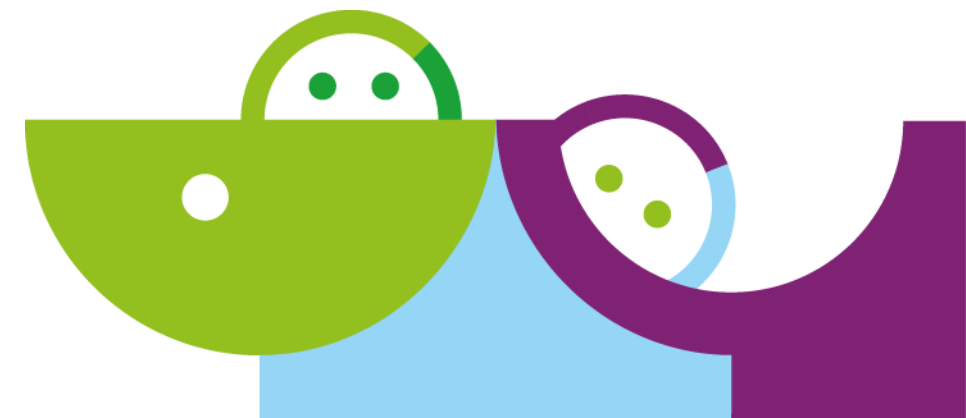# MACM: Content aus der Cloud

Wie Business User jetzt WCM Inhalte in beliebige Anwendungen integrieren können

Dr. Dieter Bühler
Software Architect, IBM WebSphere Portal & WCM

Please Note

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision.

The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.
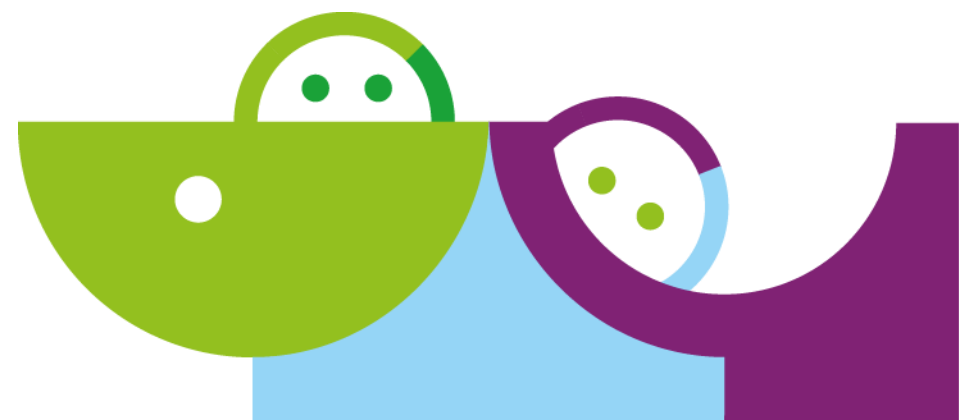
Agenda

Mobile - Before and After

Your Apps – Personal. Adaptive. Relevant.

Mobile Application Content Manager - MACM

Demo

Events

Before

After

Navigation

Before
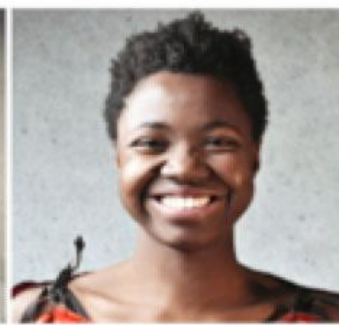

After

Financial Transactions

Before

After

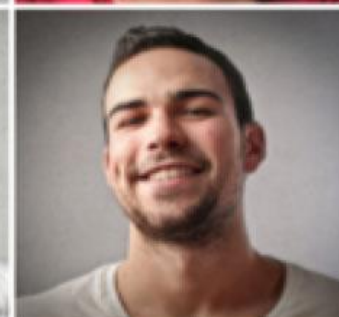People check their phones on average **150** times a day

102 + Billion expected mobile app downloads

Mobile internet usage soars by 67%!

Worldwide smartphones will grow from 71% of the mobile phone market in 2014 to 91% of the market by 2018

Households in North America own three or more mobile devices

Enterprise mobility is slowed by the lack of qualified mobile developers and the time required to deliver mobile apps using conventional tools.

A new breed of tools for mobile apps that enable enterprise business analysts to address urgent digital business opportunities

PERSONAL. ADAPTIVE. RELEVANT.

Apps
Integration
Device data
Security
Device services
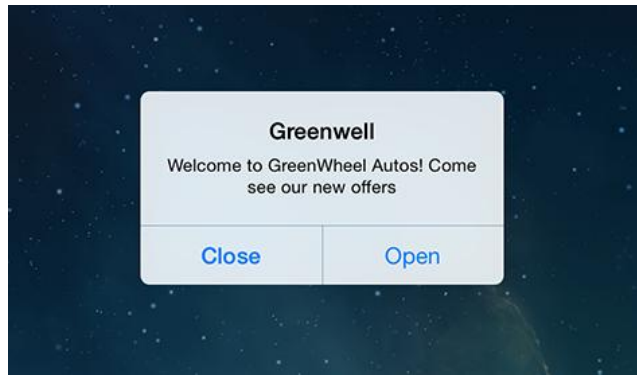(off-line, location)
Device management
Operational analytics
Testing

Content management
Content authoring
Personalization
Segmentation
Workflow
  (projects, versioning,
  approvals, syndication)
Content auditing
Publishing APIs

Mobile Services

Content Mgt

User Engagement

Analytics

Personal. Adaptive. Relevant.

Mobile notifications
Content targeting
A/B testing
Historical interactions

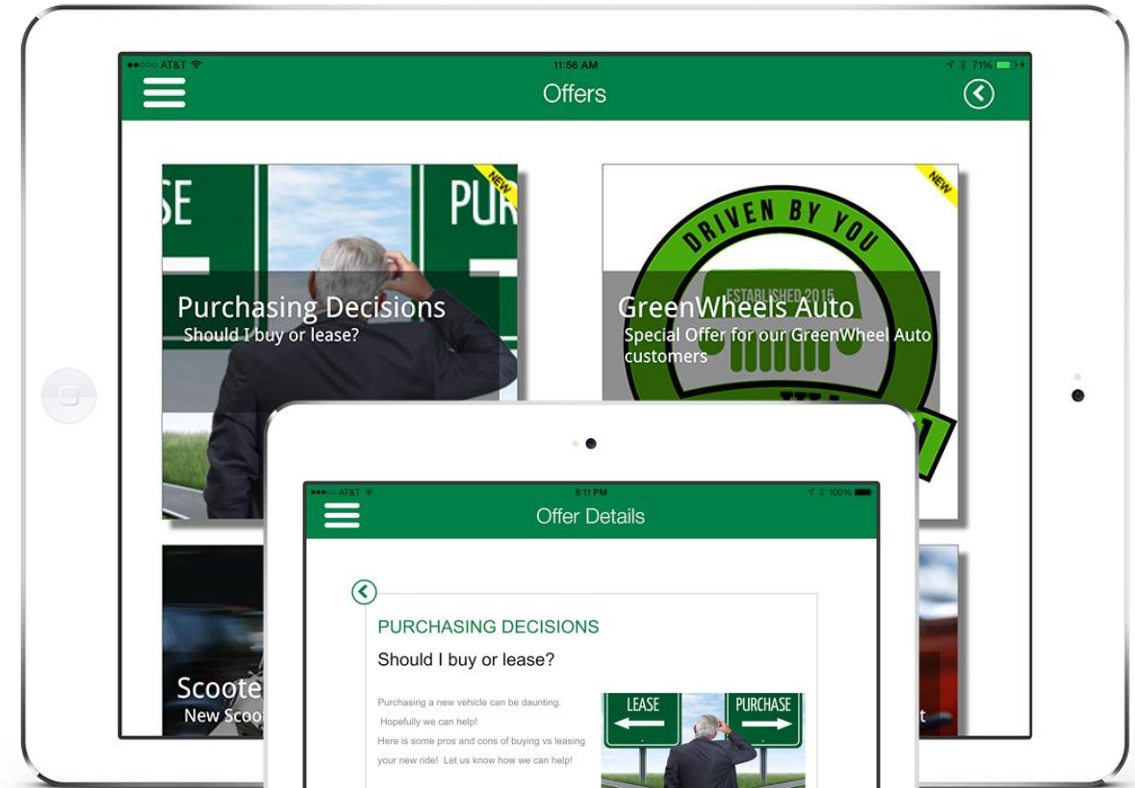Behavioral insight
Predictive intelligence
Dashboards

Mobile App

Mobile App Engagement
Persuasive Content – Trusted Advisor

Mobile Push

Notifications
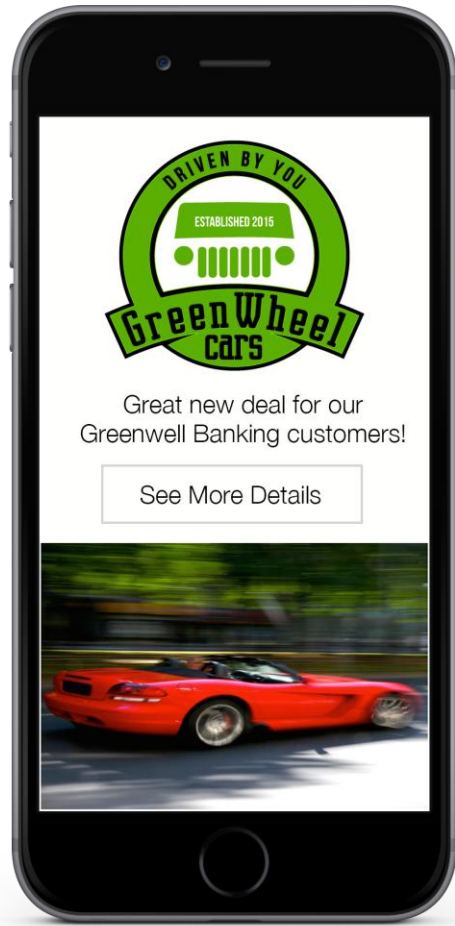
Rich Push

Notifications

Persuasive Content

Transactional

Offers

Investment

Market Info

Greenwell Banking Mobile App

Personal. Adaptive. Relevant.

First point of interaction with customers

- Mobile application

Key banking capabilities

- Transfers, bill pay, account balance, deposits…

Communication channel

- Drive new services and products by providing personalized content
- Persuasive content
- Trusted advisor strategy
- Drive customer loyalty

Transactional

Offers

Investment

Market Info

Greenwell Banking Web Site

Personal. Adaptive. Relevant.

Omni-channel presence

Key banking capabilities

- Transfers, bill pay, account balance, deposits…

Communication channel

- Drive new services and products by providing personalized content
- Persuasive content
- Trusted advisor strategy
- Drive customer loyalty

The Key to Successful Mobile App Experience
Starts With Design, LOB and App Developer Working Side By Side

Design

Line of Business

App Developer

Mobile App
Adaptive Content Options

Business drives the need for adapting content within the mobile app

Content is created in variety of tools.

Mobile App
Adaptive Content Options

App developer updates app with new content and compiles a new version of the app

User is alerted that a new version of app is available via app store

Business drives the need for adapting content within the mobile app

Content is created in variety of tools.

Mobile App
Adaptive Content Options

Business drives the need for adapting content within the mobile app

Content is created in variety of tools

App developer updates app with new content and compiles a new version of the app **A**

User is alerted that a new version of app is available via app store. **A**

App developer creates new app bundle which is uploaded to the app platform **B**

App notifies the user of an update **B**

Mobile App
Adaptive Content Options

Business drives the need for adapting content within the mobile app

Content is created in variety of tools

App developer updates app with new content and compiles a new version of the app

User is alerted that a new version of app is available via app store.

A

App developer creates new app bundle which is uploaded to the app platform

App notifies the user of an update

B

App developer uploads to a custom database

App pulls content from the database as needed

C

Mobile App
Adaptive Content Options

Business drives the need for adapting content within the mobile app

Content is created in variety of tools

A — App developer updates app with new content and compiles a new version of the app → User is alerted that a new version of is availab app store

B — App developer creates new app bundle which is uploaded to the app platform → App noti the user an upda

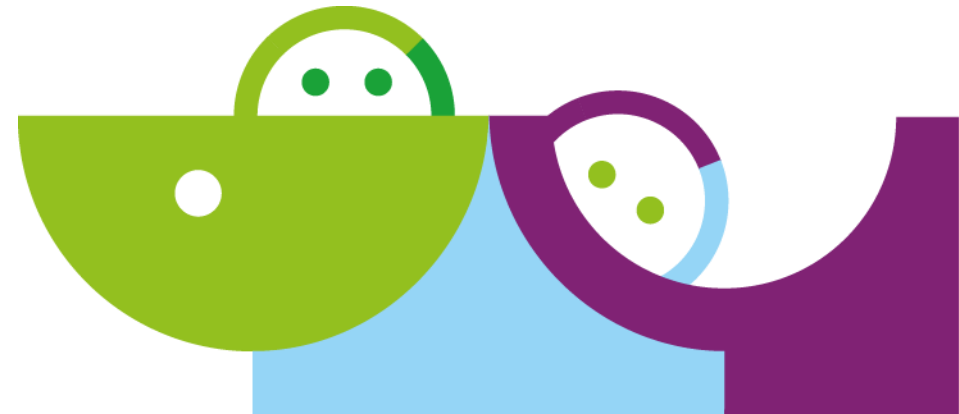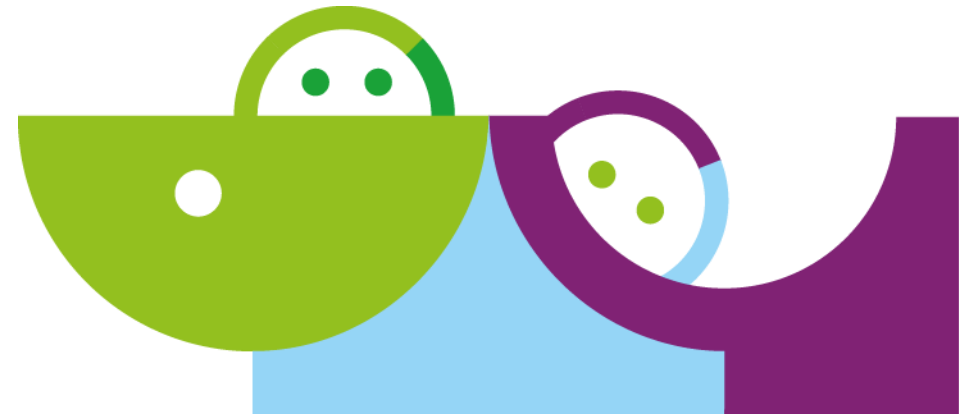**C** — App developer uploads to a custom database → App pu content the database as needed

- **All changes require IT involvement**
- Update cycle can be <u>long</u>, missing market opportunity
- <u>No</u> consistent easy content authoring experience for LOB
- <u>No</u> easy way to personalize adaptive content within the app
- <u>No</u> workflow process for content approvals
- <u>No</u> auditability of content changes
- <u>Requires</u> customer to take action

Line of Business

"I need to get the most relevant content to my mobile app customers, FAST!"

"Every time I need to make a **change** to my app content I need to go though my developer, this is just not an efficient way to manage our app"

"Our strategy of maintaining our own database for content is not working. It doesn't give me the tools I need to author, **personalize** and get **approvals**"

"I need to personalize portions of our mobile app with **targeted content** to the right audience."

"Do I have to **version** my app every time I make a content update?"

"I need to talk to my app developer to make content changes…again. I need a way to make these content changes **myself**!"

App Developer

"I spend too much time making content changes to the app for the LOB"

"I want do real app development, not small content changes"

"I thought by creating our own database for content would help but I spend too much time **maintaining** that database and importing content. I am not a DBA"

"**Testing** and **versioning** all of these content changes to the app is a huge effort"

"I want to know the content I put in the app is **approved** by the business"

"I need a standard programmatic way to get approved content into our mobile app"

Mobile App
Adaptive Content Options

Business drives the need for adapting content within the mobile app

Uses content management APIs to programmatically set conditions for adaptive content within the mobile app
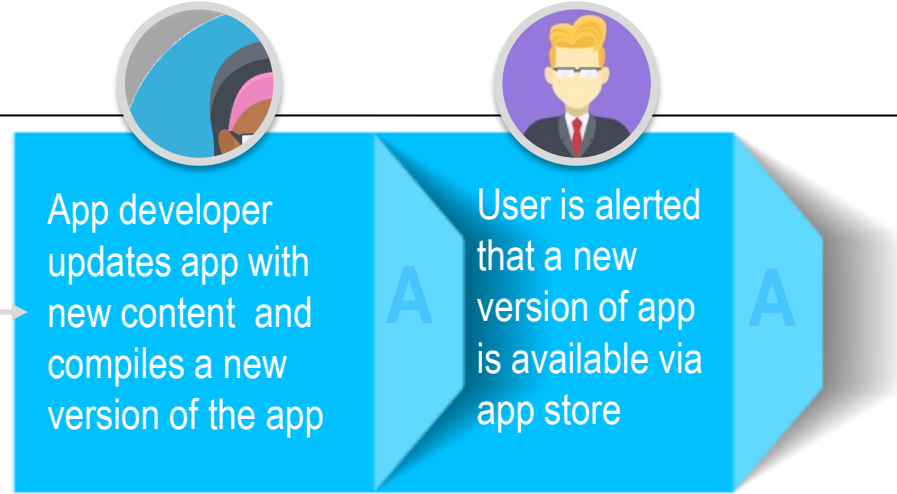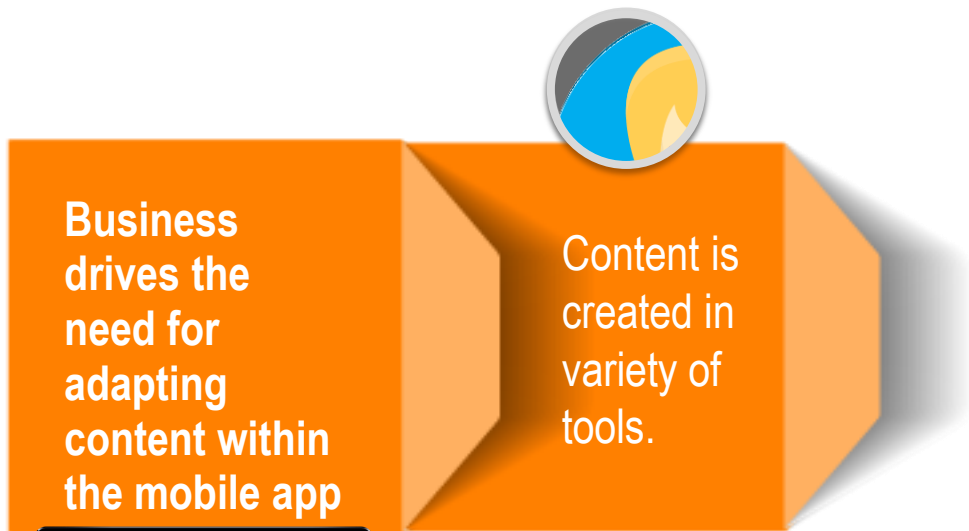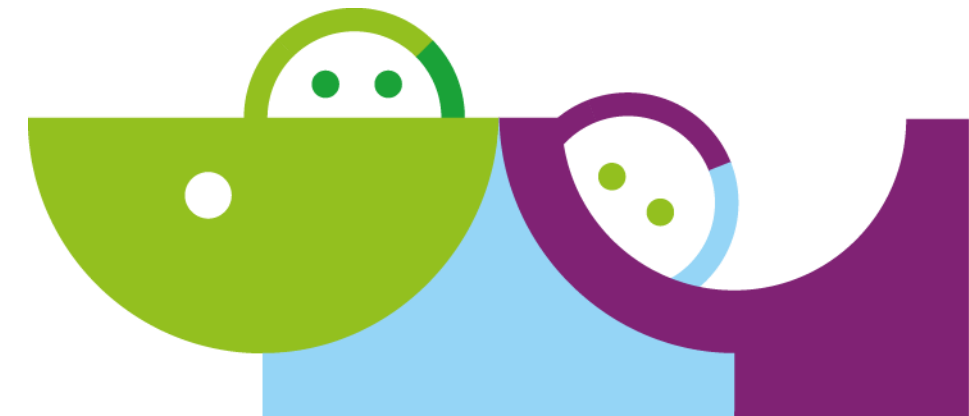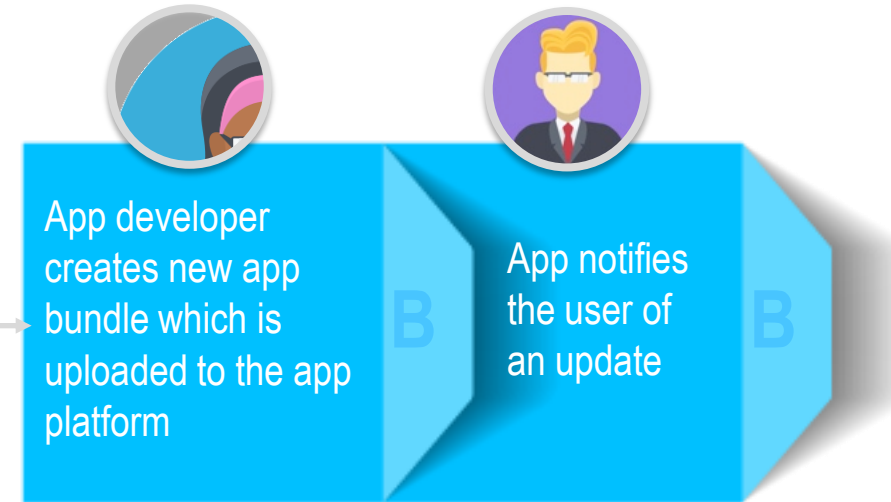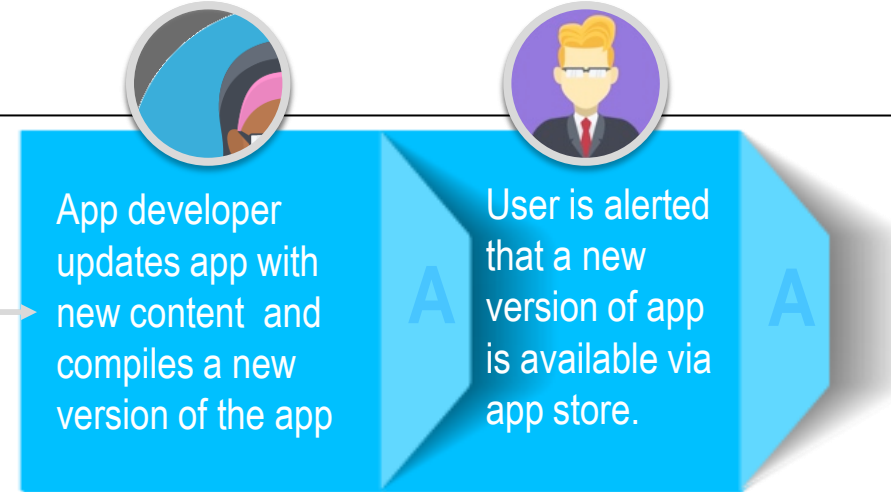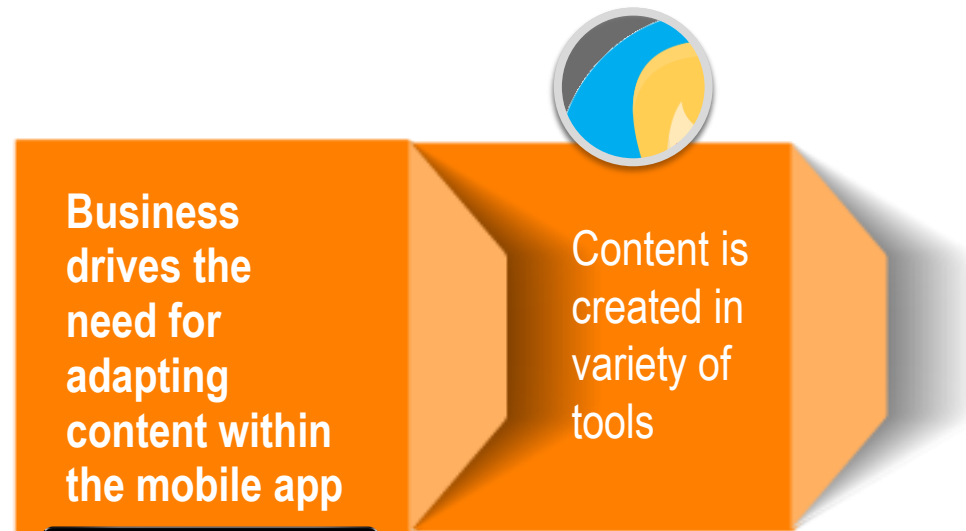
Business drives the need for adapting content within the mobile app

Content is **authored** using easy to use UI with templates to provide consistency

Segmentations are applied to content to provide **personalization**

Workflow assigned and **approvals** given by team. **Content is published**

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Customer receives a **personalized**, **adaptive**, and **relevant** app experience

Uses content management APIs a to programmatically set conditions for adaptive content within the mobile app

- Content changes **do not** require IT involvement
- Consistent and easy content authoring experience for LOB
- Workflow process for content approvals

- Easy way to personalize dynamic content within the app
- Auditability of content changes
- No action needed by customer

Business drives the need for adapting content within the mobile app

Content is **authored** using easy to use UI with templates to provide consistency

A

Segmentations are applied to content to provide **personalization**

A

Workflow assigned and **approvals** given by team. **Content is published**

A

Customer receives a **personalized**, **adaptive**, and **relevant** app experience
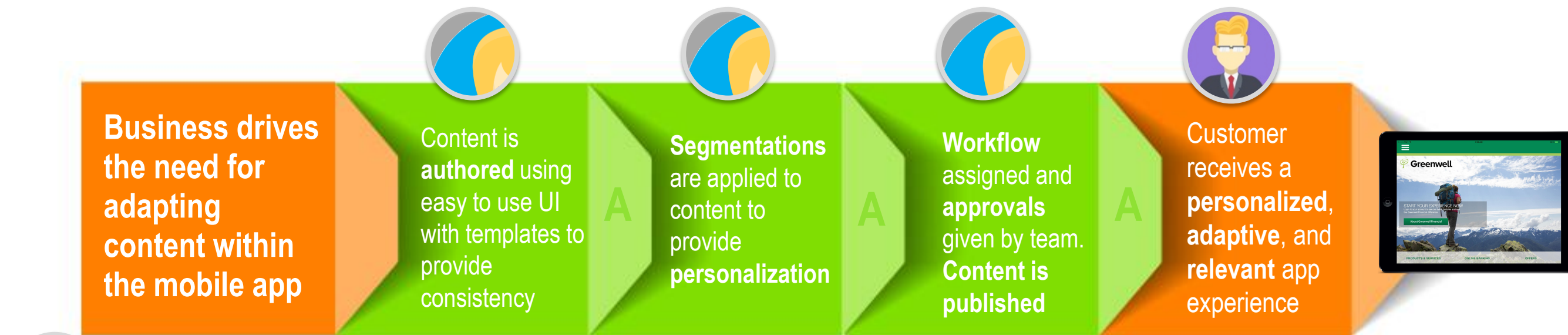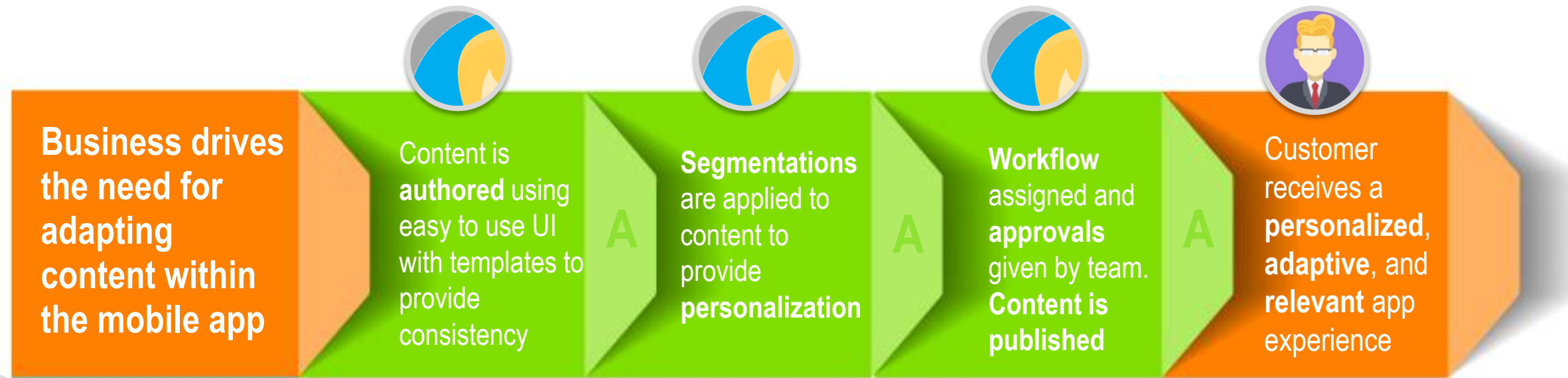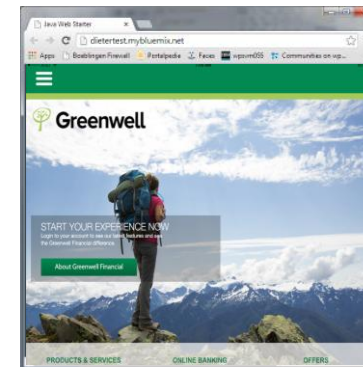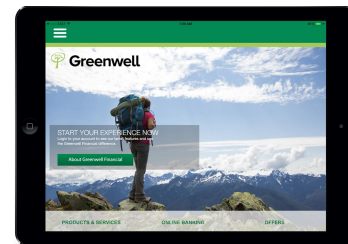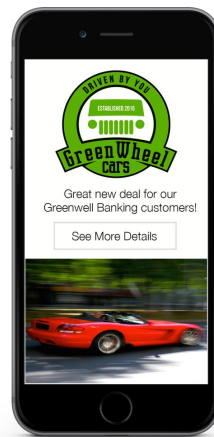
Uses content management APIs a to programmatically set conditions for adaptive content within the mobile app

Content can be consumed by all kind of clients:

Mobile Apps, Single Page Web Apps, JS Apps (e.g. Script Portlet), Web Sites (e.g. Portlets or DDC)

Line of Business

"Allows my team to be flexible in responding to market and business needs without updating code"

"I own and control app content and messaging!"

"Now we can provide a personalized mobile app experience by targeting in app content"

"The information we get from the app/device helps to provide the right content to the right users"

"Our app's content is current and relevant thus making it more valuable to our users"

App Developer

"This is way more efficient! I can now code core app updates and integration (navigation, transactional, backend integration) not content updates"

"I love the extensible set of APIs for content updates, intelligent caching of content, and pulling personalization rules"

"I get content in a consistent and standard format (JSON and/or XML) it makes it easy to program my app"

"This has minimize our code changes and app versions"

"Now we are assured that content is approved by LOB"

Mobile Application Content Manager Capabilities

Set of capabilities providing **line of business** and **mobile app developers** web content management capabilities *(content authoring, workflow, auditability, segmentation, notifications)* and APIs needed to provide **personal**, **adaptive**, and **relevant** content within mobile applications
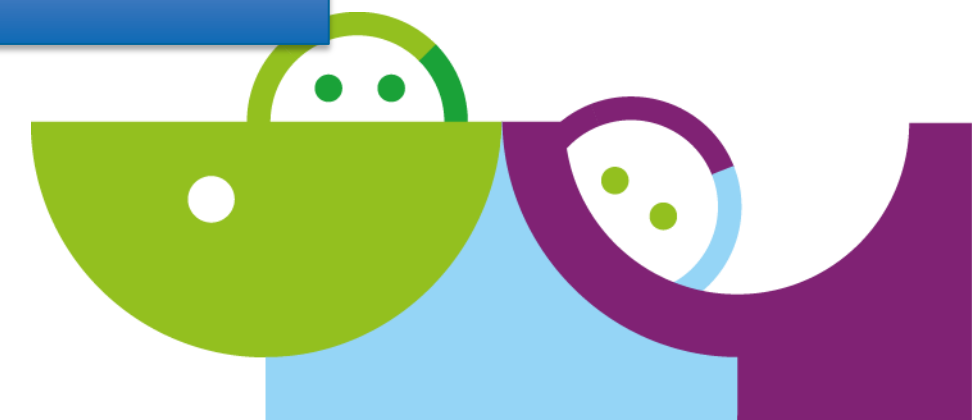
Layered Architecture – Content as a Service API Layer

- **Public URL format to adress rendered WCM content outside of portal page context**

- Mime type specific content delivery
    - E.g. To render content into JSON / XML
    - JSON / XML is generated by your WCM presentation templates

- Full portlet state/context is available for rendering (e.g. to allow serving targetted content)

- Default CaaS Rendering page

CaaS
WCM
Portal

Layered Architecture: Mobile Application Content Manager Layer

- LOB User Facing Authoring User Interface

- Remote API for convenient access to authored content in JSON format

- Mobile SDKs for easy data consumption in mobile devices

- Auto-generated JSON designs

- Support for sending Push Notifications
  - E.g. IBM Mobile Push
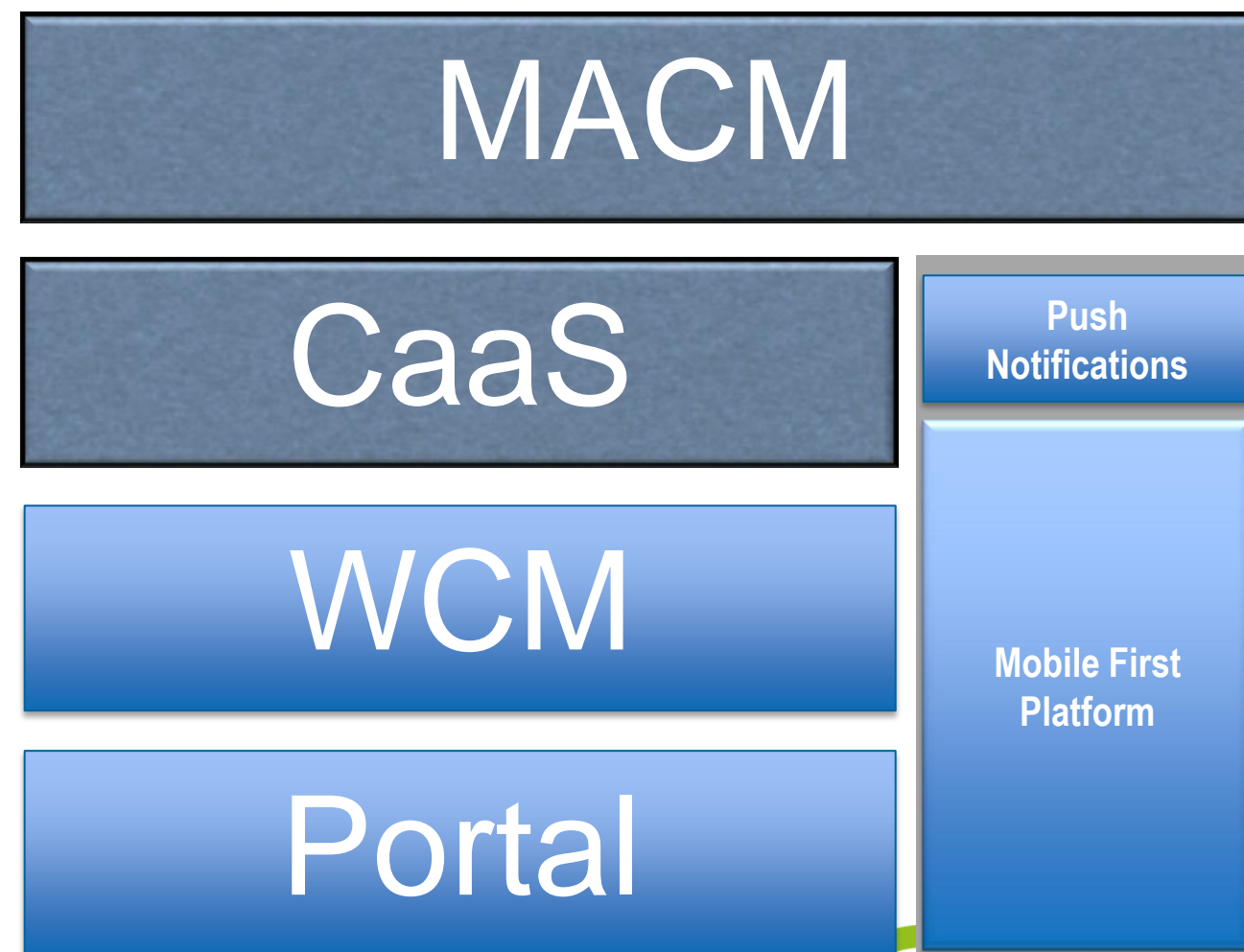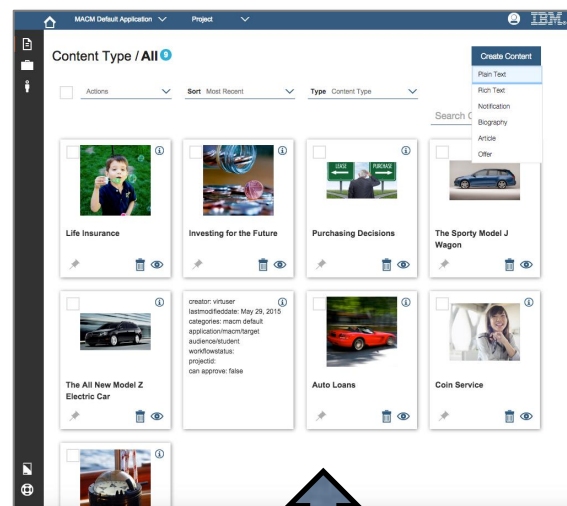
Offerings: Cloud Service

Authoring / Approvals

MACM

CaaS

WCM

Portal
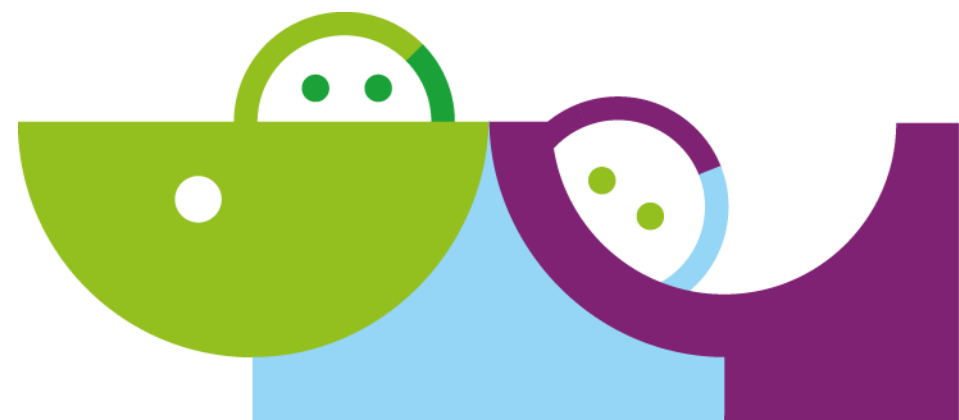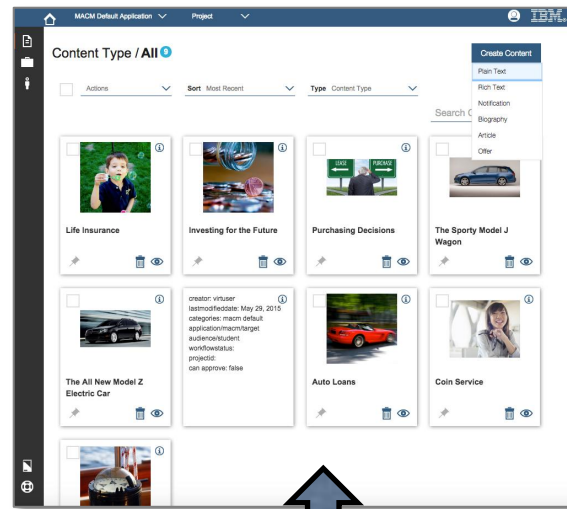
Push Notifications

Mobile First Platform

MACM API

MACM cloud service

Offerings: On Prem

Authoring / Approvals

MACM

CaaS

Push Notifications

WCM
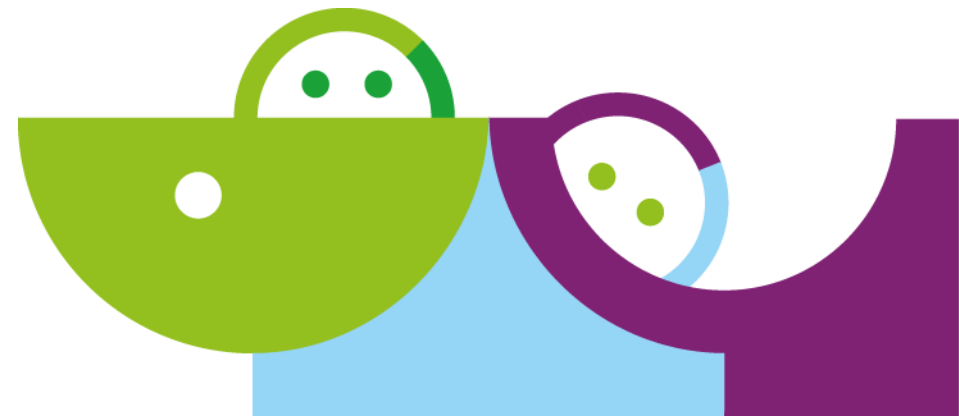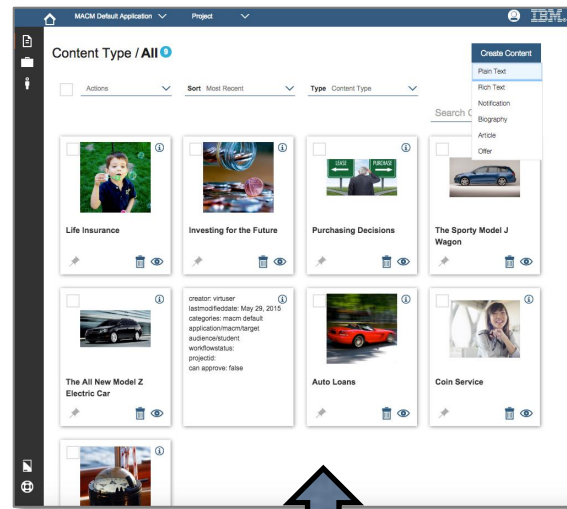
Mobile First Platform

Portal

Portal/WCM API

MACM API

On prem Portal
containing MACM

Authoring / Approvals
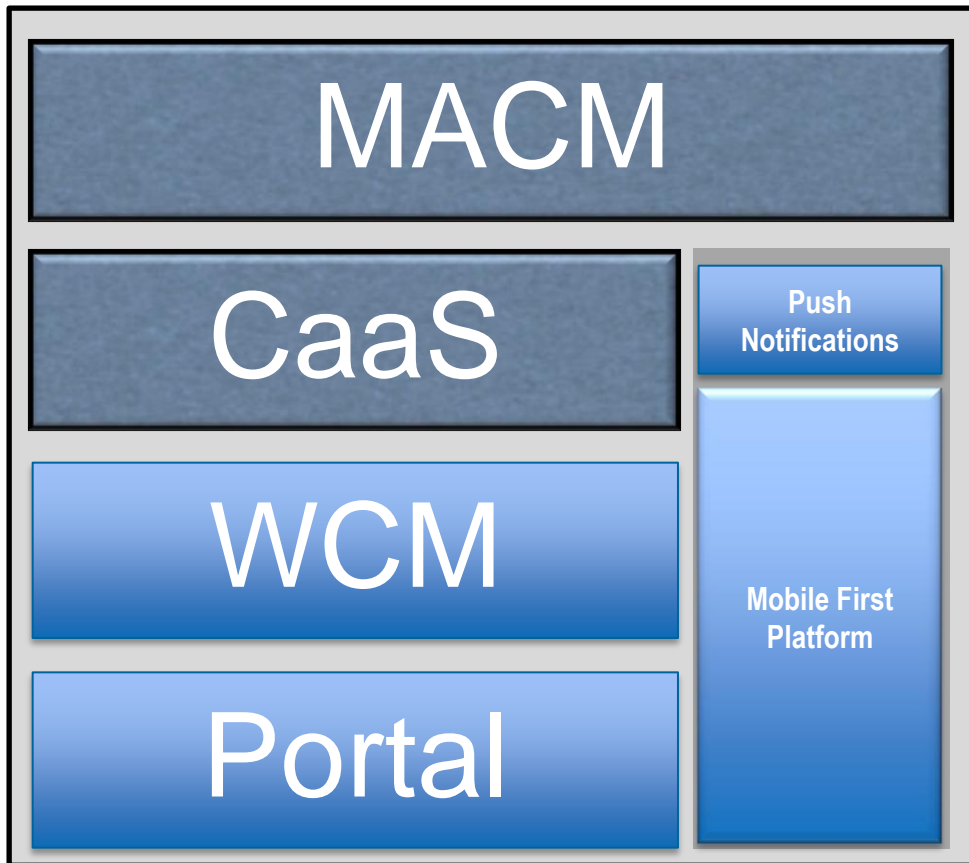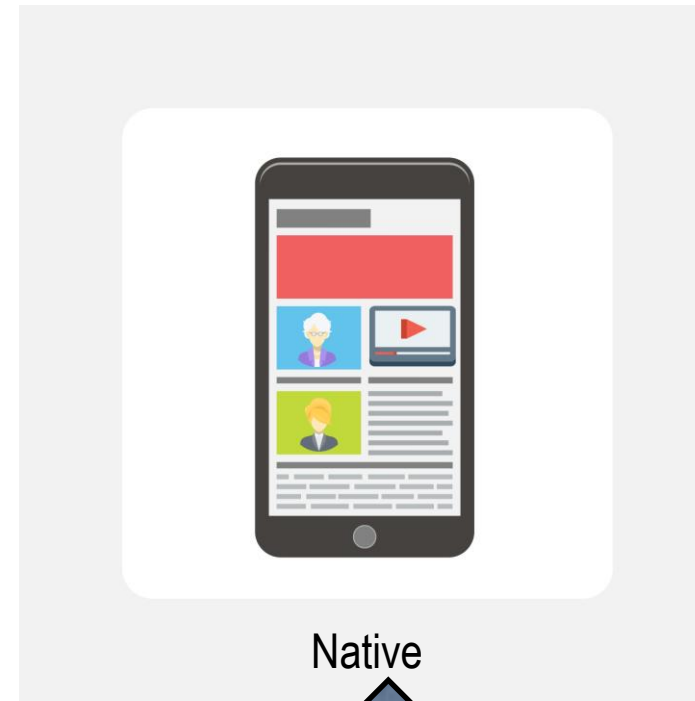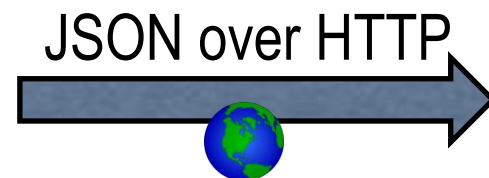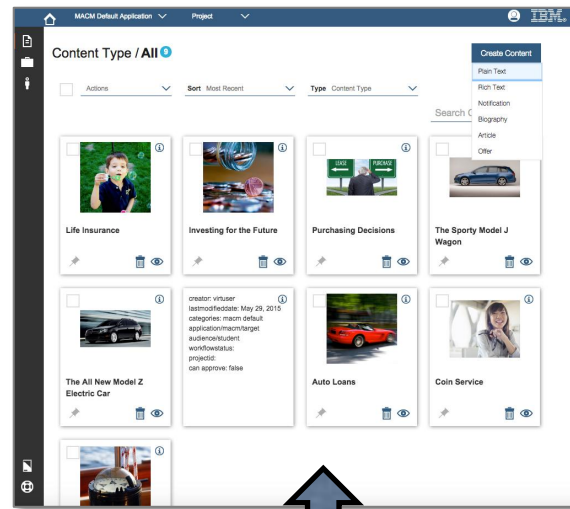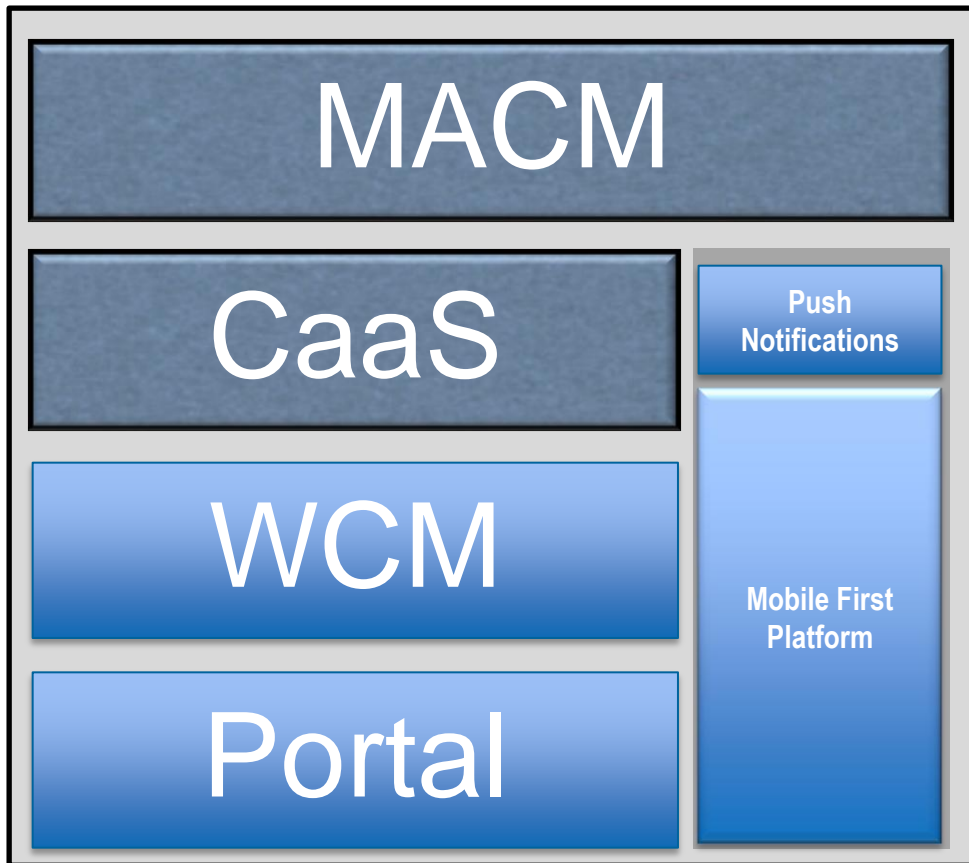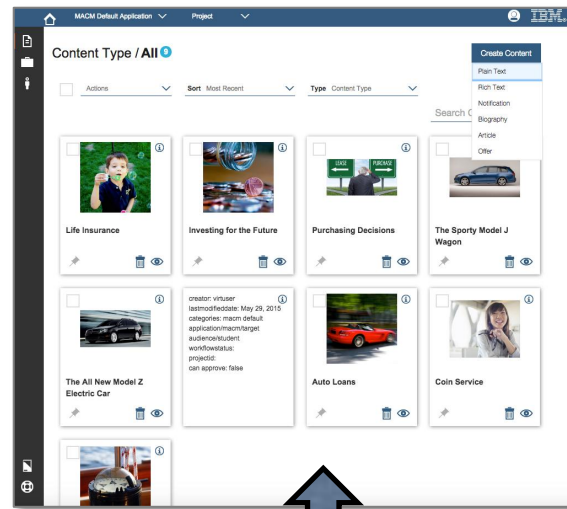
MACM

CaaS

Push Notifications

WCM

Mobile First Platform

Portal

MACM API

JSON over HTTP

Native

Local API call

MACM SDK

Authoring / Approvals

MACM

CaaS

WCM

Portal

Push Notifications

Mobile First Platform

MACM API

JSON/HTML over HTTP

JSON over HTTP

MACM SDK

Native

Authoring / Approvals

MACM

CaaS

WCM

Portal

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JSON/HTML over HTTP

Authoring / Approvals

MACM

CaaS

Push Notifications

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Mobile First Platform

Portal

Portal/WCM API

MACM API

JSON/XML/HTML over HTTP

JSON/HTML over HTTP
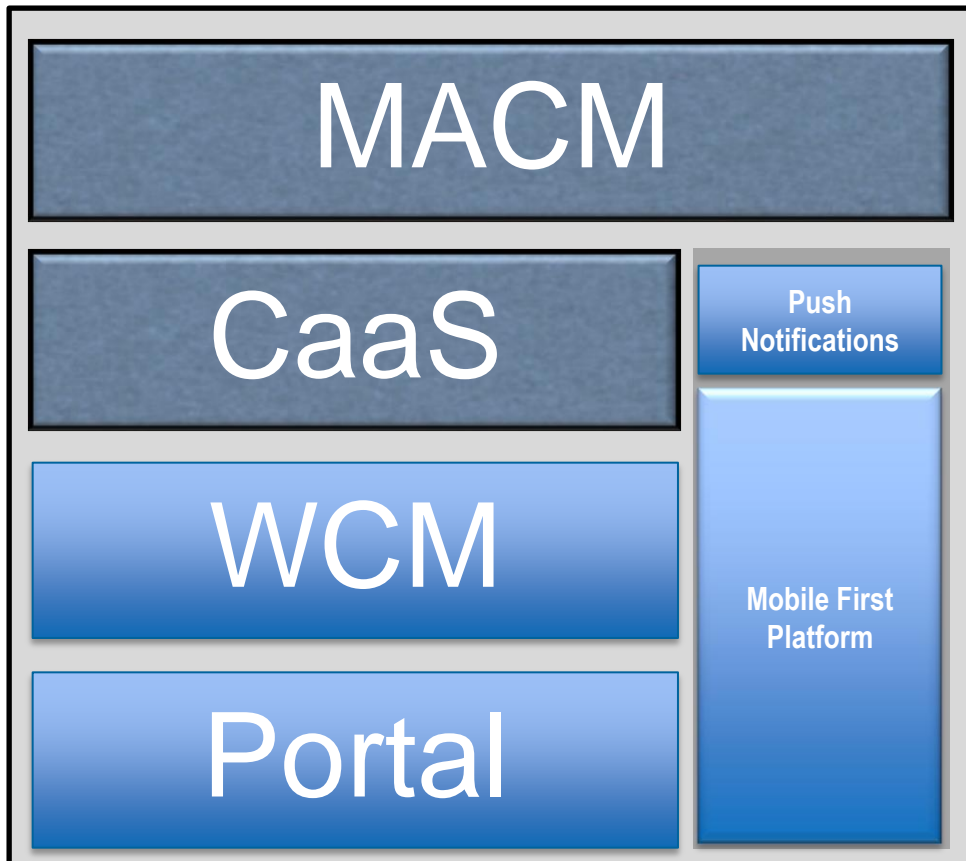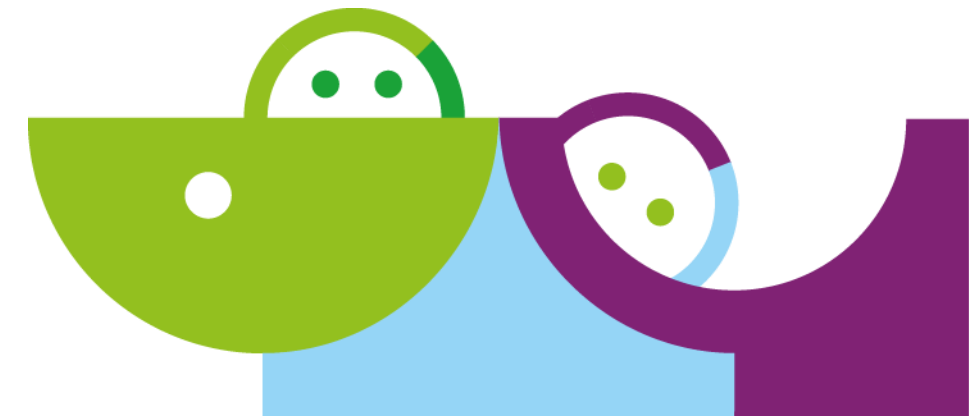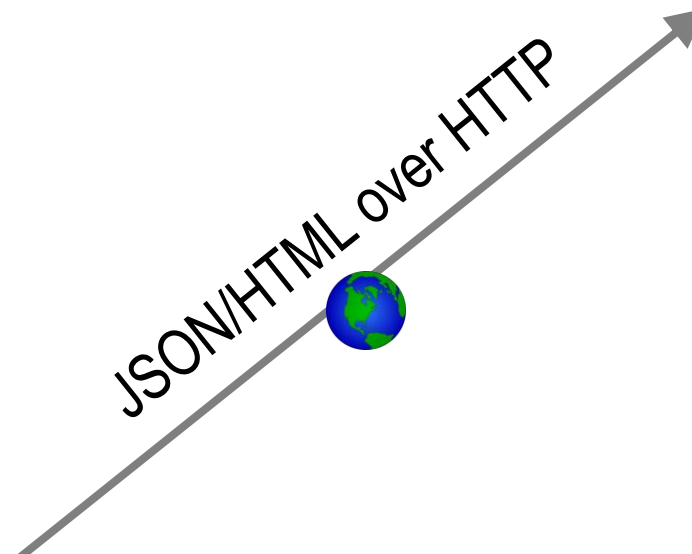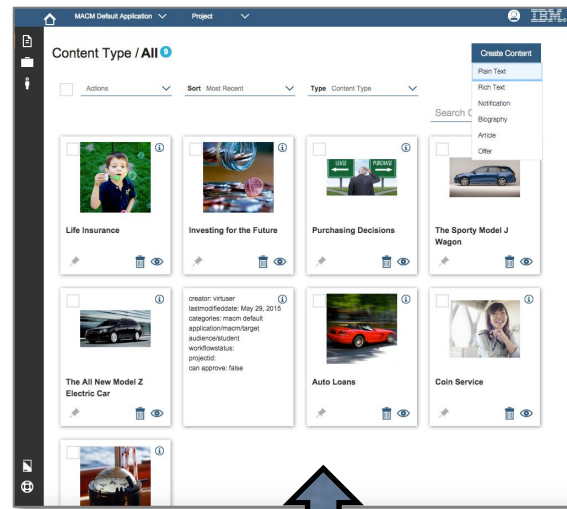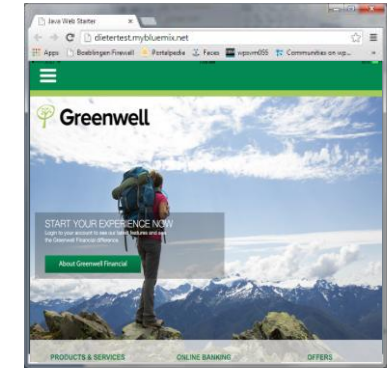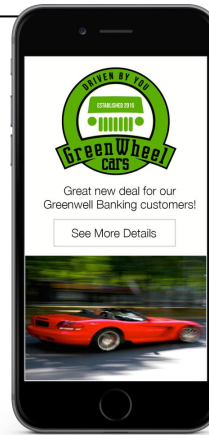
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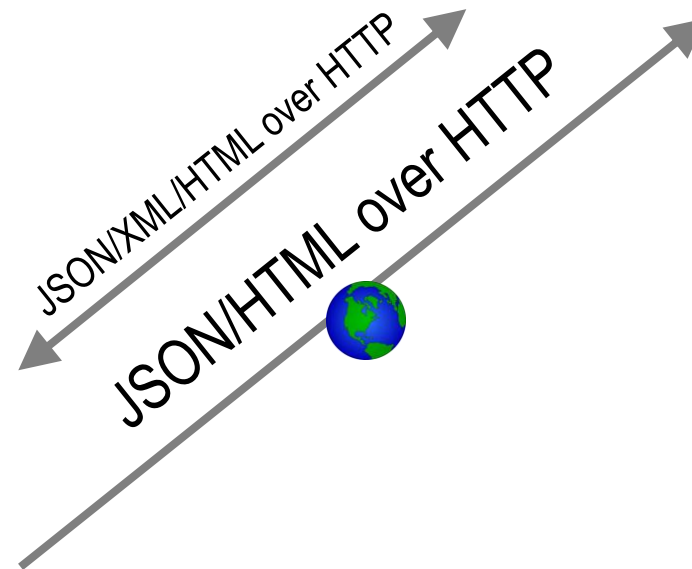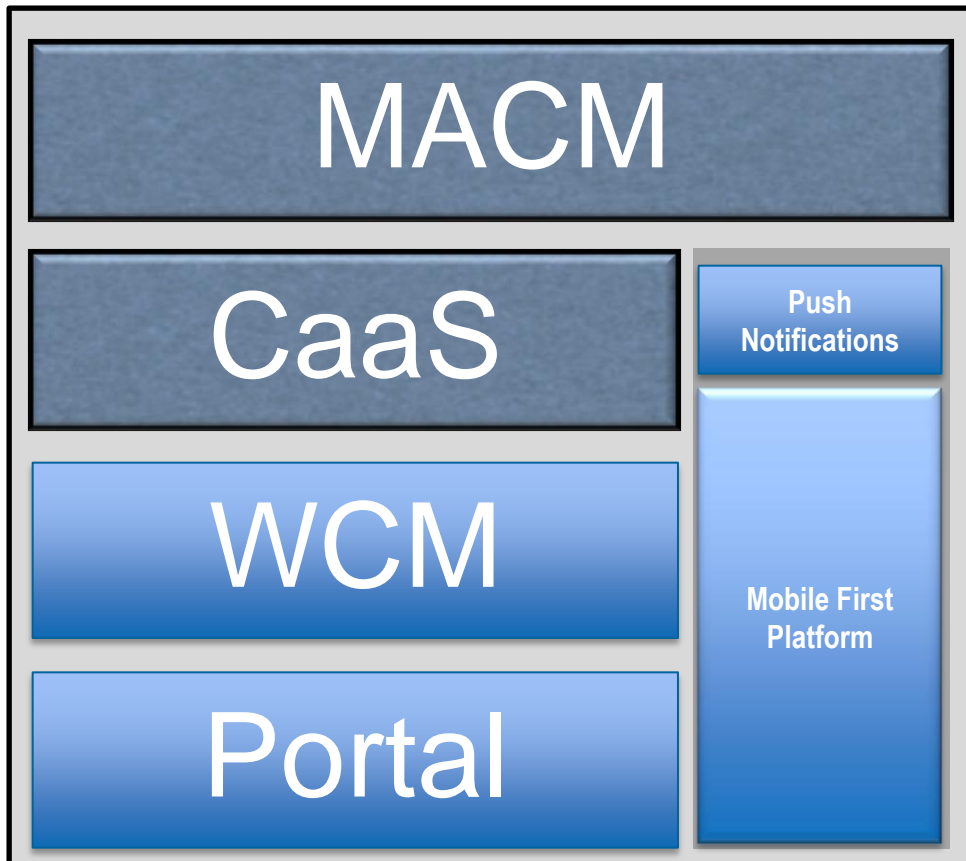
On Prem: You can use the full Portal REST API
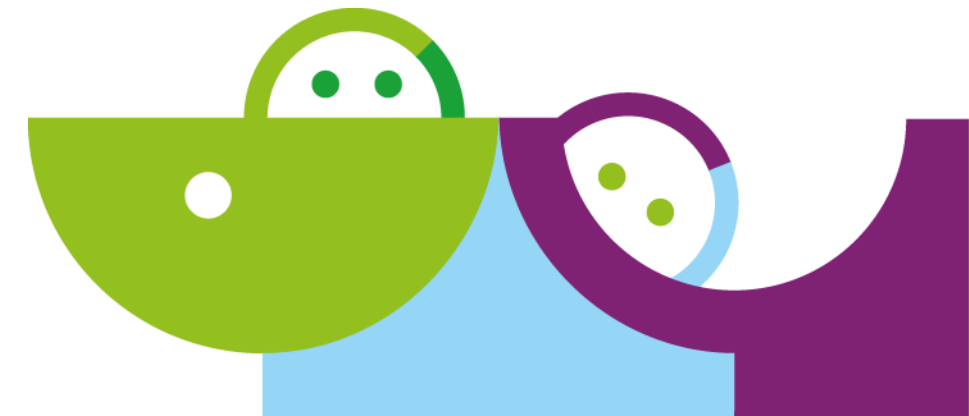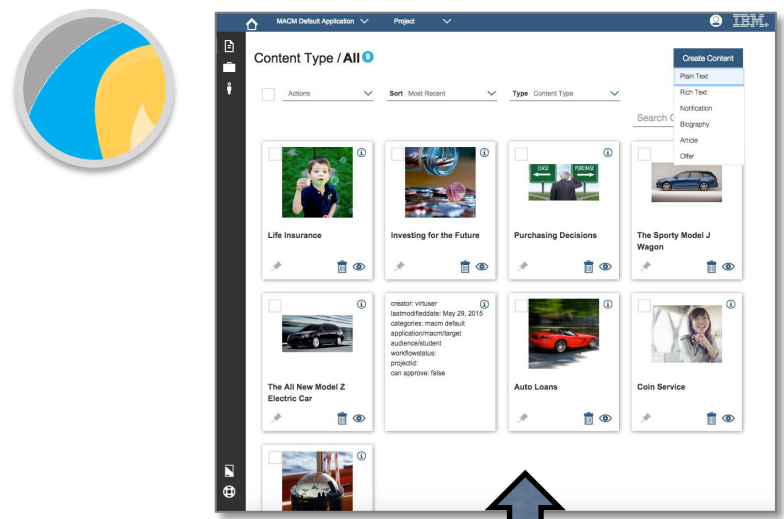
Authoring / Approvals

MACM

CaaS

Push Notifications

WCM

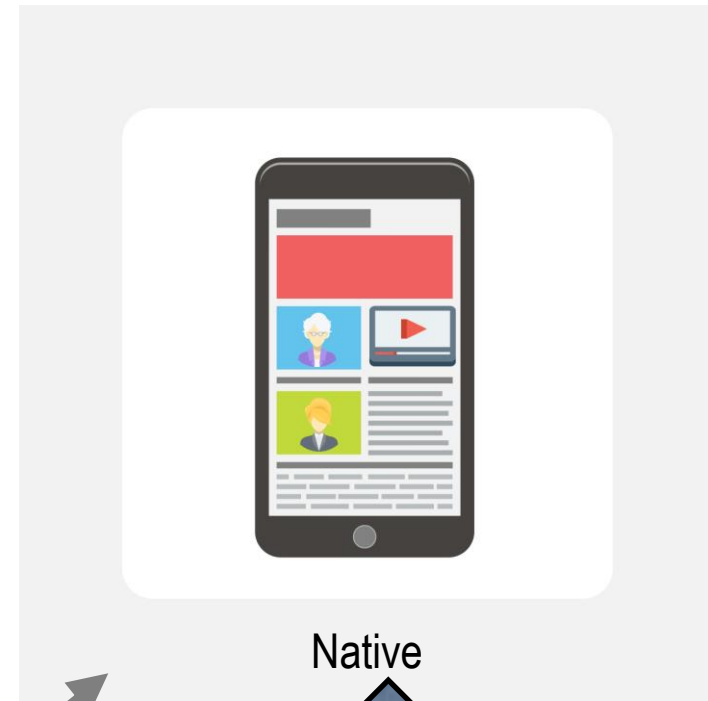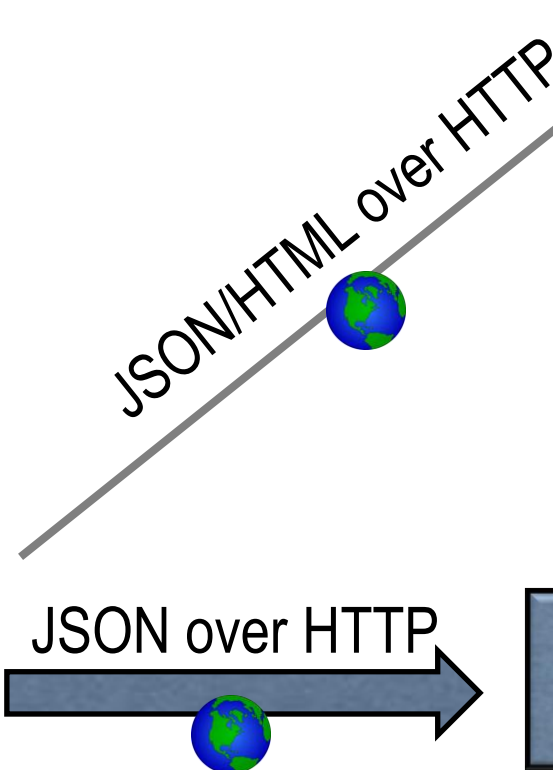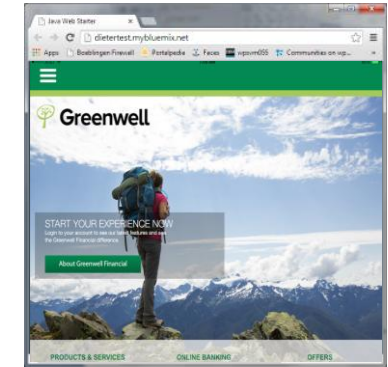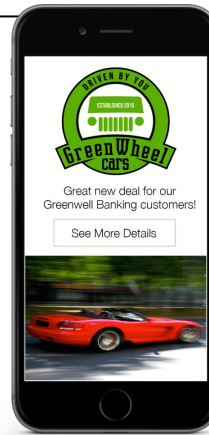Mobile First Platform

Portal

Portal/WCM API

MACM API

JSON/XML/HTML over HTTP

JSON/HTML over HTTP

JSON over HTTP

Native

MACM SDK
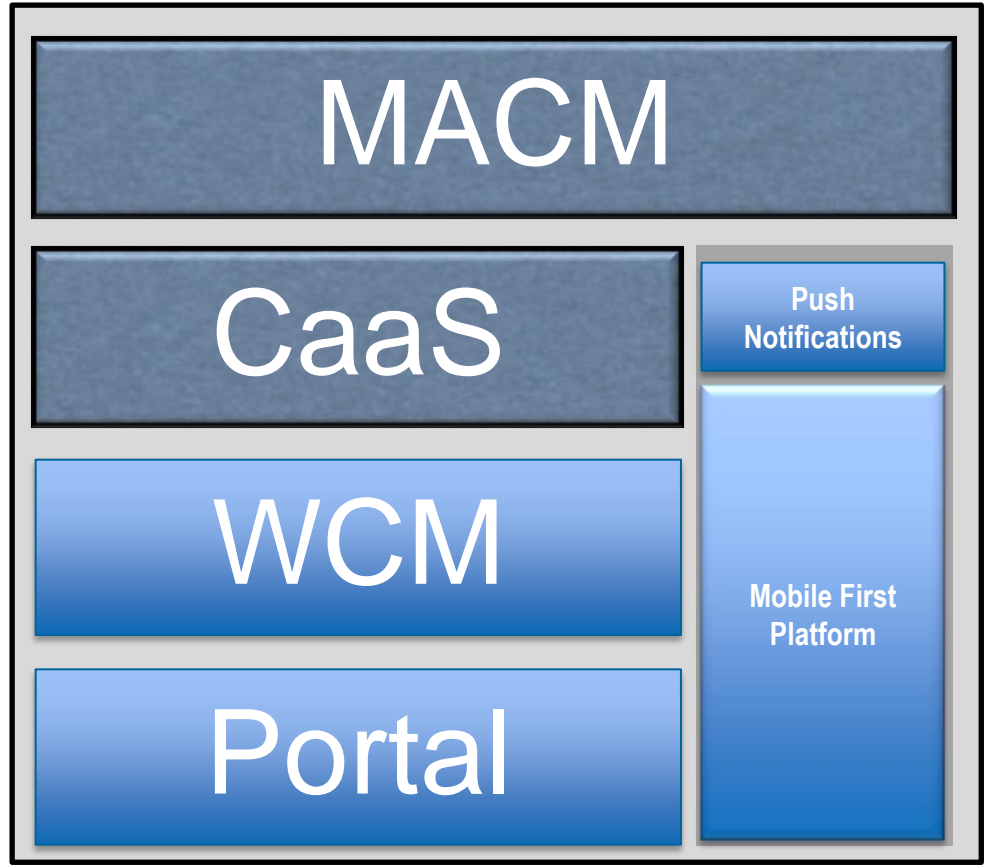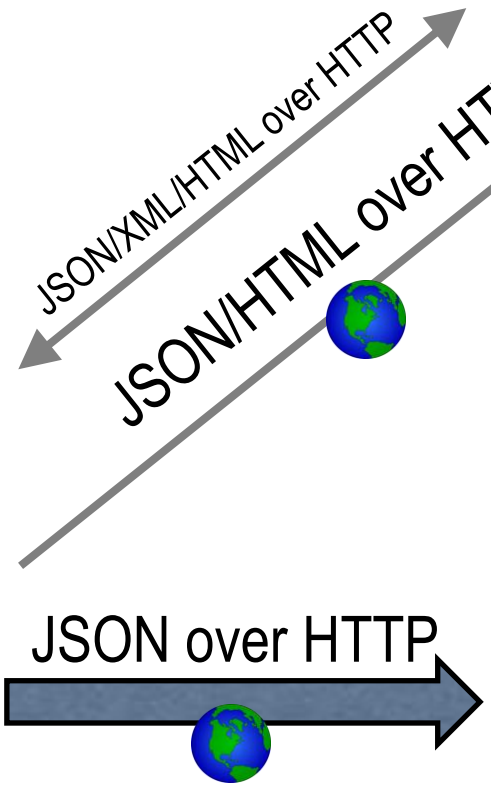
On Prem: You can use the full Portal REST API

MACM ReST API

- The MACM API bases on the Content as a Service (CaaS) apis introduced in CF05

  - http://www-01.ibm.com/support/knowledgecenter/SSHRKX_8.5.0/mp/wcm/slct_dta_frmt_mime_type.dita

  - http://www-01.ibm.com/support/knowledgecenter/SSHRKX_8.5.0/mp/wcm/wcm_dev_writing-links.dita

- Sample CaaS URLs

  - `http://<host>:<port>/wps/myportal/<tenant>/caas?current=true&urile=wcm:path:Web%20Content/Articles/Sample%20Article&mime-type=application/json`

  - `http://<host>:<port>/wps/myportal/<tenant>?urile=wcm:oid:63d4e6dc-5289-403e-86c0-b973652c9e8&page=ibm.portal.caas.page&mime-type=application/json`

    `caas/page=ibm.portal.caas.page` dentifies the Content as a Service page using its well known friendly namre / unique name.

    `mime-type=application/json` identifies the desired content type

    `Web%20Content/Articles/Sample%20Article /`
    `63d4e6dc-5289-403e-86c0-cb973652c9e8` is addressing the content item by path / id
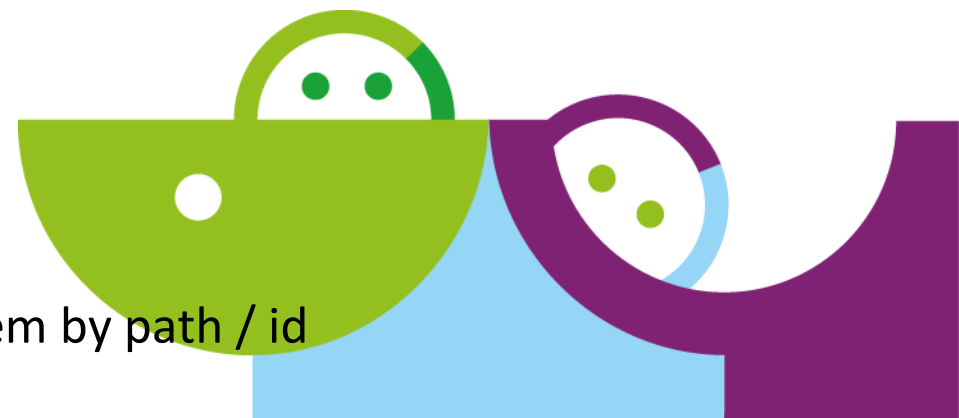
MACM ReST API – CaaS API extensions

- Well known addressable content items representing predefined views
    - All Content, All Content of type xyz, Open Projects

- Multiple filters can be added as URL query params
    - Filter for categories, keywords, title, ...

- Client can set query parameter to define the exact set of properties/elements to be included in the JSON response

- Sort options

- Paging

- Multiple ootb JSON formats simple vs comprehensive
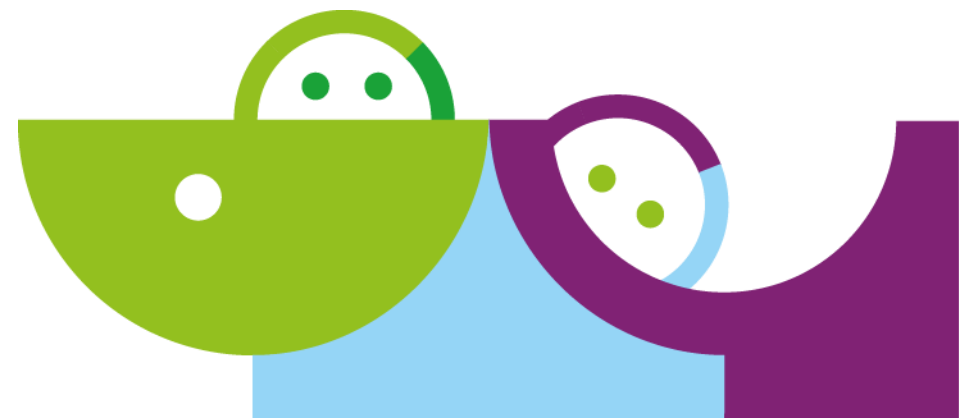
MACM – API Sample

- http://\<host>:\<port>/wps/myportal/acme/caas?current=true&**urile**=wcm:path:Banking%20App/Content%20Types/Offer&**ibm.filter.categories.any**= Banking%20App%2FStudent, Banking%20App%2FScholar&**ibm.filter.keywords**=active&**ibm.pagesize**=4&i**bm.sortcriteria**=-lastmodifieddate&**mime-type**=application/json&ibm.type.information=true

```
{
    "listProperties" : { "id":"5122a462-5813-45ba-9b17-9d09f796b034","lastmodifieddate":"2015-03-13T14:08:43.032Z", "pageSize":4, "pageNumber":1, "hasNext":true},
    "header":{"propertyIndex":{"id":0,"title":1,"contenttype":3,"lastmodifieddate":2}},
    "values":[
        ["93badde7-f819-4fe3-a67a-d6142b860ed2","Auto Loan","2015-06-17T12:58:41.153Z","Offer"],
        ["312d00ee-25d5-4acc-b5fc-a20d5d08e1f4","Student Offer","2015-06-16T12:27:09.140Z","Offer"],
        ["7f81be8b-3e23-4c48-bee7-35a0c136c724","Retirement","2015-06-16T08:02:00.821Z","Offer"],
        ["b771cd60-55b4-4bbe-86d0-c81b22384b74","Insurance","2015-06-15T08:3
    ]
}
```

List result JSON

```
{
    "header":{
        "propertyIndex":{"id":0,"title":1,"keywords":4,"categories":5,"projectname":3,"lastmodifieddate":2},
        "elementIndex":{"Body":6,"Price":8,"Image":7,"Summary":9}
    },
    "values":[[
        "c077f28f-aa6d-4a13-a915-48648ac7bde2",
        "Student Offer",
        "2015-06-17T20:23:55.601Z",
        "Dieter1",
        "New Customers",
        "MACM Default Application\/MACM\/MTL\/Special Offer,MACM Default Application\/MACM\/Target Audience\/Re
        "<div dir=\"ltr\"><span style=\"color:#0000FF;\"><span style=\"font-size:14px;\"><strong>Lorem ipsum<\/
        "\/wps\/wcm\/myconnect\/mtl2015\/bdf5af89-4701-41db-a9e3-06b505c39955\/student.jpg?MOD=AJPERES",
        "Enter offering price",
        "This is the summary text for the Student Offer"
    ]]
}
```

Item Details JSON

All Content 13

Organize your content with libraries

View current projects and content that need approval

View all content or filter by content type

Quickly assign content to a project to track changes and drive approvals

Easily add new content from out of the box content types or create your own

Clean "Card" UI allows LOB quickly create mobile app content

Preview, Delete, approve/reject content items

Flip cards to get more details

MACM Default Application ⌄   **Dieter** ⌄

Create Content
- Image
- Plain Text
- Rich Text
- Notification
- Biography
- Catalog Item
- Article
- Offer

Actions   Sort Most Recent ⌄   Type Content Type ⌄   Search Con

Retirement
Published
Unregistered User,Gol...

Scooter
Published
Unregistered User

Coin Offer
Draft , Dieter
moneymanagement,savings
Gold Customer,Register...

Greenwheels
Published
car,mobility

Default Offer
Draft , Dieter

Creator: wpsadmin
Last modified:
  Jun 16, 2015, 3:13:28 AM
Categories:
Workflow status:
Project ID: ea40adeb-96b8-4773-84a2-3c42d8c895bc
Can approve: true

Student Offer
Published
david,winter
Registered User

Motorcycle
Published
Gold Customer,Smartph...

MACM Default Application ∨   Project   ∨

IBM

IBM

New Offer   [Preview]

Title

Life Insurance

Summary

Normal (... | Font | Size | A▾ 🖉▾ | **b** *i* U S x₂ x² | ⌘ ☰ | ⇤ ⇥ | ≡ ≡ ≡ ≡

There's a lot to learn when you're getting started with life insurance, and there's still a lot to learn when you've had insurance for years! Greenwell Financial wants to make sure you understand the basics and feel confident that you're making the best decision.

With our life insurance policies, you can help your family:

- Keep paying the home mortgage.

- Maintain their current standard of living.

- Pay off debts, estate taxes, and final expenses.

- Create a fund for college education.

- Create a fund for a family member with special needs.

- Protect their dreams for the future.

Image

Properties

Content type: Offer
Project: Offers (Active)
Workflow: Simple (Draft)
Description:

Life Insurance promotion 5.30.2015

Categories

High Net Worth ⊖

Select Category   ∨

Geo Location

GreenWheel Cars

Greenwell Banking Branch

Target Audience

Gold Customer

High Net Worth

Registered User

Retiree

Student

Unregistered User

Intuitive content authoring experience

Intuitive and powerful content creation tools

Insert images from content library or other locations

See content workflow workflow status, library location, and content ID

Set tags for searching and filtering

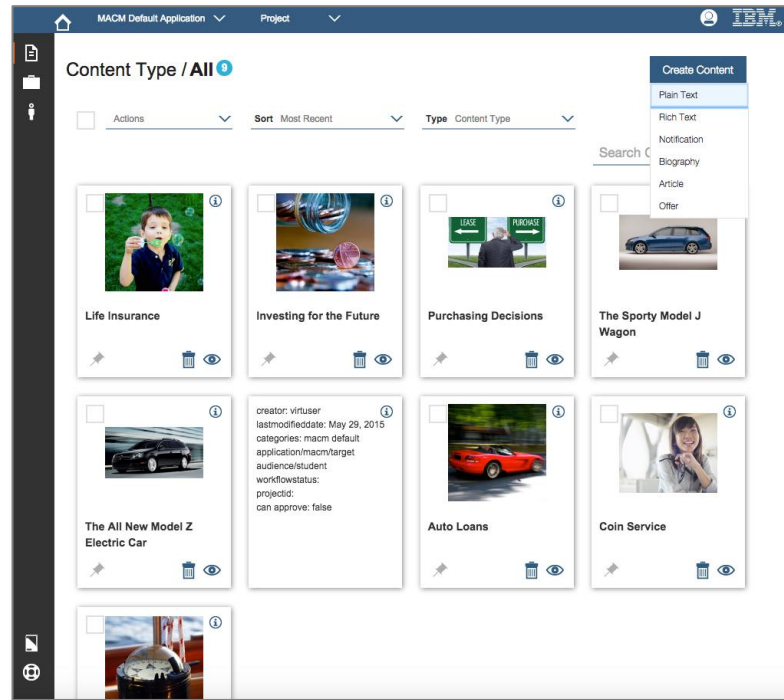Select user segmentation to personalize mobile app content to a targeted audience

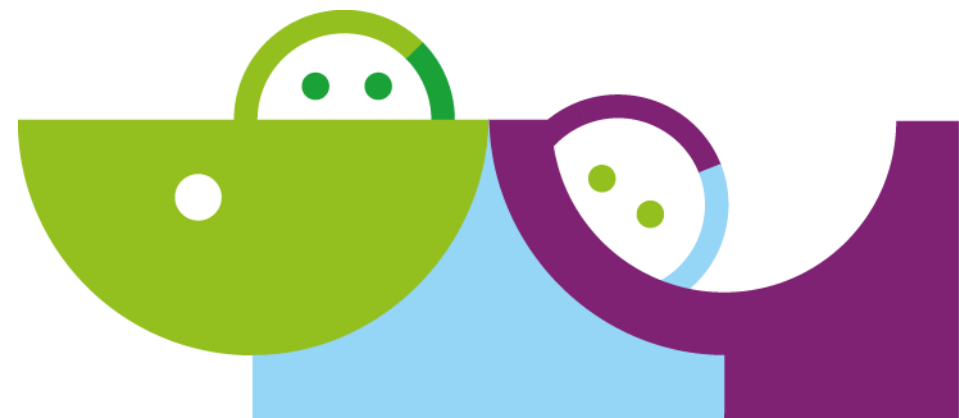Author push mobile push notifications

JSON Rendering

{"names":{"title":0,"id":1,"summary":2,"price":3, "imageURL":4, "lastModifiedDate":5},
"values":[[
"Life Insurance",
"f933fa96-fff8-4b7a-8b18-f952f19fe520",
"Heed the call of the open road!",
"Rates start at 5.0%",
"/wps/wcm/myconnect/fc819f49-0159-4f55-85d3-
3db43752c9cc/motorcycle_financing_loans.png?MOD=AJPERES&CACHEID=fc819f49-0159-4f55-85d3-3db43752c9cc",
"1421850274206"
],[
"Financial Planning",
"cce662be-60c8-477e-95ec-9b0a1f63894b",
"Enter short description",
"Enter offering price",
"/wps/wcm/myconnect/d1f8ae5b-0c7c-457f-bfb7-818f583ee260/defaultMACM.jpg?MOD=AJPERES&CACHEID=d1f8ae5b-
0c7c-457f-bfb7-818f583ee260",
"1421837605807"
],[
"Student Loans",
"65b4fc17-e7a5-4a94-bc3f-e421d3a39e13",
"Apply for a student load today and be entered to win a scholarship.\n\nEnter short description",
"Enter offering price",
"/wps/wcm/myconnect/e4a98720-b3f7-4ee7-aa55-7dd45dc9bb8a/student.jpg?MOD=AJPERES&CACHEID=e4a98720-
b3f7-4ee7-aa55-7dd45dc9bb8a",
"1421748014470"
],[
"Auto Loan",
"9052c16c-4700-4942-9e6b-4969dd4530b6",
"Auto loans starting at only 1.9% for 60 months and no money down.",
"Enter offering price",
"/wps/wcm/myconnect/4cc10d83-8e53-4688-935e-c3d8431b09b6/auto.jpg?MOD=AJPERES&CACHEID=4cc10d83-8e53-
4688-935e-c3d8431b09b6",
"1421682842498"
],[
"Coin App Offer",
"25ba2bf2-2e6a-4f18-88d4-a47852518b60",
"Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
"Enter offering price",
"/wps/wcm/myconnect/10e0b853-71bf-407d-94a4-
223b921d4abd/Coin_app_offer.png?MOD=AJPERES&CACHEID=10e0b853-71bf-407d-94a4-223b921d4abd",
"1421679514571"
]]}

JSON
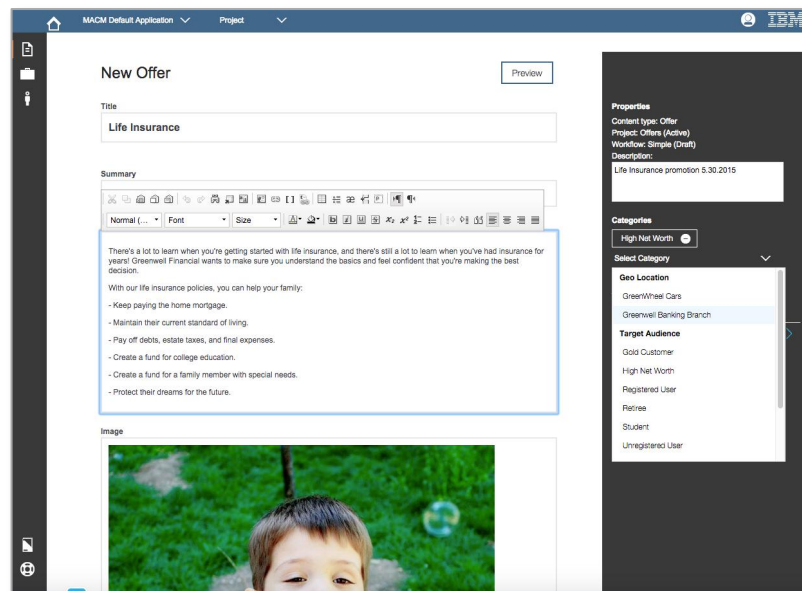
DEMO

Thank you

Dr. Dieter Buehler