

# Geospatial Analytics with ArcGIS and IBM Bluemix

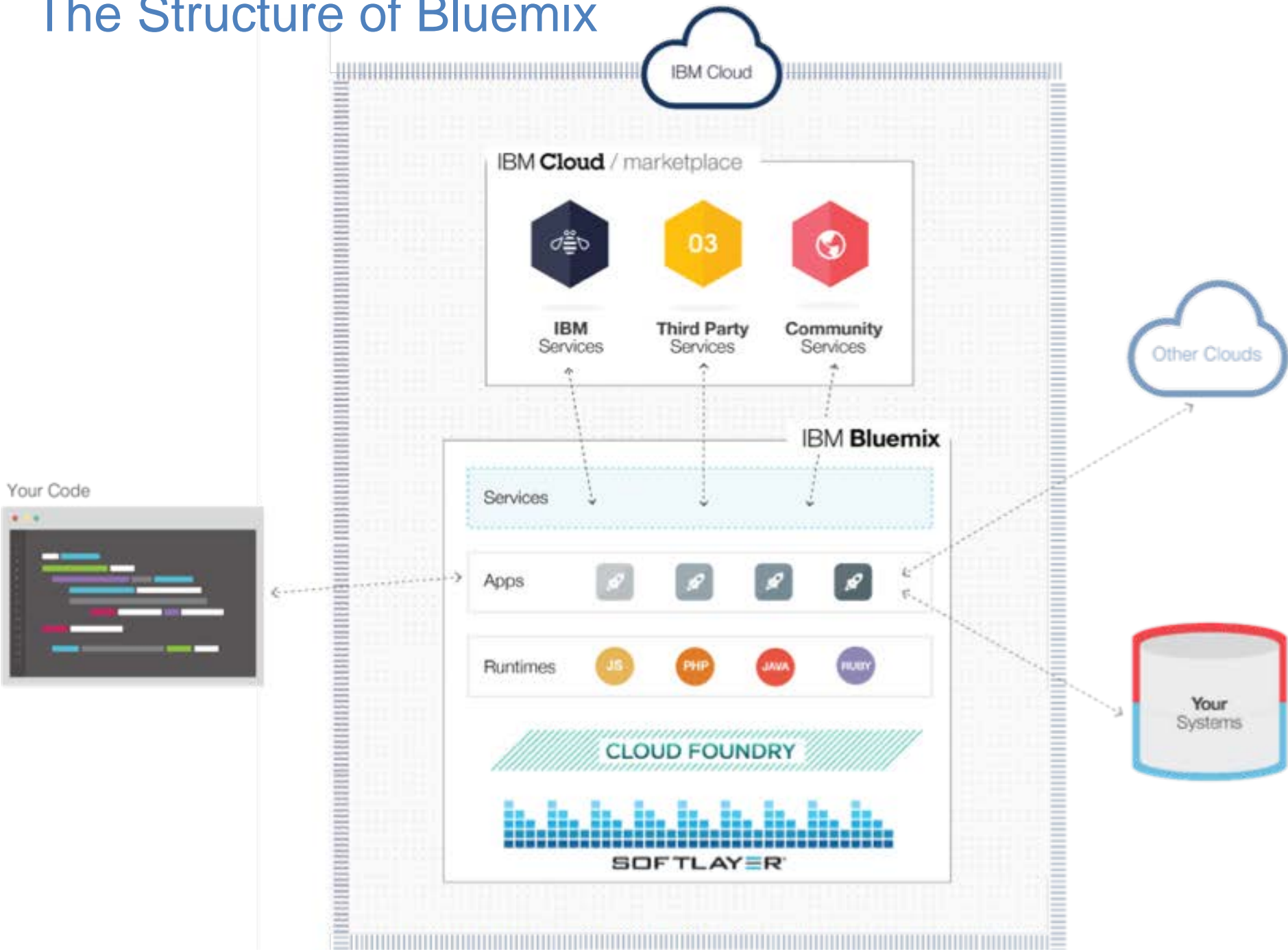
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See also a demo at: <http://ibm.biz/dashDB-geospatial-analysis-tutorial>

# The Structure of Bluemix

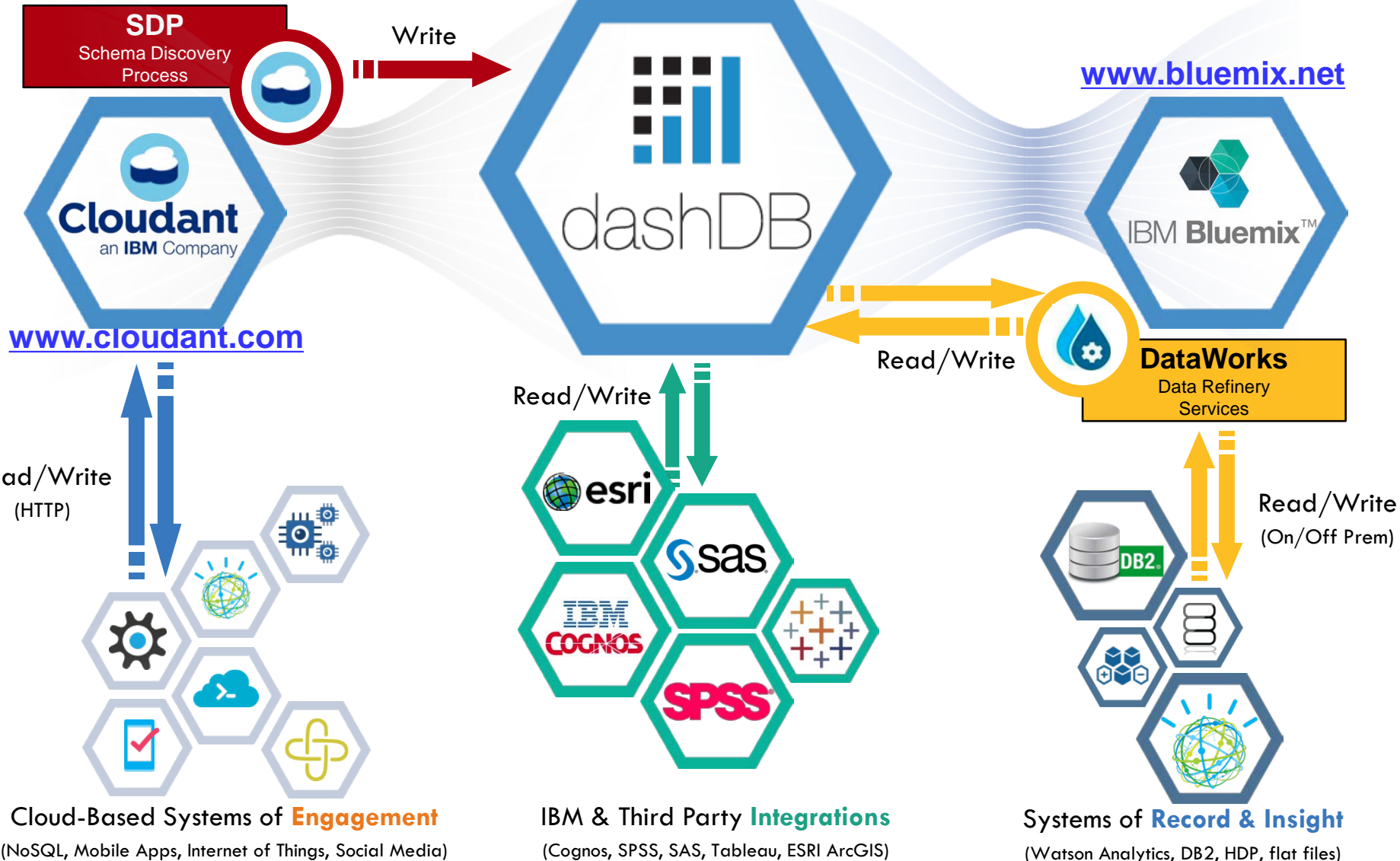


## SoftLayer Infrastructure as a Service

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[www.dashDB.com](http://www.dashDB.com)

[www.ibm.com/bluemix.net](http://www.ibm.com/bluemix.net)



Cloud-Based Systems of **Engagement**  
(NoSQL, Mobile Apps, Internet of Things, Social Media)

IBM & Third Party **Integrations**  
(Cognos, SPSS, SAS, Tableau, ESRI ArcGIS)

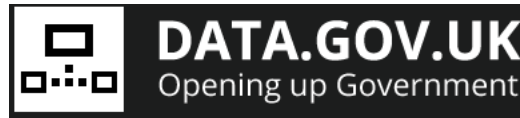
Systems of **Record & Insight**  
(Watson Analytics, DB2, HDP, flat files)

# There is Valuable and Free Data Online in the Cloud

Everywhere



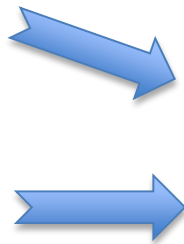
GeoLite



# Pulling Together Data in a Central Place in the Cloud

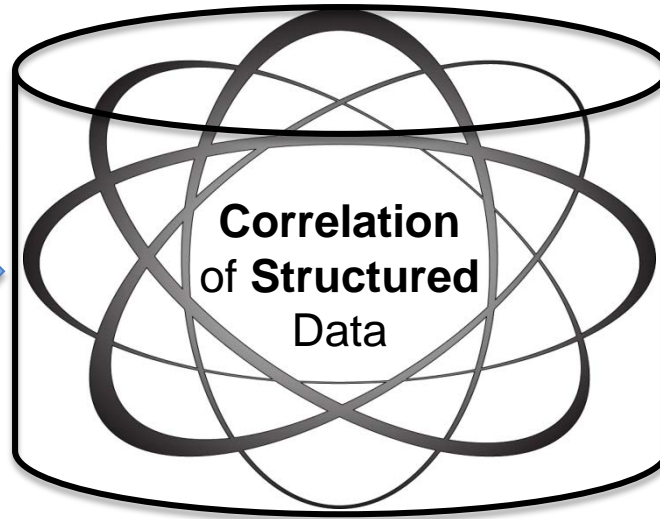
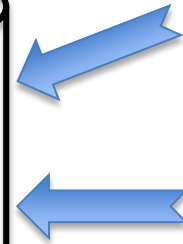
## Public Data

- Weather
- News
- Stocks
- Social Media
- ...



## Enterprise Data

- Orders
- CRM
- Master Data
- Operations
- ...



- Speed to market
- Improved accuracy
- Lower cost

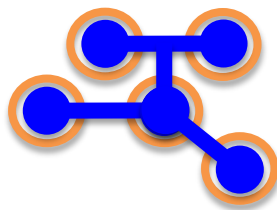
**Data + Data > 2 x Data**

*Combining various data in a DW can be a  
**fusion reactor for analytics***



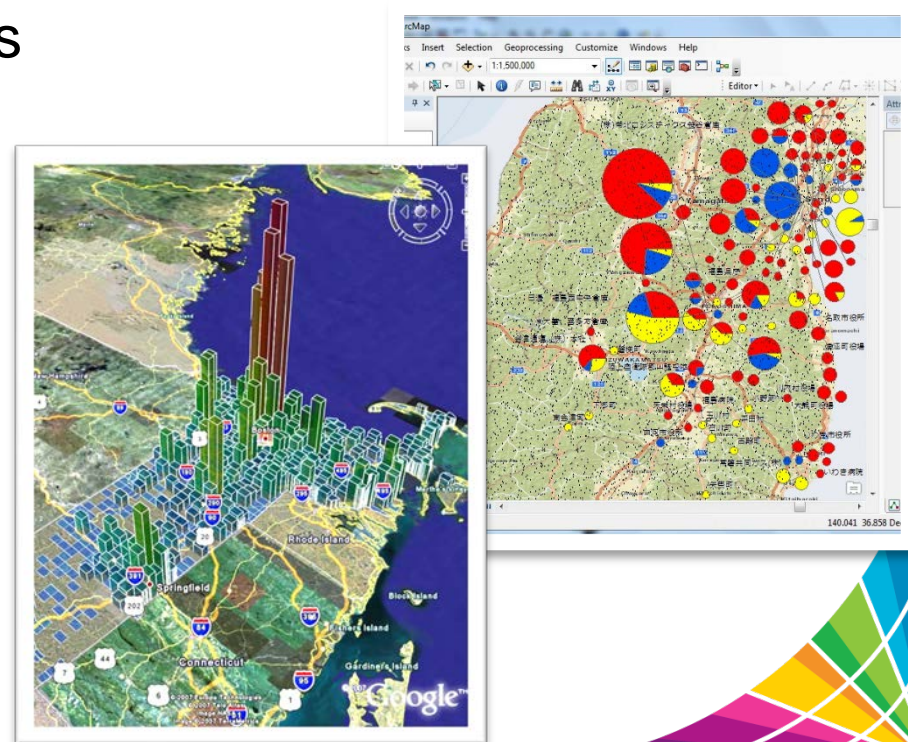
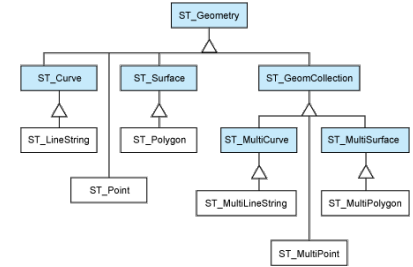
## Systems of Engagement

- IoT
- Mobile Apps
- Cloud Apps



# GeoSpatial Analytics In dashDB

- Implements **OGC SFS & ISO SQL/MM standards** for spatial
  - See [http://www.iso.org/iso/catalogue\\_detail.htm?csnumber=38651](http://www.iso.org/iso/catalogue_detail.htm?csnumber=38651)
- Spatial data type **ST\_GEOMETRY** (hierarchy)
- Enables **spatial joins** in database through spatial operators available as user defined functions
- Dedicated support in **ESRI tools** starting V 10.3
- GeoSpatial Applications Examples
  - Telco Location Data
  - Utilities Smart Grid
  - GPS Tracking in Transportation
  - Insurance Demographics
  - Cable Marketing Campaigns
  - Retail Store Placement



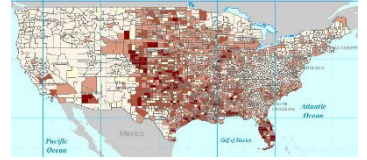
# Insurance Risk Analysis, Fraud Detection, Damage Prevention

See Video at: <http://ibm.biz/dashDB-geospatial-analysis-tutorial>

Insurance **Master Data** (customers)

**Cloud warehouse service for analytics and correlation**  
between customer data and public or third party data

Cloud service for persistency of **system of engagement**



**Visualization and spatial analysis capabilities by Esri ArcGIS**

- Public spatial data sets** available online
- Historical tornados from 1950s to today  
<http://www.spc.noaa.gov/gis/svrgis/>
  - Current tornado weather warnings  
<http://www.nws.noaa.gov/regsci/gis/shapefiles/>
  - US counties  
<https://www.census.gov/geo/maps-data/data/tiger-line.html>



**Mobile application** generating spatial data for insurance claims for tornado damage



# Demo:

- Bluemix
- dashDB
- Show Case