

Integration beyond the Enterprise

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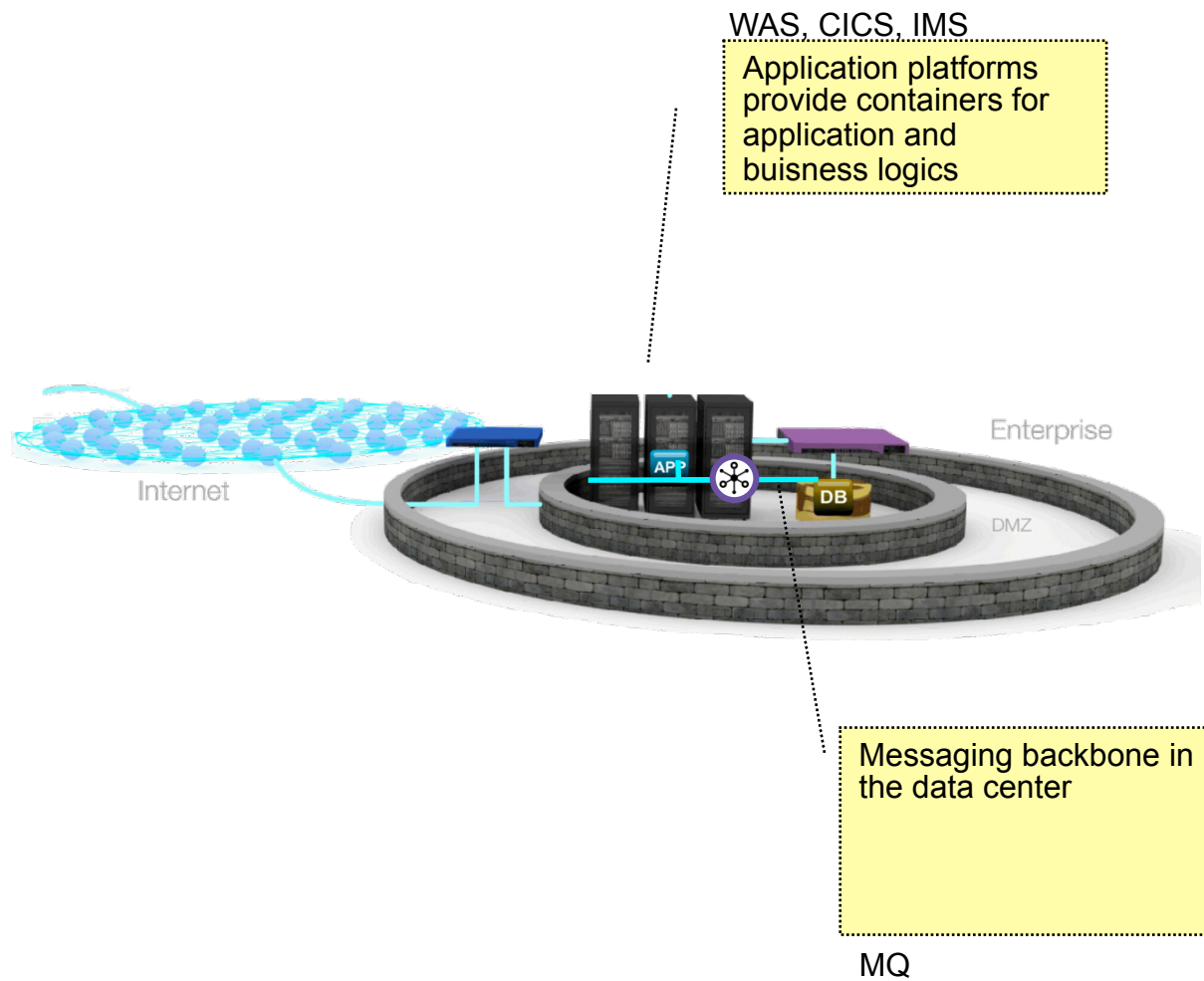
Agenda

- System of Engagement and Systems of Record
- IBM API Management
- IBM DataPower
- Summary



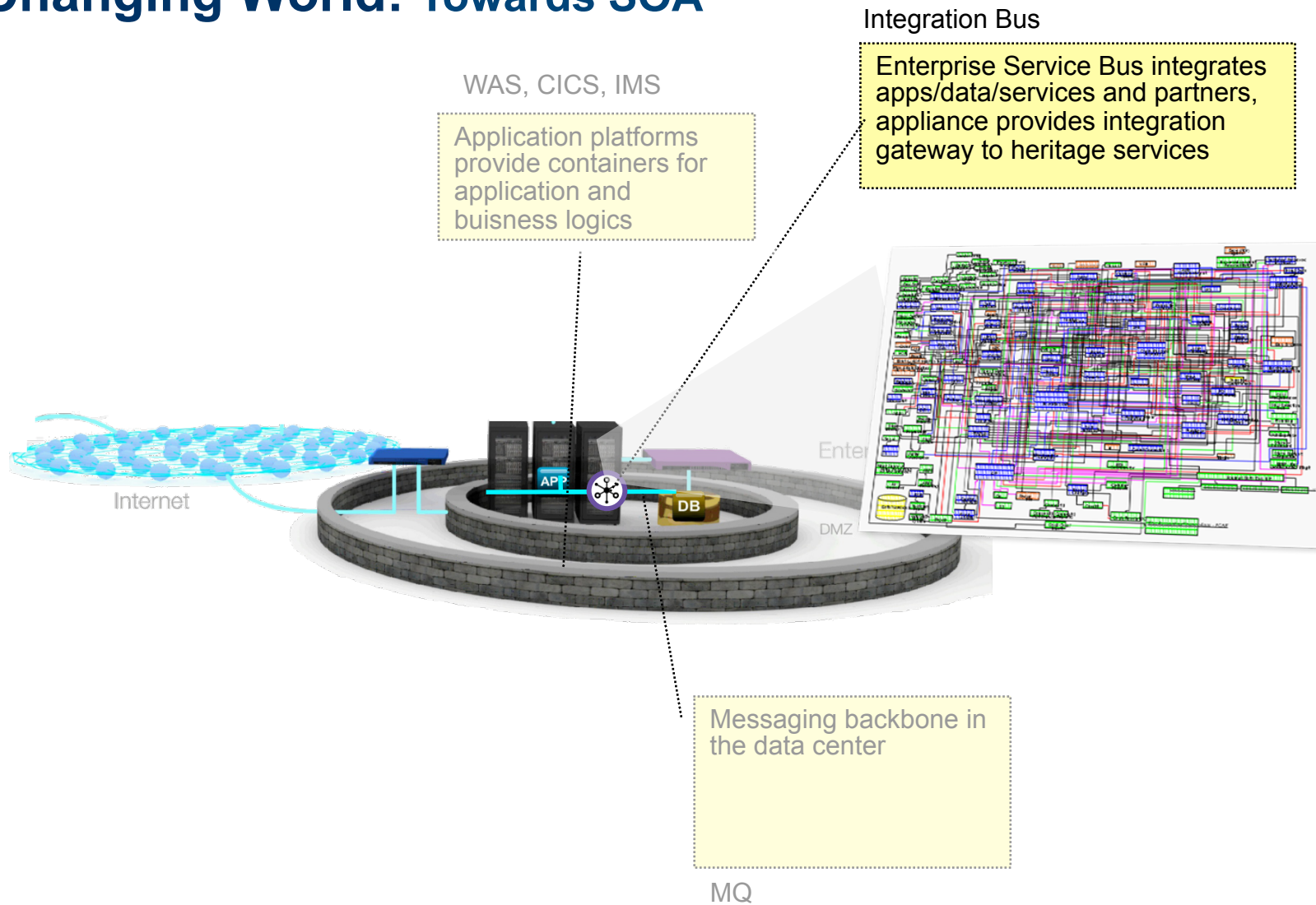
Integration Beyond the Enterprise

The World As We Knew It



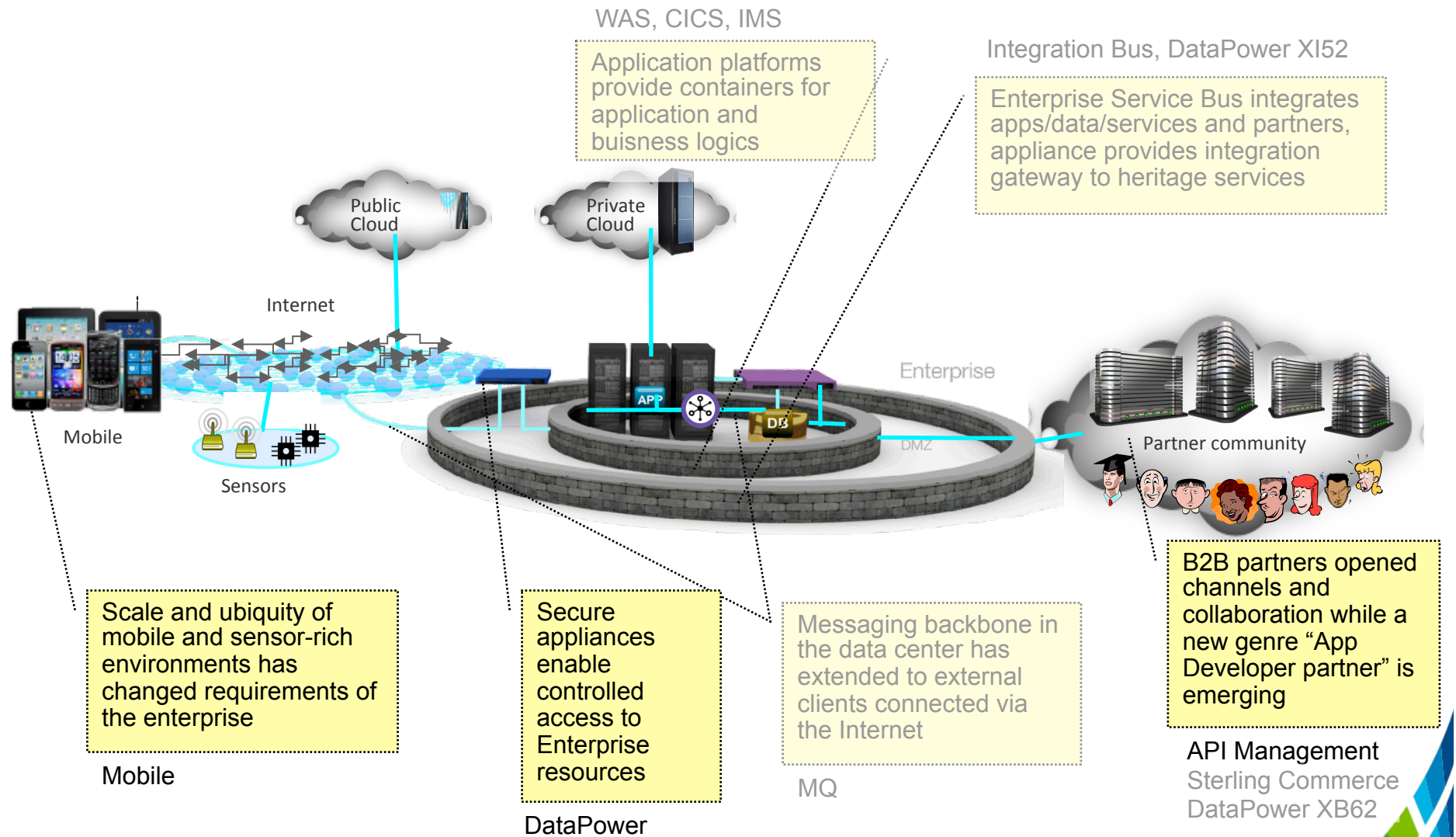
Integration Beyond the Enterprise

The Changing World: Towards SOA

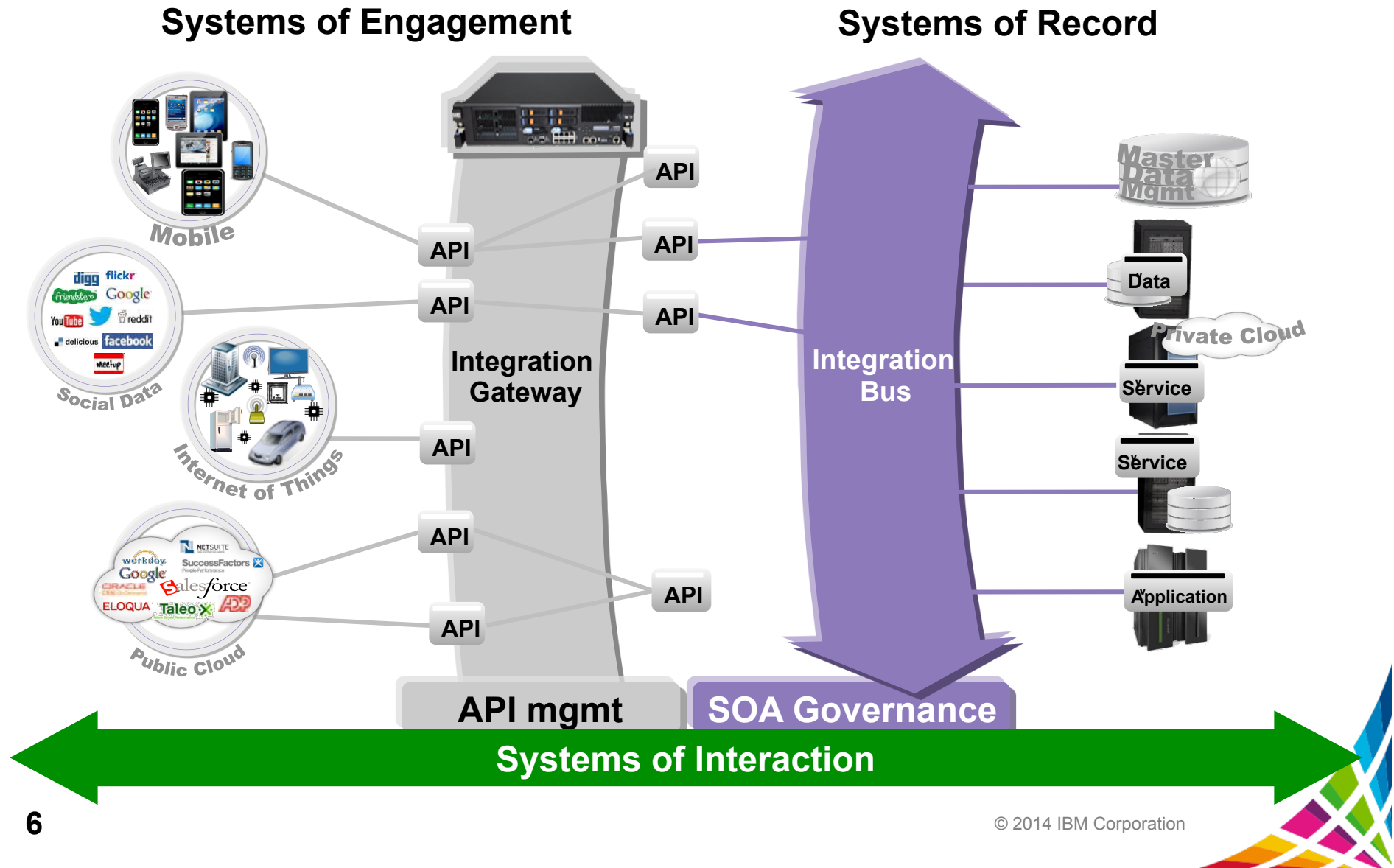


Integration Beyond the Enterprise

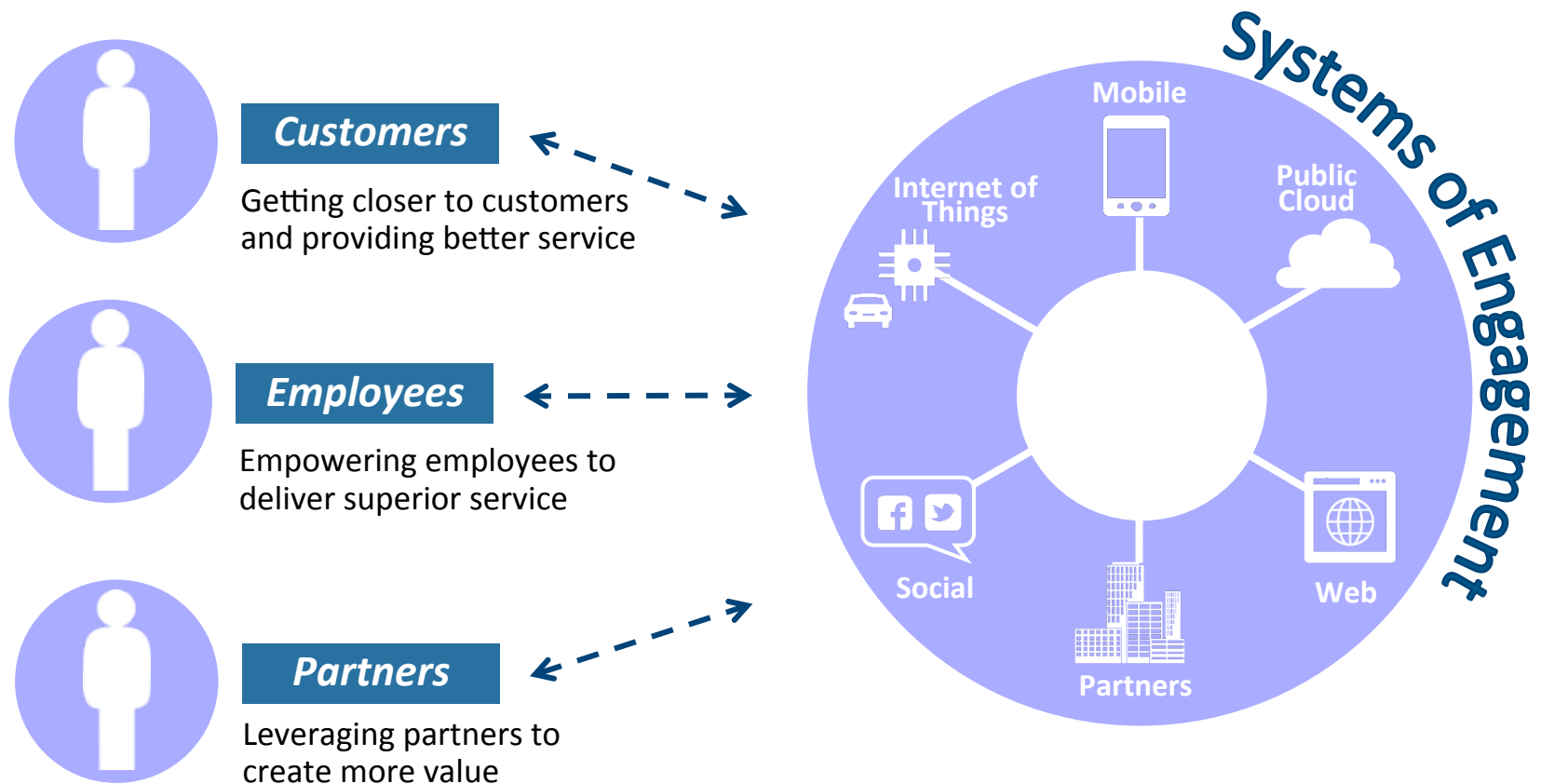
The Changing World: (Social) Evolution of “Partner”



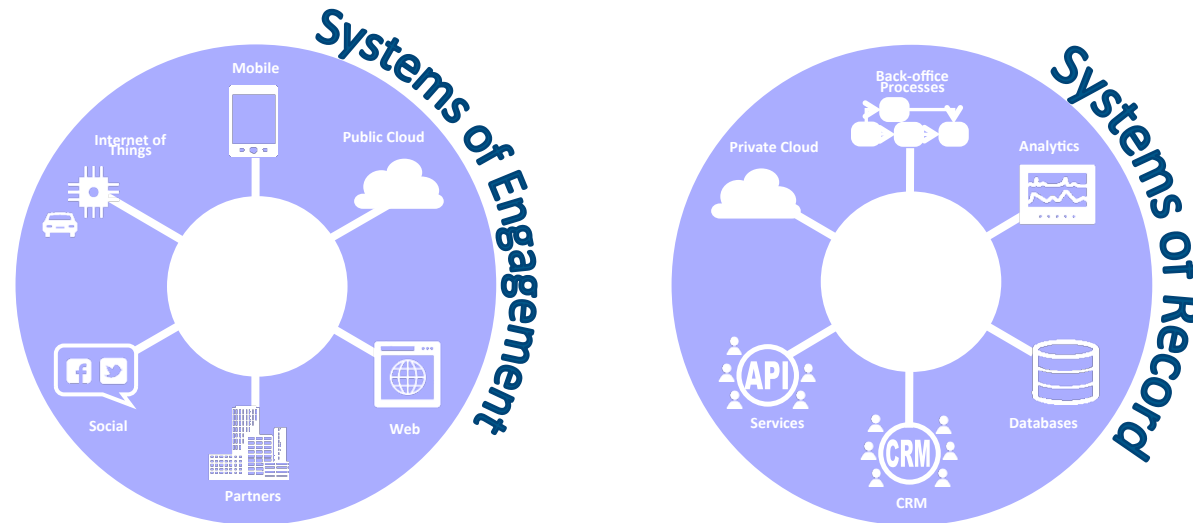
Extending SOA to the API economy



Goal of Systems of Engagement



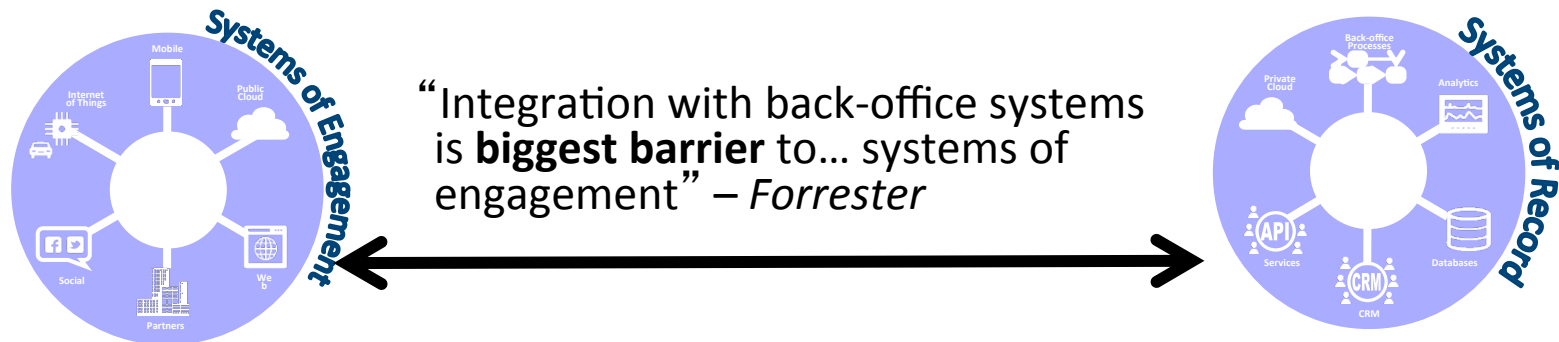
How different are these Systems?



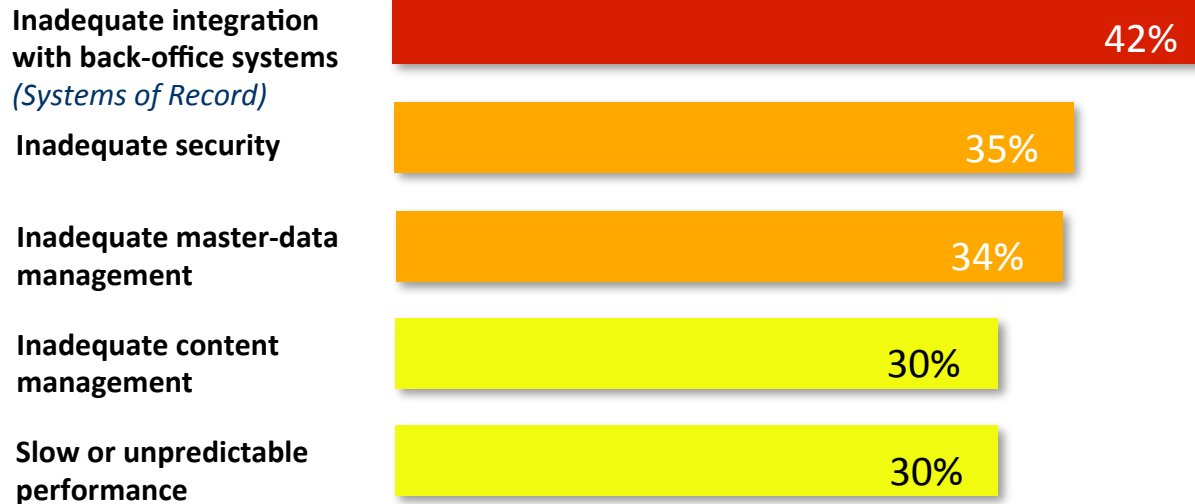
	Systems of Engagement	Systems of Record
Sponsors	Business e.g. CMO	IT e.g. CTO
Creators	Contractors	In-house and packaged
Value	Dialog and discovery	Source of truth
Interactions	Conversational, Synchronous	Transactional, Asynchronous
Pace of change	Ideally high	Ideally low
Lifecycle	Transient and fluid	Permanent and foundational



Lack of integration impedes innovation



What is your most significant technical barrier to creating effective customer-facing systems?
(*Systems of Engagement*)



Agenda

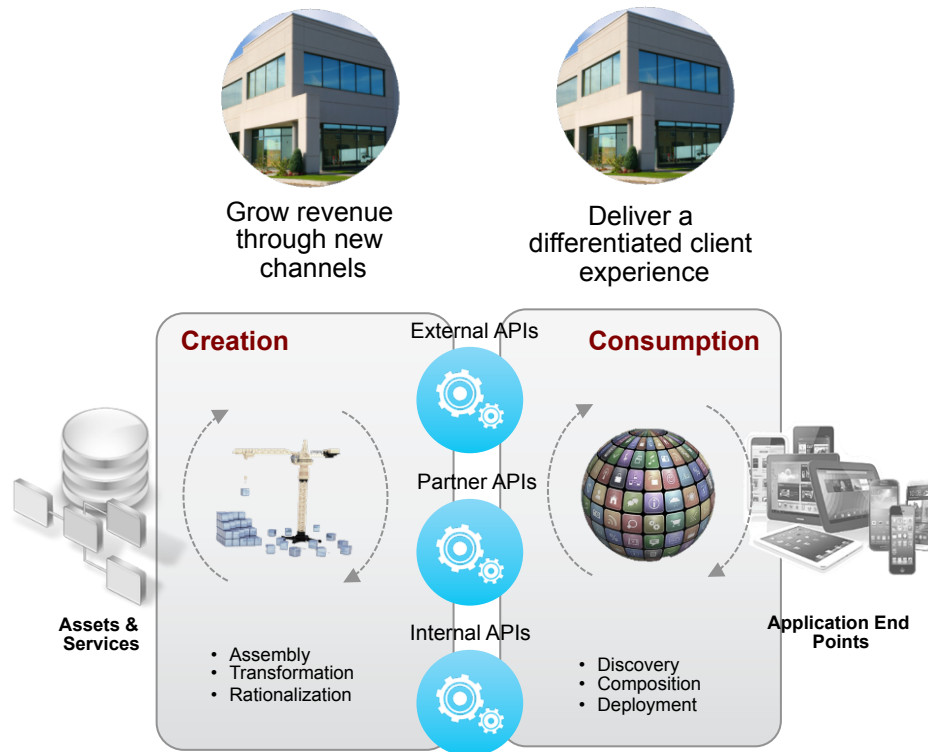
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Integration Beyond the Enterprise

IBM API Management

Expose APIs to drive innovation



Key Capabilities

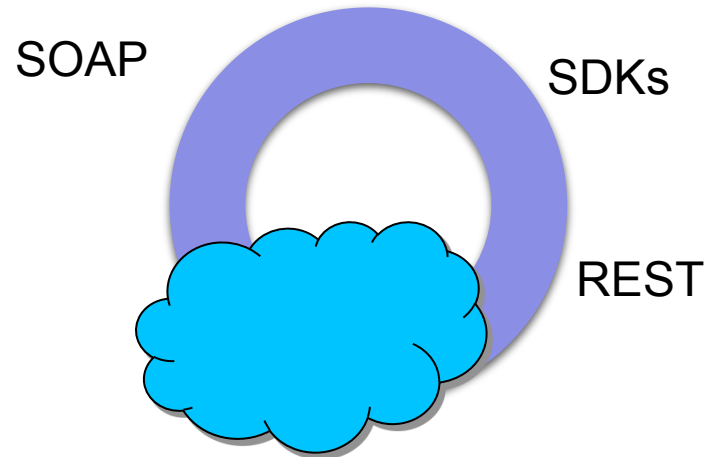
- Easy API creation from existing services
- Compose APIs by integrating services
- Manage complete lifecycle of API
- Secure and control access to APIs
- Robust business analytics of API use

Business Value

- Rapidly establish presence in new API economy
- Nurture innovation by rapidly building community of developers, entrepreneurs and partners



APIs Exist Already



- Integration not apps
- Not quite right...
 - Aggregated APIs
 - Filtered/Transformed data



API Management

It's not about the API

It's about the exposure

The key word is 'management'



Exposing APIs is easy

- Just add a secure gateway to your existing APIs
- Datapower will do all that you need



Not quite!



Why APIs

- Internal
- External
- App to App communication: Integration!



APIs are products

- An enabler for realising value of data

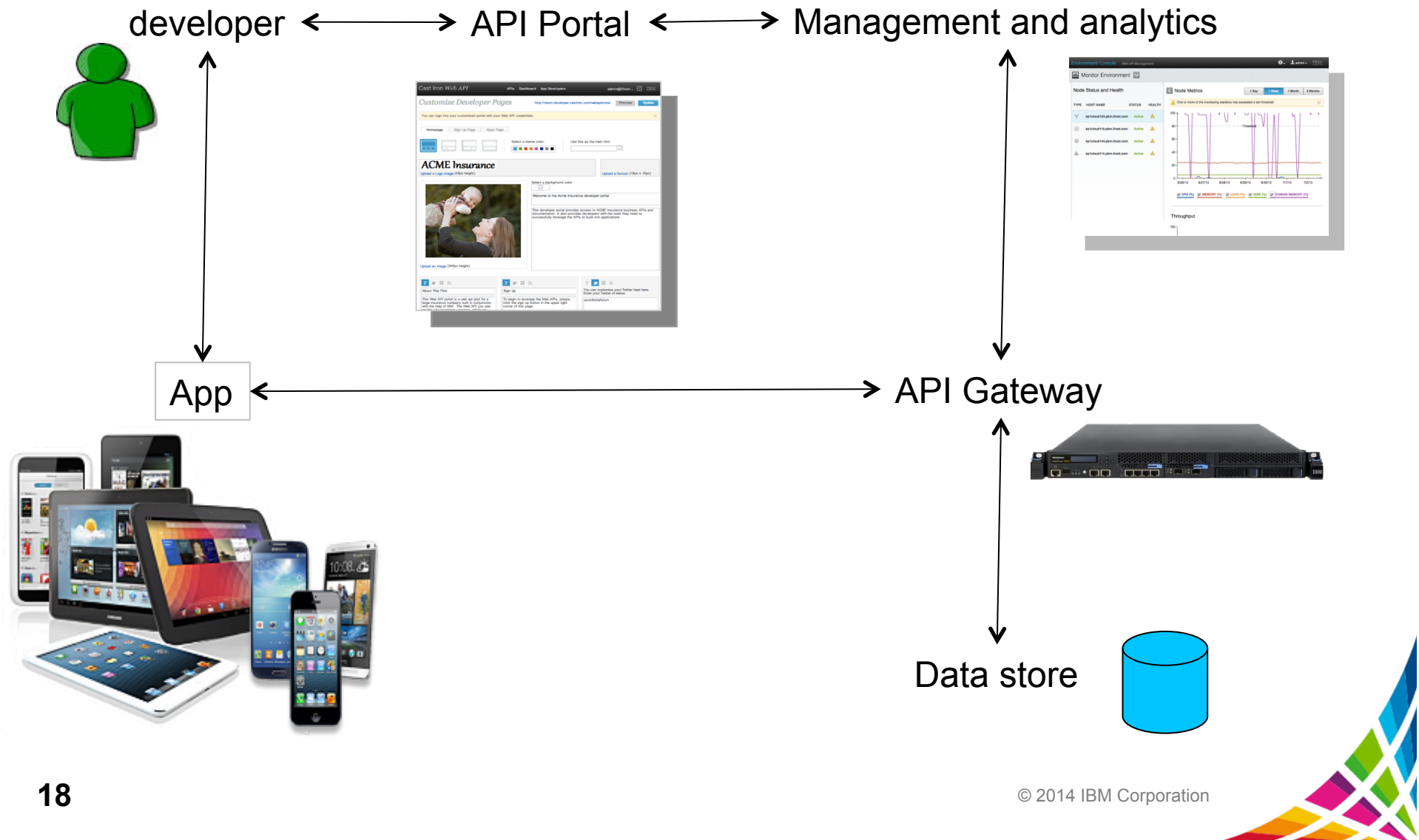


5 Core Concepts

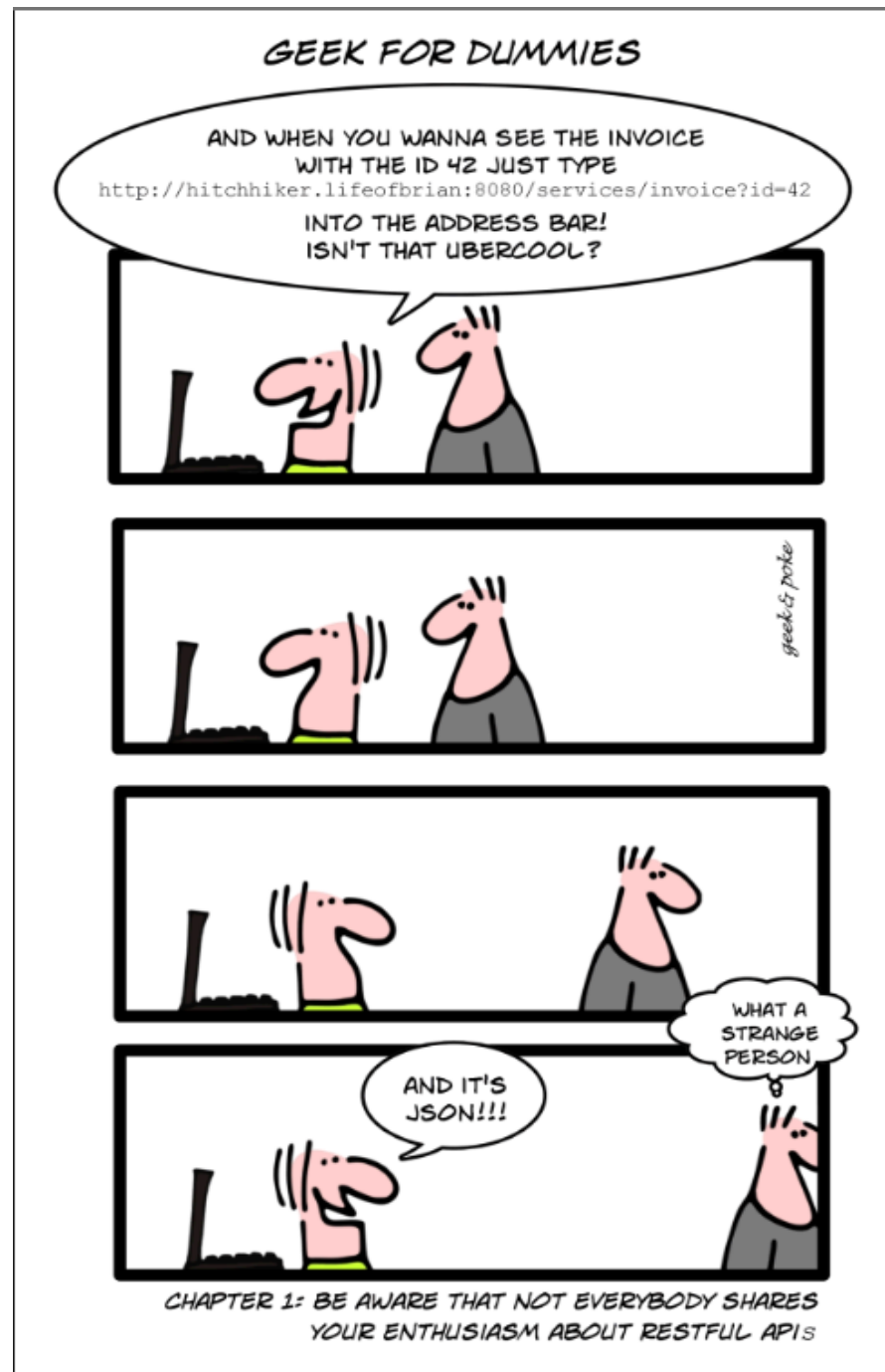
- **Security**
 - Managing access
 - Quota usage, tracking and monitoring
- **Capability**
 - Proxy of existing services
 - “Assembly” of existing data sources to create a new API
- **Caching**
 - Deal with increased load on backend services
 - Flood control / DoS prevention
- **Analytics**
 - Technical metrics about calls made, devices used, workload per app developer
 - Business level queries defined on the fly
- **Community**
 - Publicize and promote adoption of your APIs
 - Manage sign up of app developers
 - Provide branding for your enterprise, plus self service documentation and samples for your users



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Integration Beyond the Enterprise

Drive innovation
through APIs

Freedom to Innovate Faster through APIs

Designing APIs that
attract developers

Assemble from new
and existing services

Share with
developer community

Manage, scale and
monetize

All APIs

Baggage

+ Add authentication URL

Checks baggage status

admin@khleairways | Jul 26, 2012 12:09:53 PM |

Resource Definition More Documentation

Add a Resource

GET Resource URI (e.g. customer/c)

Resource description

https://khleairways.web.castiron.com/acme/

GET status?trackID

This gets a status for a bag

https://khleairways.web.castiron.com/acme/status

Details

Created by sb2 | Apr 15, 2013 2:31:52 PM

Describe this entitlement (optional)

Requires Id and Secret ☒ Requires Approval

100 Calls per second

Advanced

GET	1,000	Calls	per minute
PUT	10	Calls	per hour
POST	20	Calls	per hour
DELETE	100	Calls	per day

APIs using this Entitlement (1)

Catalog

Created by admin@sb2 | Apr 10, 2013 9:41:42 AM

Show Resources

acme airlines API Documentation

Getting Started

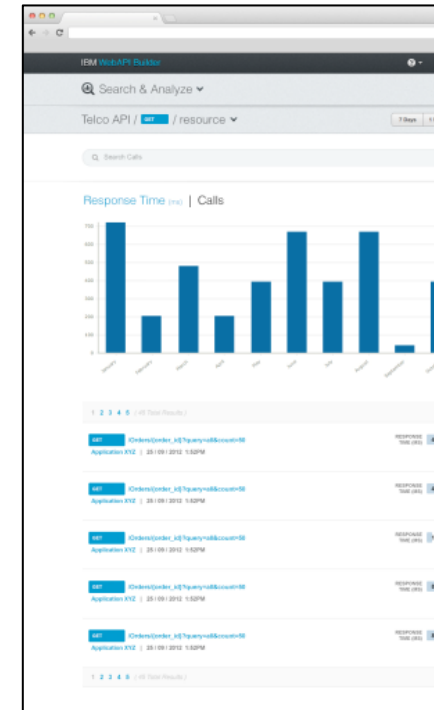
Start adding applications and managing your API usage on your Homepage

To access this Getting Started page at any time, access the user menu top-right and click Show

Browse APIs Register Apps

Discover available APIs, view documentation, and learn about access levels

Register your applications to access available APIs and select your entitlement levels



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Integration Beyond the Enterprise

IBM DataPower

*Integrate and secure
across boundaries*

DMZ ready appliance for mobile, allowing you to rapidly secure and optimize new mobile client access patterns to back-end systems and data



Key Capabilities

- Scalable DMZ-based authentication
- Reverse proxy with protocol translation
- Transformation, routing, session affinity
- Intelligent load balancing
- Policy-driven enforcement
- Integrated caching

Business Value

- Hardened security for mobile access
- Rapid deployment and change mgmt

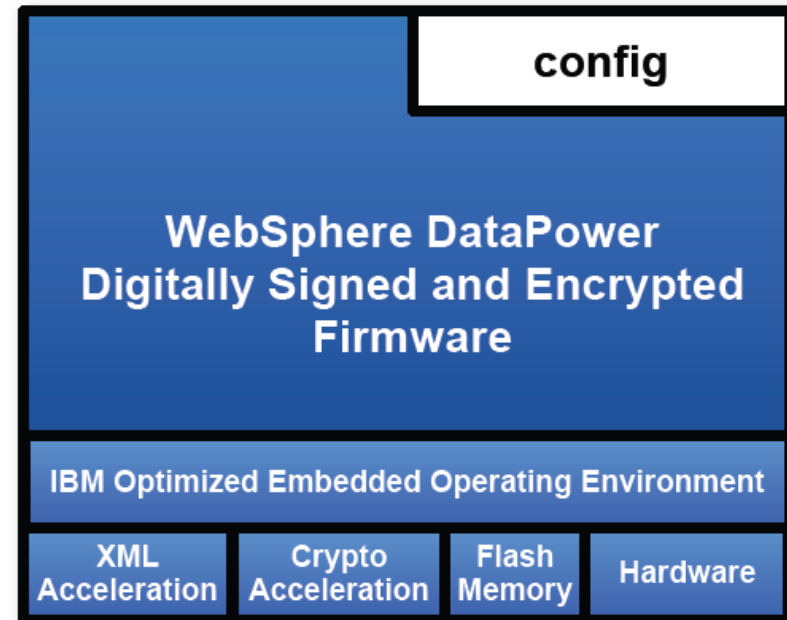


Achieve Security Assurances with Hardware and Firmware

- Purpose-built **hardware** provides physical security
 - Sealed, tamper-evident case
 - No external drives, etc.
 - Default “locked-down” configuration
 - Verbose audit log

Third party certifications

- Common Criteria EAL4
- FIPS 140-2 Level 3 (with HSM)
- Drummond Group AS2



- DataPower Appliances use a hardened **firmware** image
 - Signed and encrypted by IBM
 - Upgrades in minutes
 - Optimized, embedded DPOS operating system
 - Runs no arbitrary software or Java



Protect your data with cryptography and XML threat protection

- Use DataPower to help resolve **PCI compliance** issues
- Easily sign, verify, encrypt, decrypt any content
- **Configurable** XML Encryption and Digital Signatures
 - Message-level
 - Field-level
 - Headers

XML Threat Protection

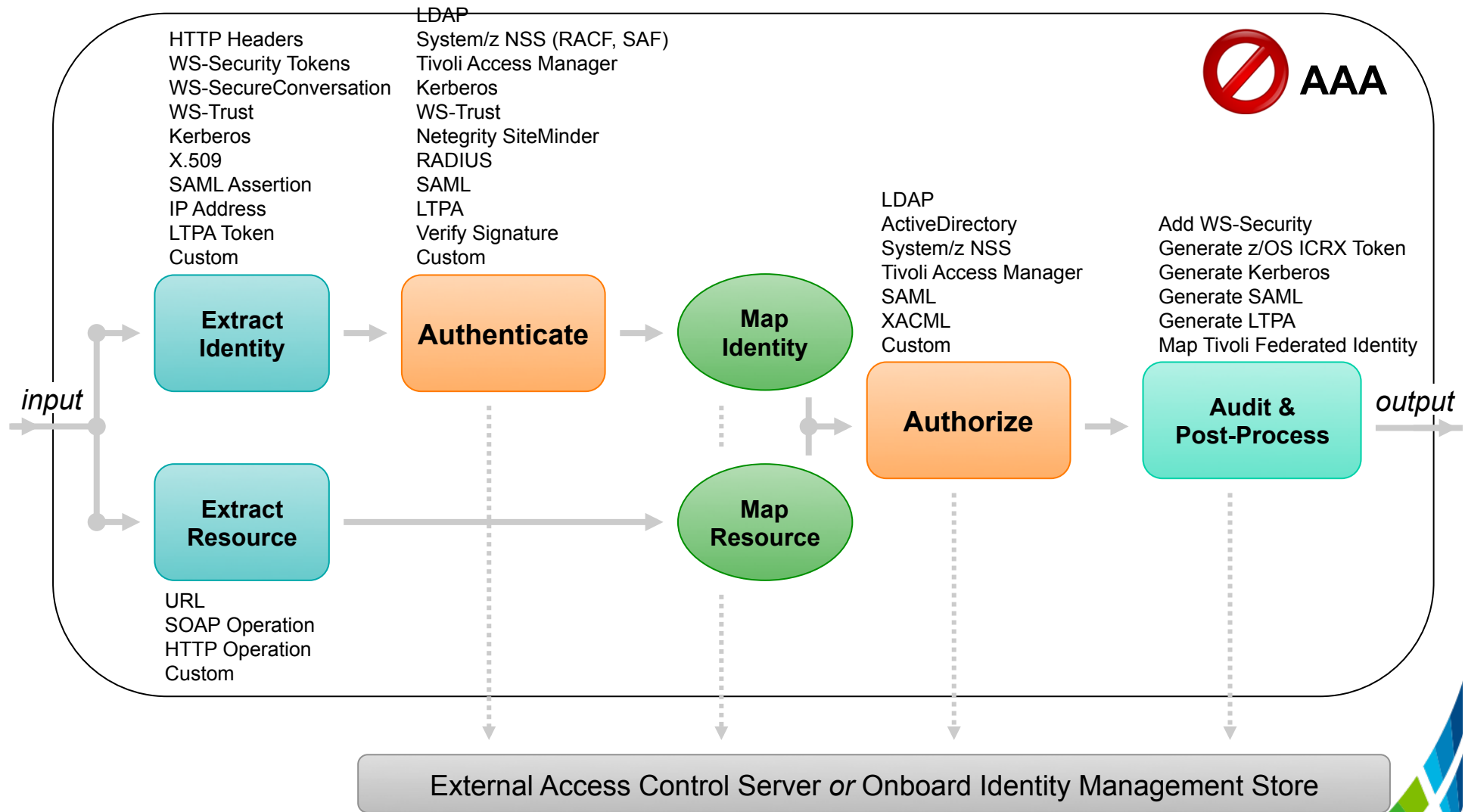
- Entity Expansion/Recursion Attacks
- Public Key DoS
- XML Flood
- Resource Hijack
- Dictionary Attack
- Replay Attack
- Message/Data Tampering
- Message Snooping
- XPath or SQL Injection
- XML Encapsulation
- XML Virus
- ...many others

See: *The (XML) threat is out there...* by Bill Hines
ibm.com/developerWorks



Integration Beyond the Enterprise

Employ flexible AAA (Authenticate, Authorize, Audit) Policies



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Summary:- Integration beyond the Enterprise

