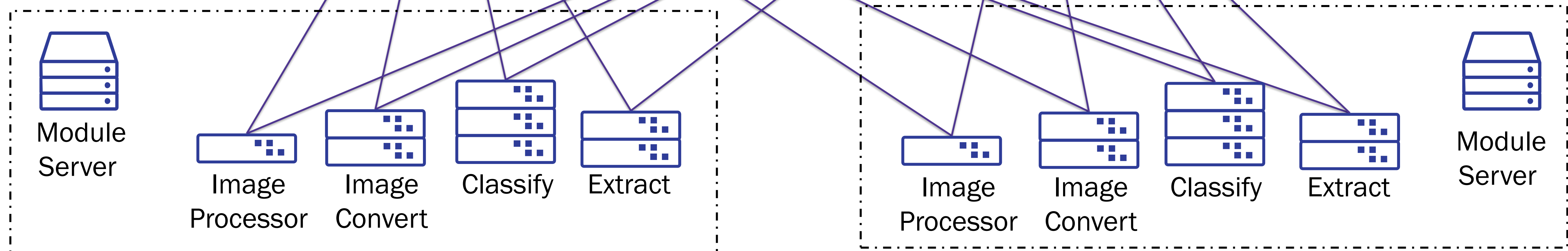
Module Server is responsible for the lifecycle of a set of capture modules (starting, recycling, etc.) It is not part of the communications for task assignment

The number of Module Servers per machine is configurable
The number of each capture module per Module Server is configurable (global setting)



Real-Time Servers distribute work to the appropriate task using a round-robin approach

Captiva 7.7 adds node lock/unlock to improve load balancing when 2 or more servers are running



Captiva Real-Time – scaling up

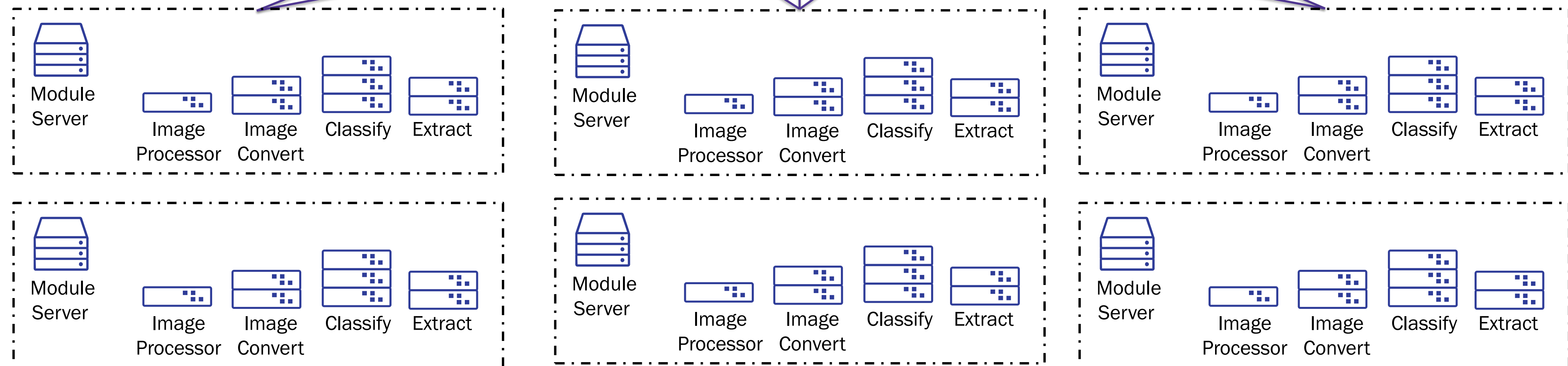
All servers and modules for a single RT system use a single file share for configuration and temporary data storage. Scaling is achieved by starting up another instance and pointing it to the file share

3 Pty Load Balancer

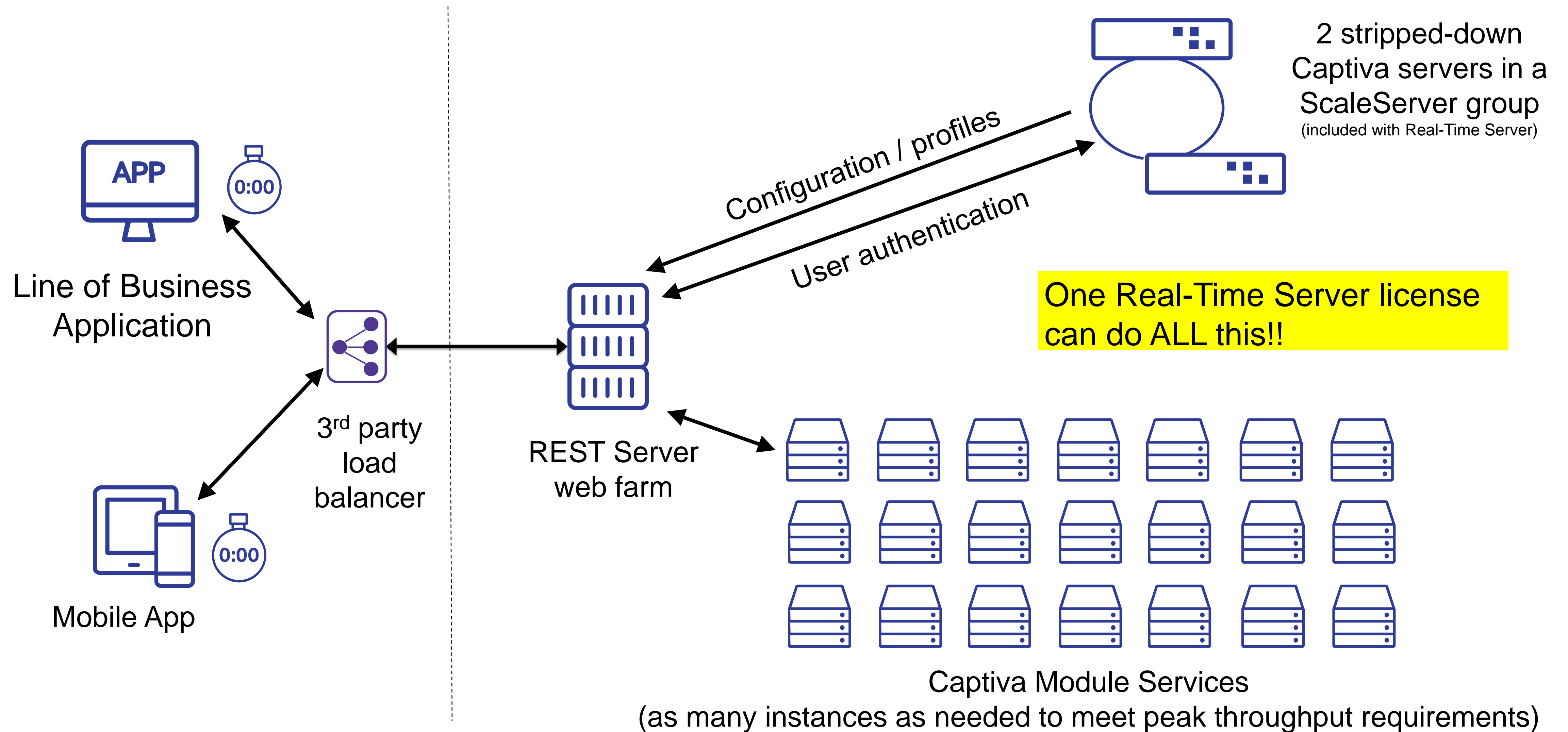
Captiva Real-Time (REST) Servers

Add new instances of Module Server to ensure there are always available instances for each capture module. No additional licensing required

Add new instances of REST server to handle several hundreds of simultaneous transactions. No additional licensing required



Highly-available stand-alone Real-Time system

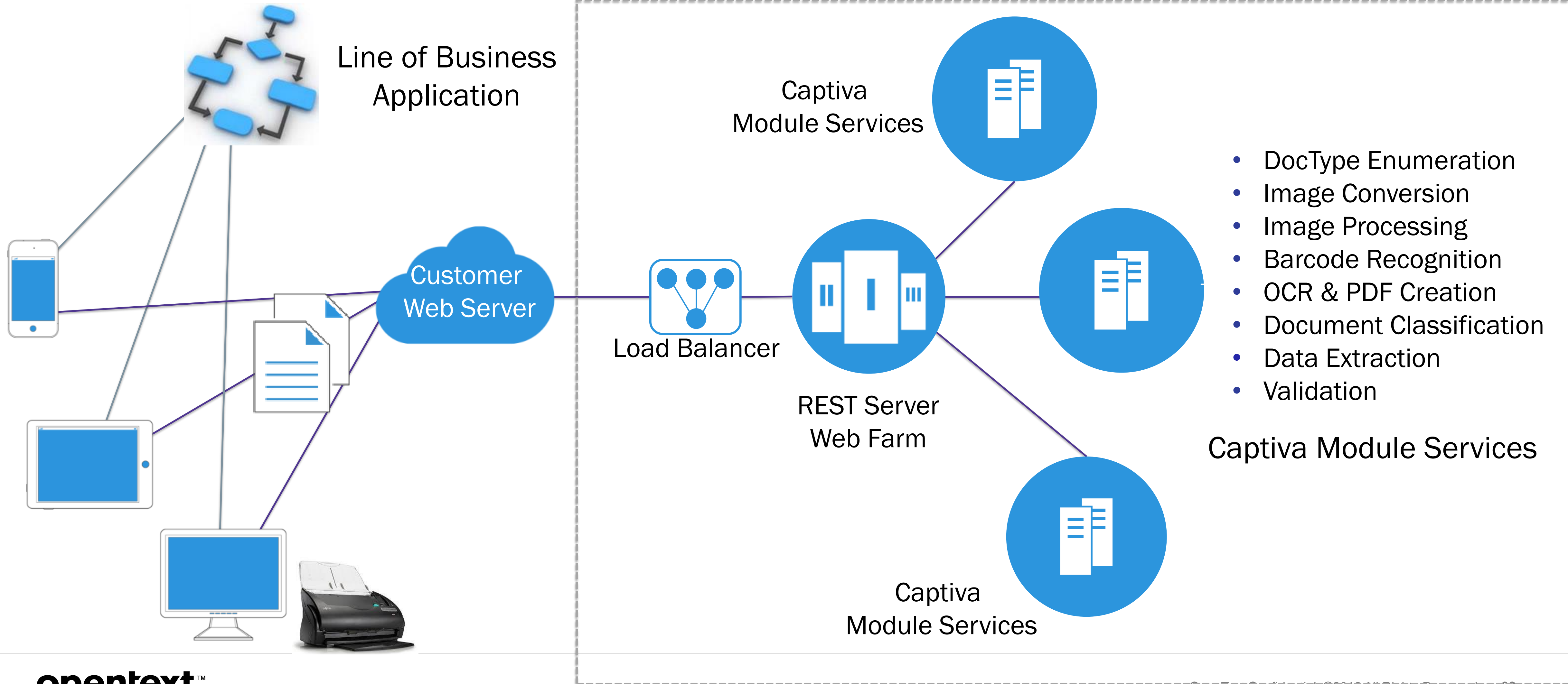


Real-Time Capture

Embedded into LOB applications

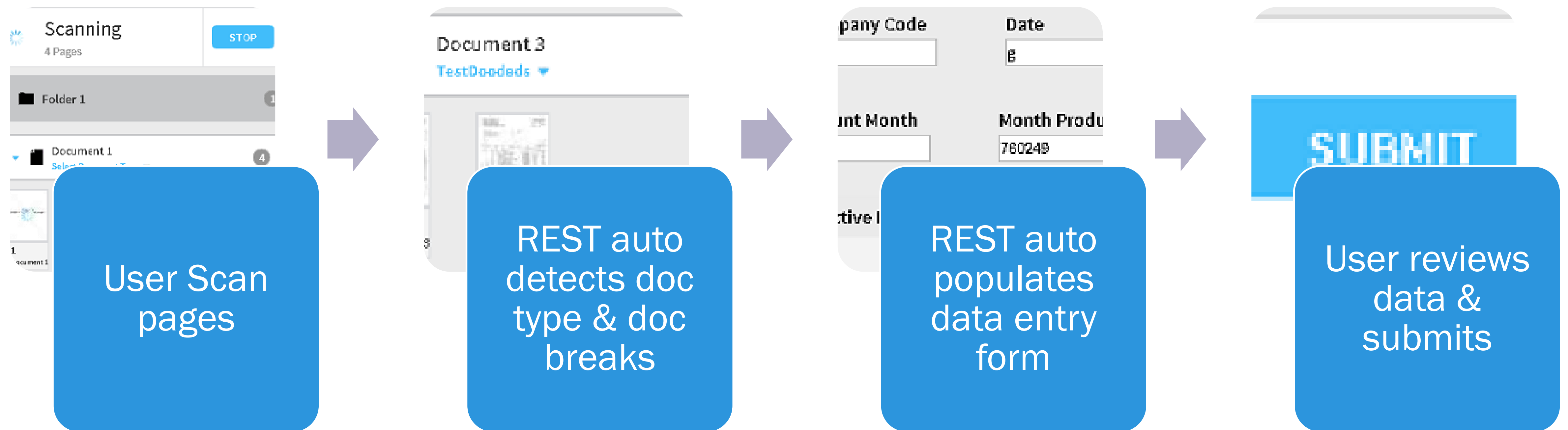


- Easily scales to support mobile capacity needs – just install additional module service instances
- Cloud & web-farm-friendly / designed for “cloud first”
- Call only services needed; no CaptureFlow required
- Integrated with Captiva Web Capture Client



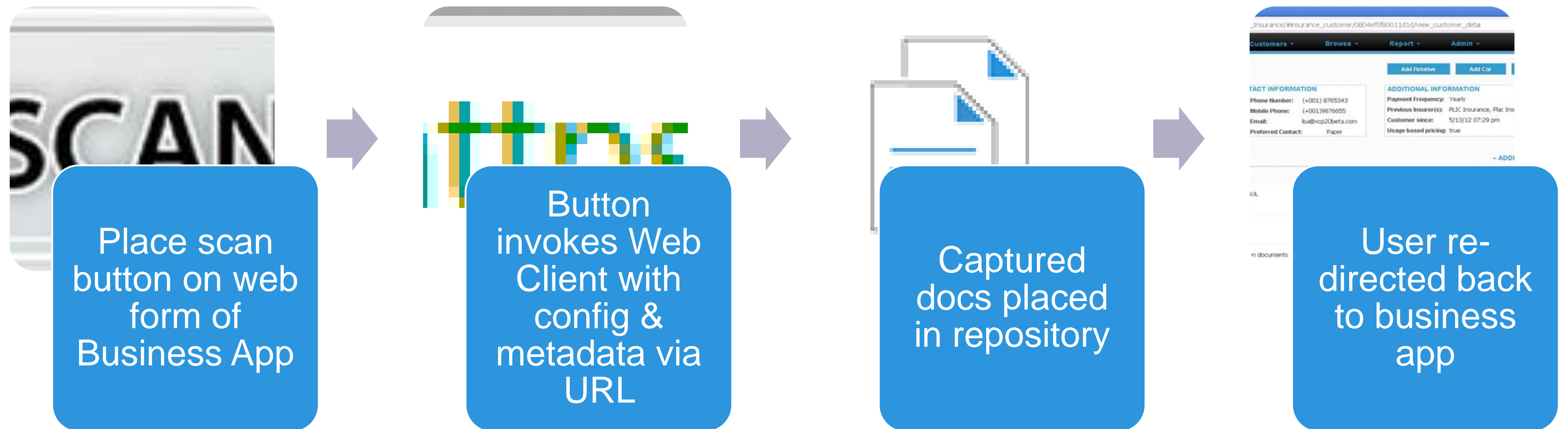
SAMPLE WEB CLIENT IMPLEMENTATION

With Real-Time Advanced Recognition at Scan-time



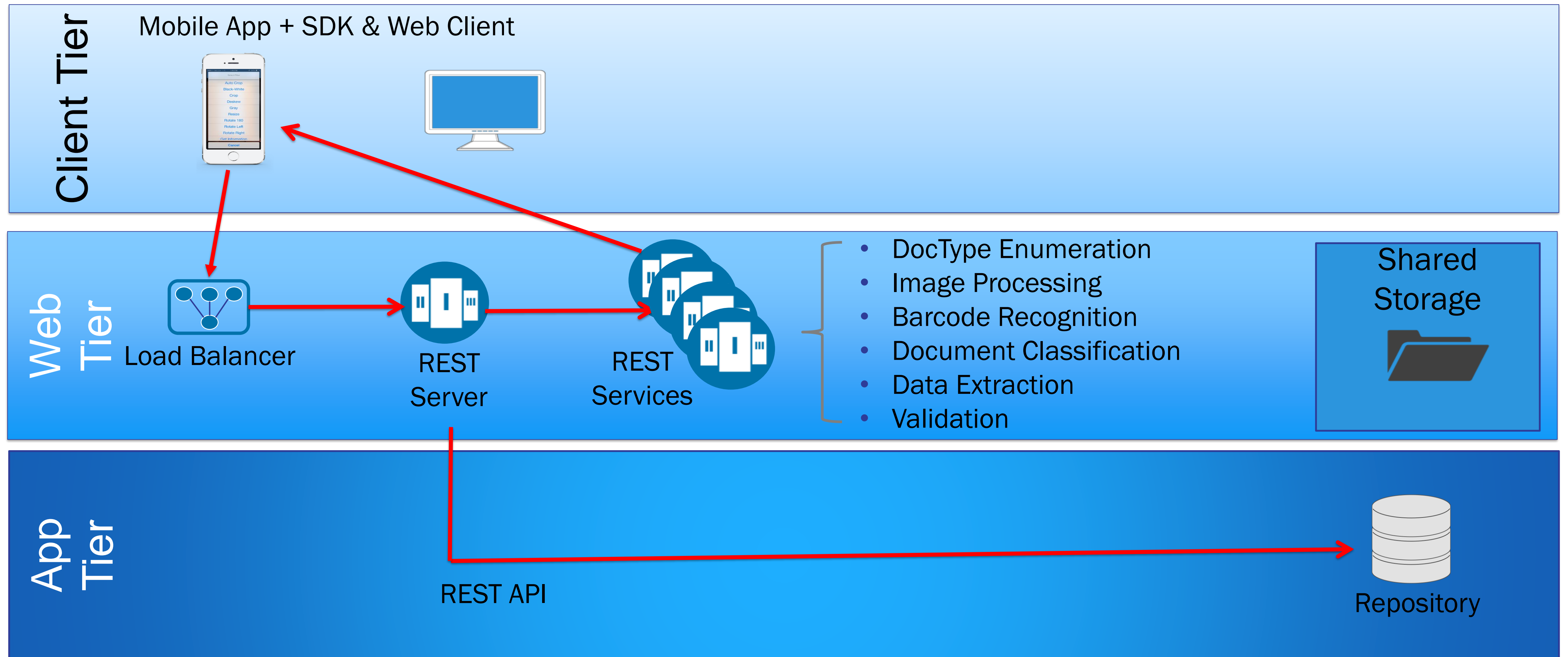
SAMPLE WEB CLIENT IMPLEMENTATION

Invoke from Business Application



- Parameterized URL launching
- Pass SSO tickets
- Specify localization preference
- Specify Web Client Scan Profile to use

WEB CLIENT ARCHITECTURE (REST Real-time)



Key Benefits

- Highly Scalable
 - Only constrained by the load on the module servers
 - Easily directs new module servers to the shared configuration to add capacity
- Highly Secure
 - Multiple authentication options available
 - Network traffic is secure with HTTPS
 - Storage – secure the REST data directory

Summary

- Captiva Real-Time Capture Services
 - Standalone services for immediate & real-time capture processing
 - Designed for concurrent processing of large number of transactions
 - Robust under low-bandwidth conditions and on unstable networks
 - Simplifies integration of capture capabilities in other applications