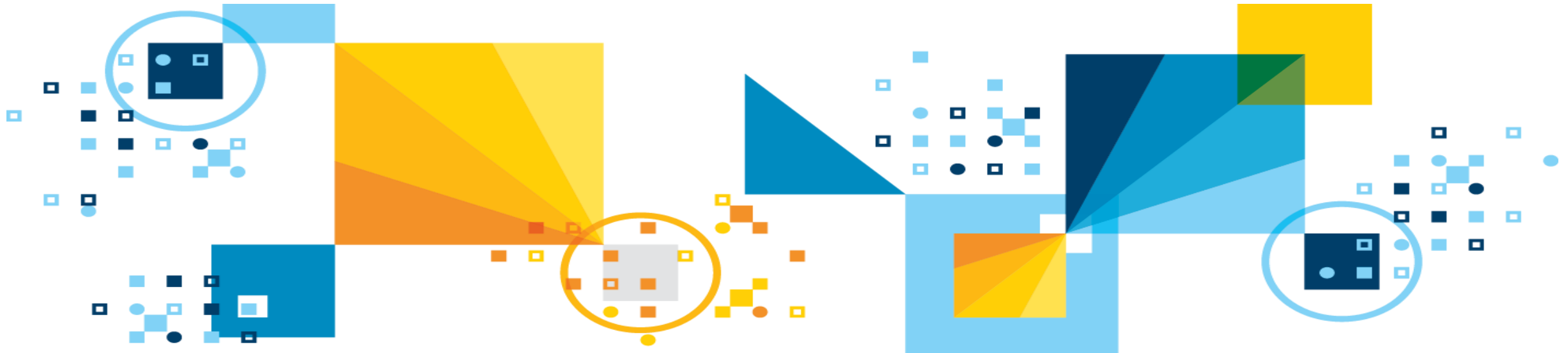


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August 2016
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Overview of IBM Database Servers



Overview of Database Servers – Topics Covered

- Introduction

- Databases for OLTP
 - DB2 LUW for OLTP
 - DB2 on Cloud
 - dashDB for Transactions
 - Cloudant
 - Informix
 - Compose

- Databases for Analytics
 - DB2 LUW for Analytics
 - PureData System for Analytics
 - dashDB for Analytics & dashDB Local

- Strategy and Competition

IBM database servers have a long history of on-premises offerings and is making significant investments in open, hybrid cloud-centric data analytic services

We make data easy and help transform businesses and organizations to build applications and gain new insights better and faster.

Comprehensive

- Broadest selection of data and analytic services available on multiple cloud platforms
- Pre-built integrations
- Integrated with open data to gain deeper insights

Flexible

- Open-sourced driven innovation
- Industry leading support for move to hybrid cloud with investment protection
- Premises, bare metal, virtual, pay-as-you-go and reserved
- Leverage existing skills

Trusted

- Fully managed options: 24 x 7
- Secure infrastructure
- Mitigate risk and lower costs

IBM Analytics is Open For Data

IBM is a Cloud Company

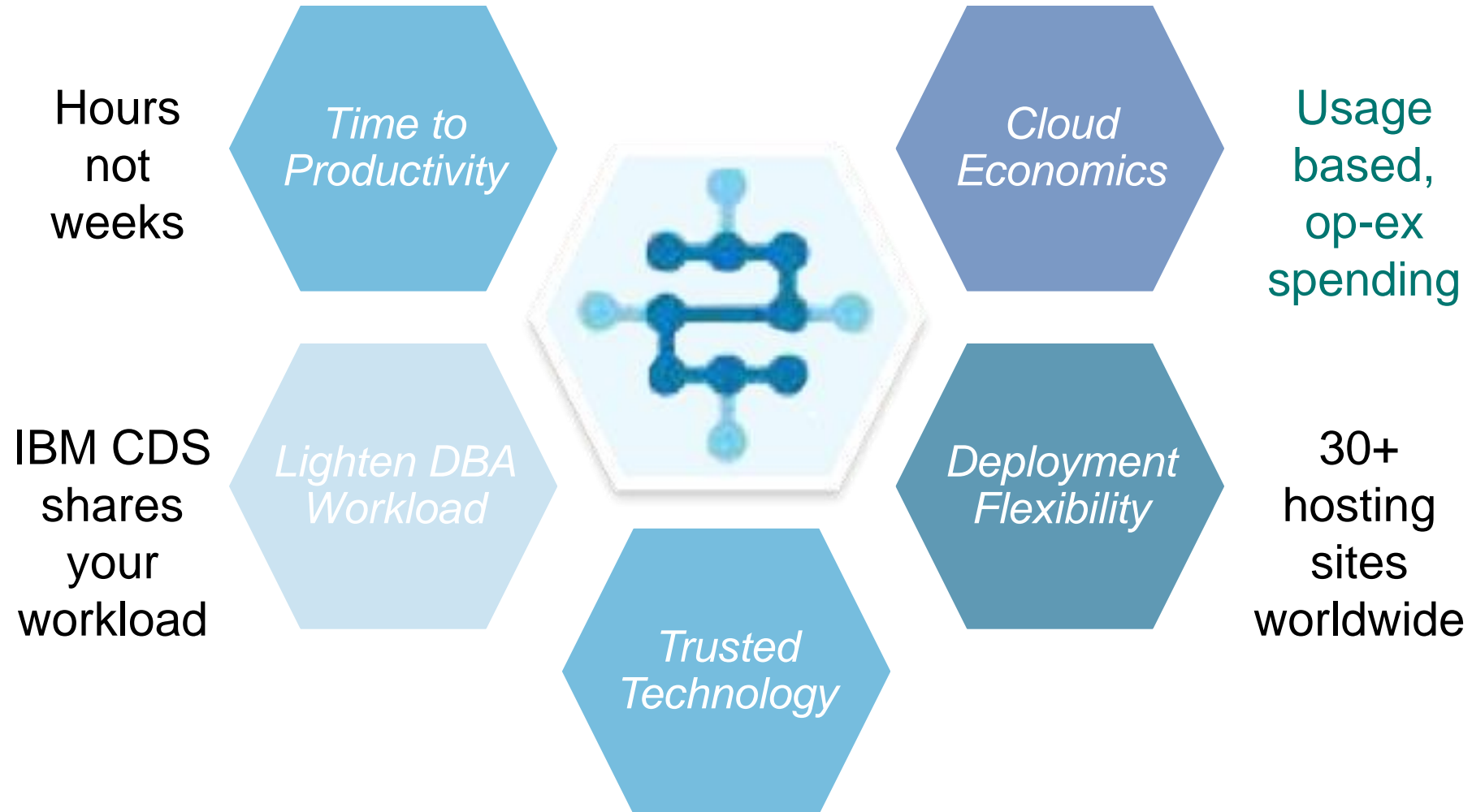
- We are a Cloud Company - \$10B in Cloud in 2015 – up 41%
- We are an ‘as a Service’ Company – \$4.5B in 2015 – up 61%
- Strong partnerships and investments bring value to our clients
 - Acquisitions of SoftLayer, Cloudant, Compose, BlueBox, the Weather Company
 - Partnerships with Twitter, Facebook, Box
- IBM’s IP leadership, investment in open source, integrated experience, and flexibility of deployment makes the IBM Cloud and offerings best suited for enterprises and developers alike
- We’re leaders in Open and Innovative solutions
- We’re open for data in the same way you are open for business



IBM Cloud Definition:

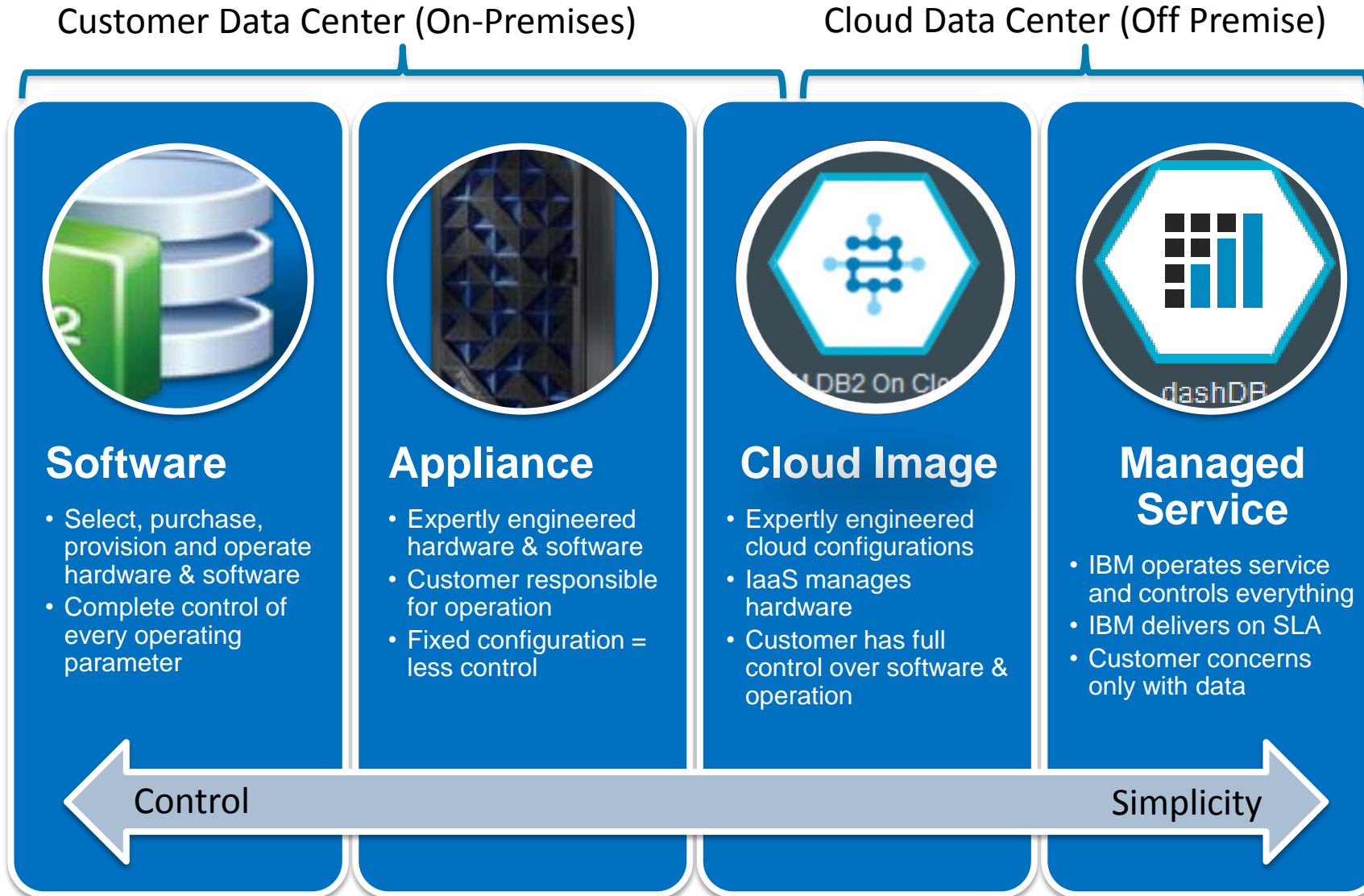
- **Elastic resources—Scale up or down quickly and easily to meet demand**
- **Metered service so you only pay for what you use**
- **Self service—All the IT resources you need with self-service access**

Why Customers Use DB2 on Cloud



Familiar DBMS works with apps, tools you use today

Cloud Data Services Span a Variety of Needs



Why the Journey to Cloud-based Data Services ?

MISSION

To provide the **best experience for developers, data scientists and data engineers** with a **comprehensive set of rich, integrated cloud data services** covering content, data and analytics.

FASTER INNOVATION

Instant provisioning
saves weeks of data
center setup

BETTER IT ECONOMICS

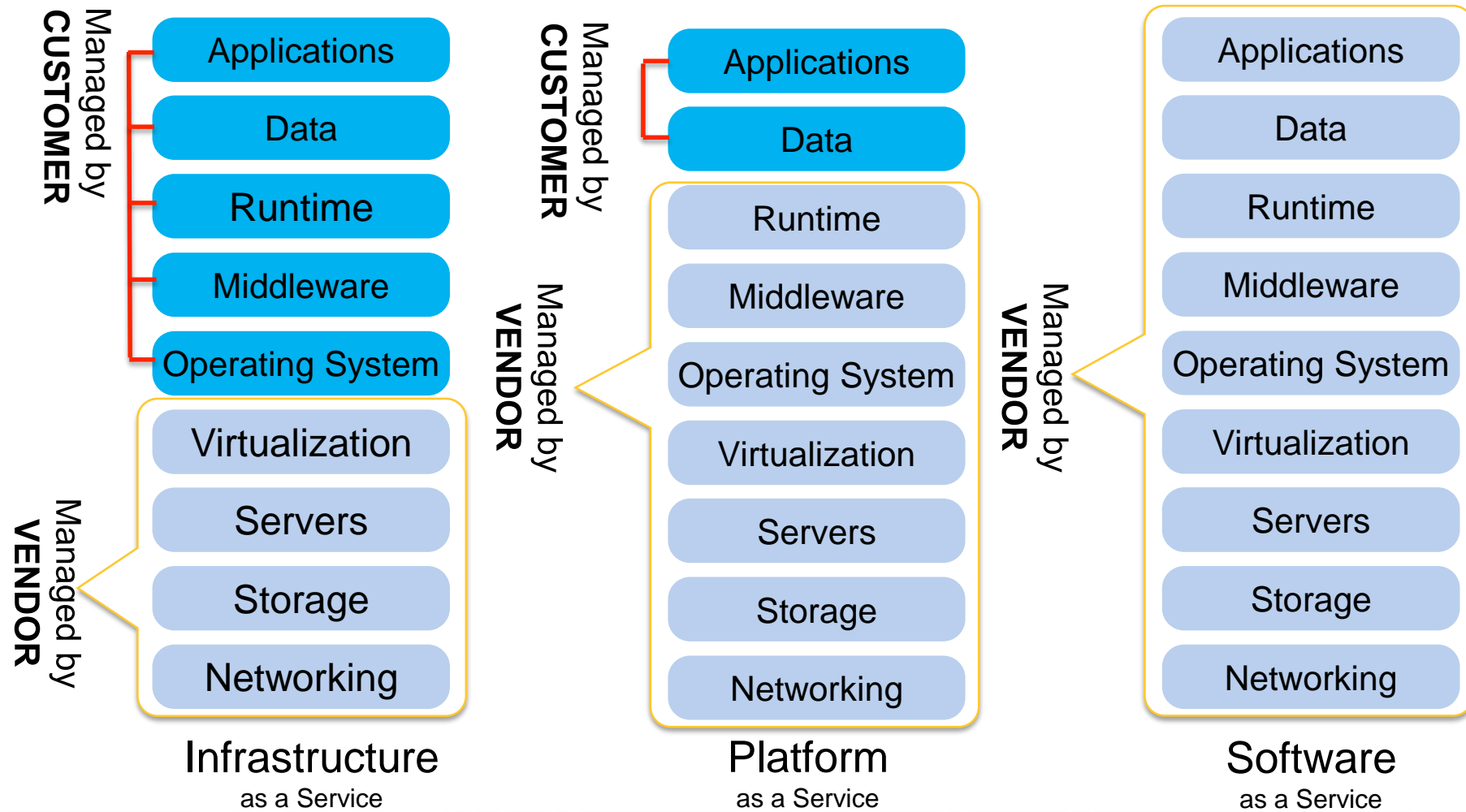
Pay as you go with no
big up-front capital
investments

LOWER RISK OF FAILURE

Fully managed 24x7 so
you can focus on new
development

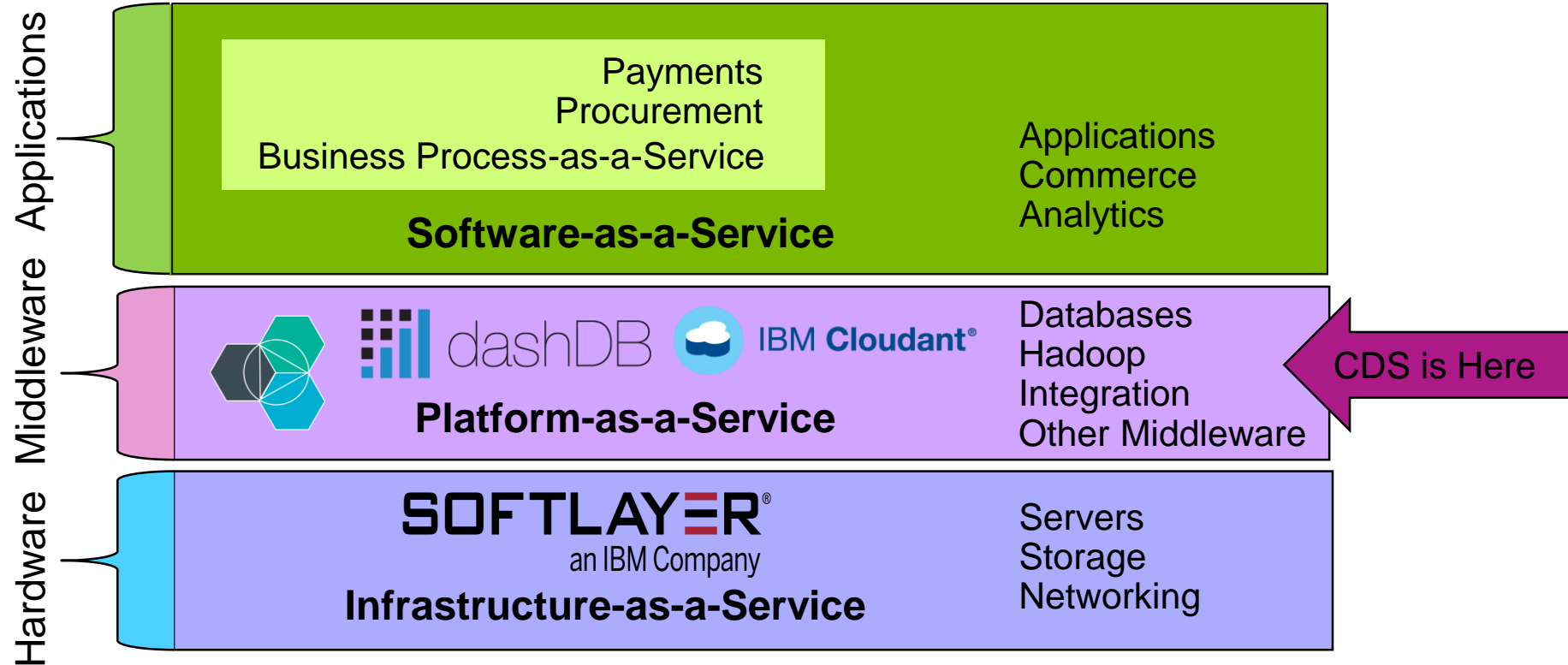
Pizza as a Service



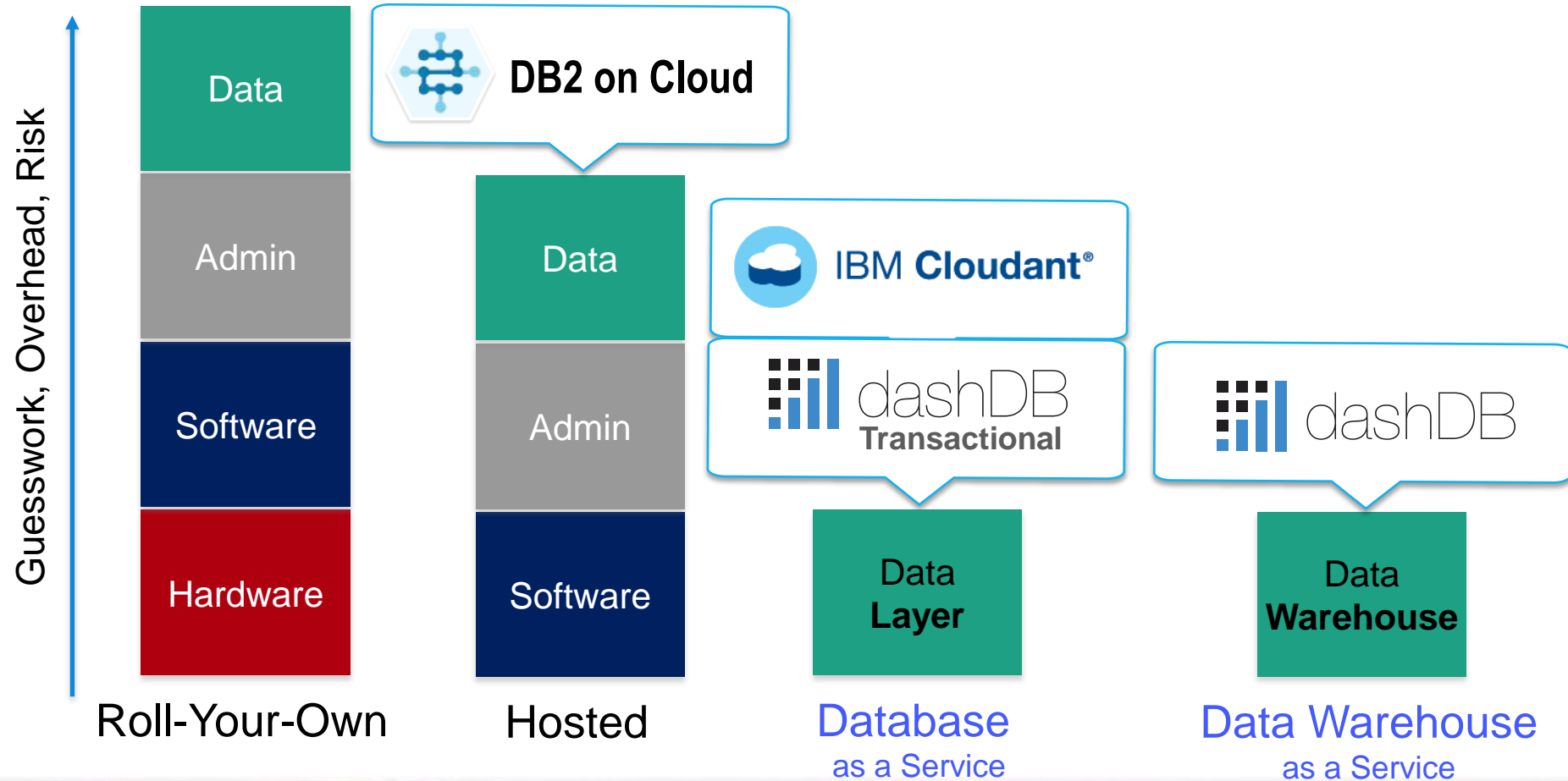


Cloud Service Models

1. IaaS – Infrastructure as a Service
2. PaaS – Platform as a Service
3. SaaS – Software as a Service

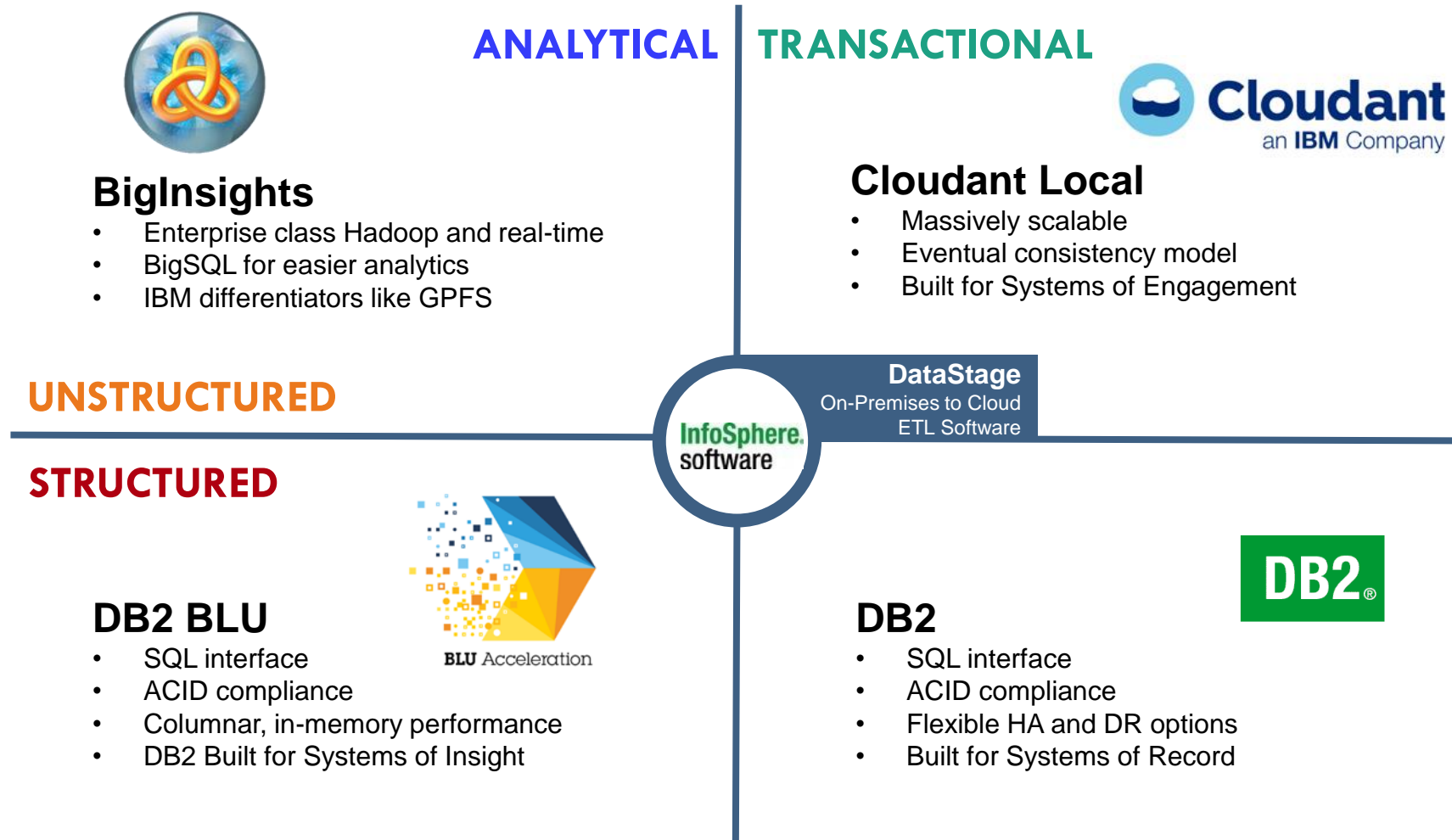


Highlights of IBM's Database-as-a-Service Options



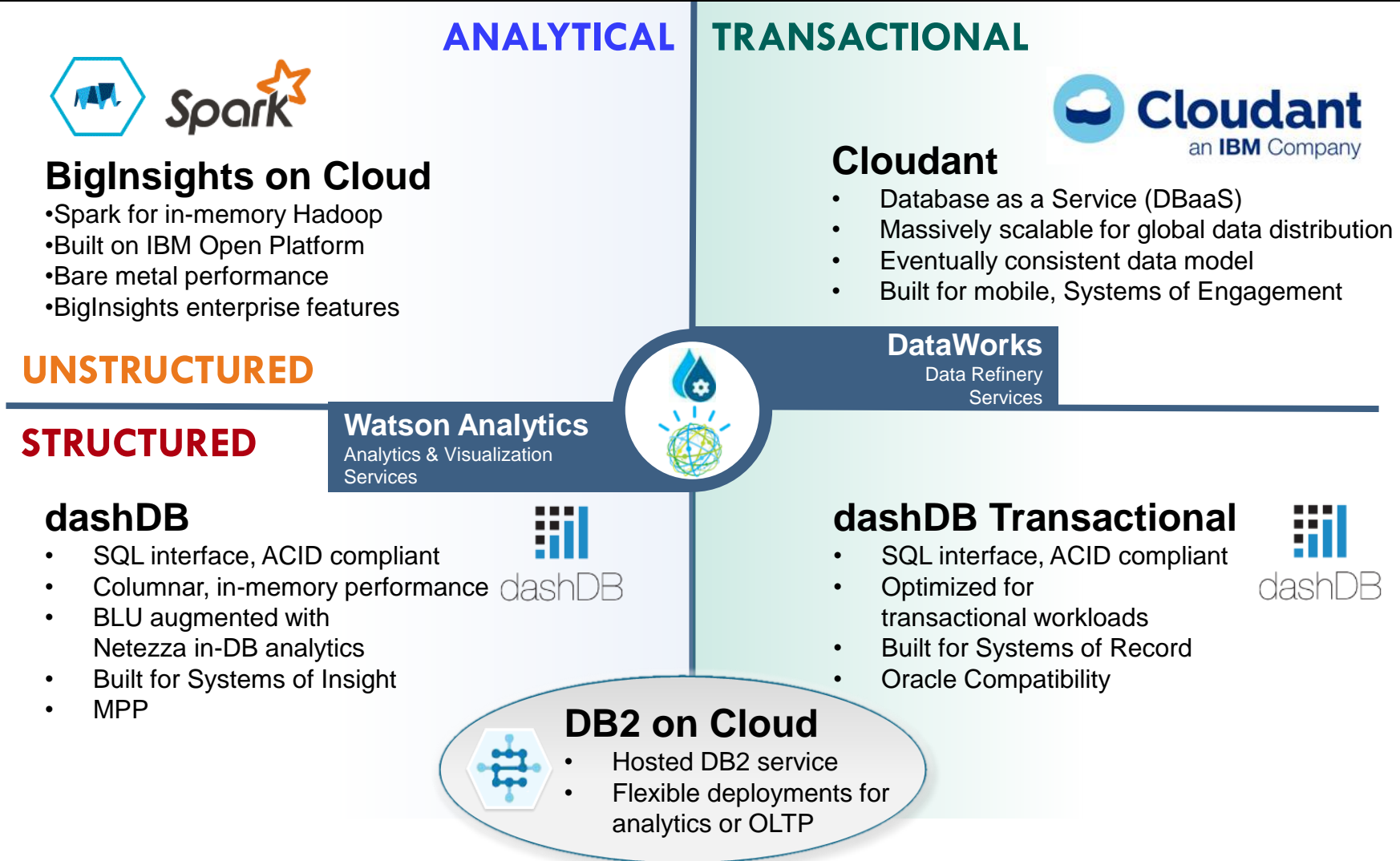
Data on Premises – Workload Optimized Products

- Offerings for structured and semi-structured data, transactional and analytics workloads.
- Knit together with the InfoSphere IIG technologies for data movement and integration.



IBM Cloud Data Services Analytics and Transactional

IBM solutions combine workloads and data types for true managed hybrid services



Common Analytic Engine

▪ What is the common analytic engine

- It is a hybrid of the **best values** of the DB2 with BLU Acceleration engine and the PDA engine.
- An initial version of this engine exists today, called dashDB
- High Value capabilities include:
 - DB2-based SQL MPP engine with BLU Acceleration
 - Columnar storage model
 - In-memory processing
 - INZA predictive analytic algorithms
 - Full integrated Rstudio and R language
 - Oracle application compatibility
 - Massive parallel processing
 - On-disk data encryption and secure connectivity
 - High concurrency (10,000s of concurrent connections)
 - Highly performant (DB2's BLU+MPP engine)
 - Highly scalable (10s TB, 100s TB, PBs)
- With our “cloud first” strategy, this is enhanced approximately monthly
- Much more high value capabilities still to come over the next 12-24 months

Future-proof your data and analytics deployments with the IBM “Common Analytics Engine”

Managed Public
Cloud Service



dashDB

Software-defined
Private Cloud



dashDB Local

Appliance



Next-gen appliance

Custom Deployable
Software



DB2

Hadoop / Spark
Environment

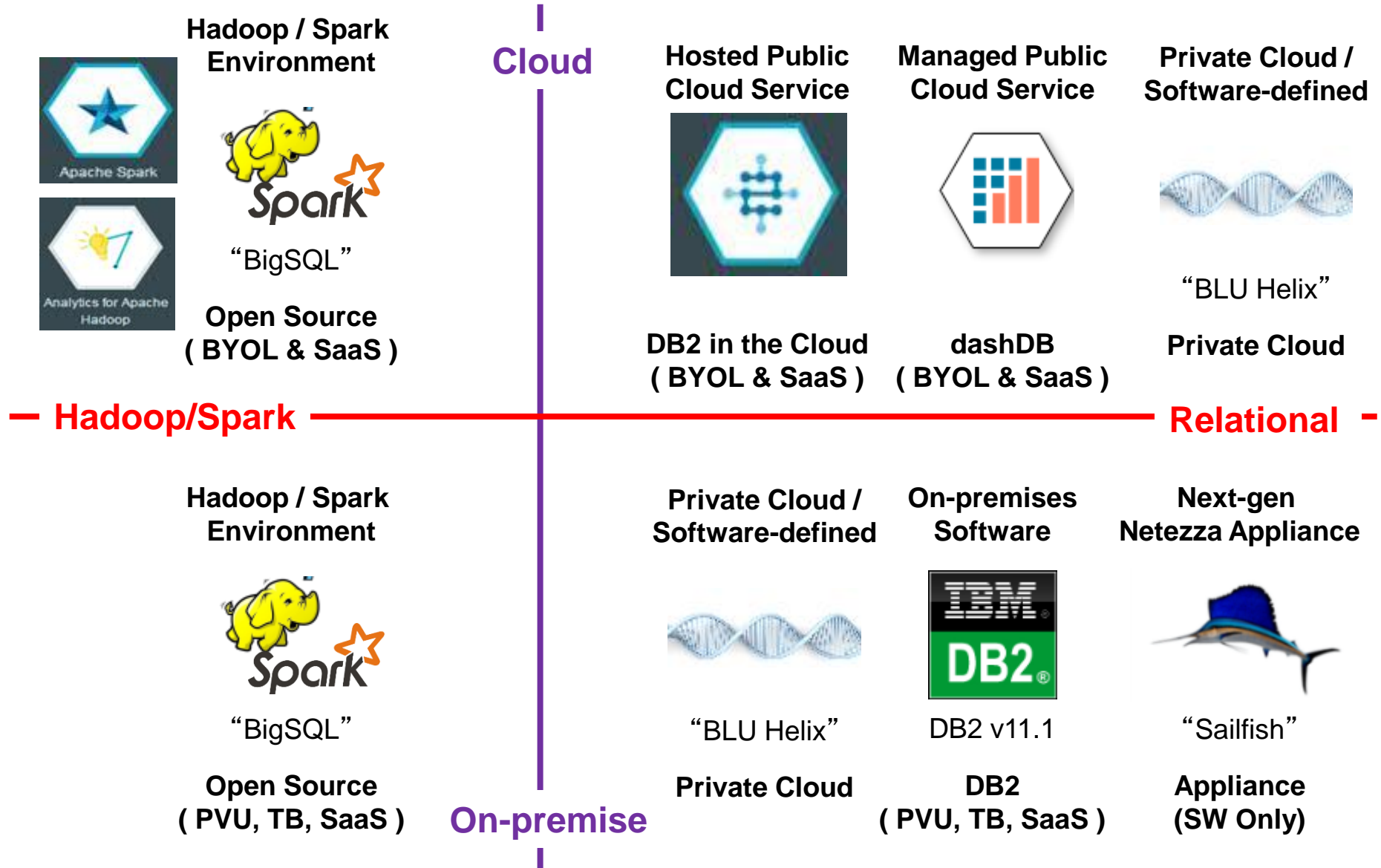


BigSQL

A Common Analytics engine
enabling true hybrid solutions with portable analytics

- **Application compatibility:** Write once, run anywhere
- **Operational compatibility:** Reuse operational and housekeeping procedures
- **Licensing:** Flexible entitlements for business agility & cost-optimization
- **Integration:** Common Fluid Query capabilities for query federation and data movement
- **Standardized analytics:** Common programming model for in-DB analytics
- **Ecosystem:** One ISV product certification for all platforms

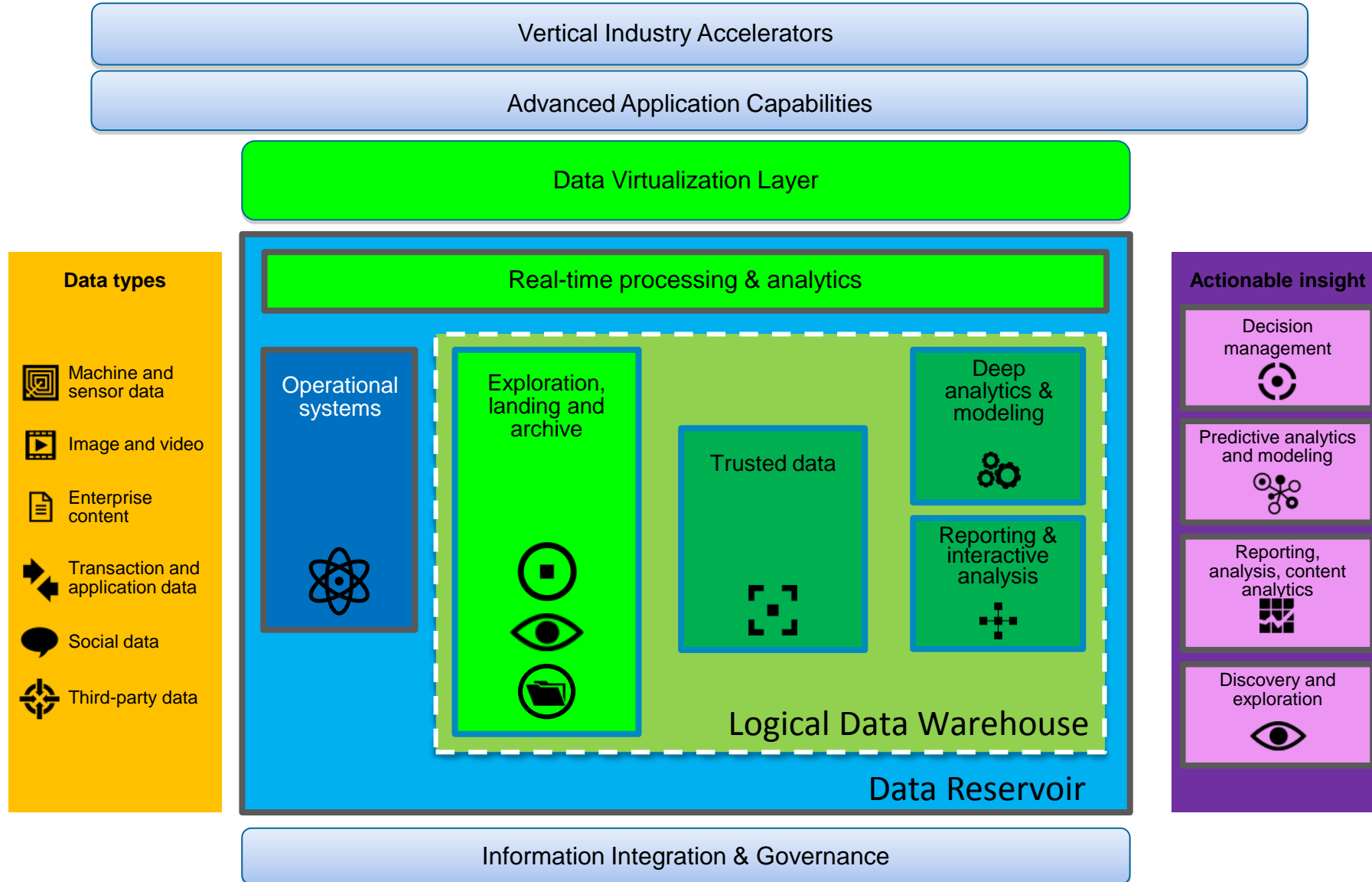
Common Analytic Engine Deployment Options



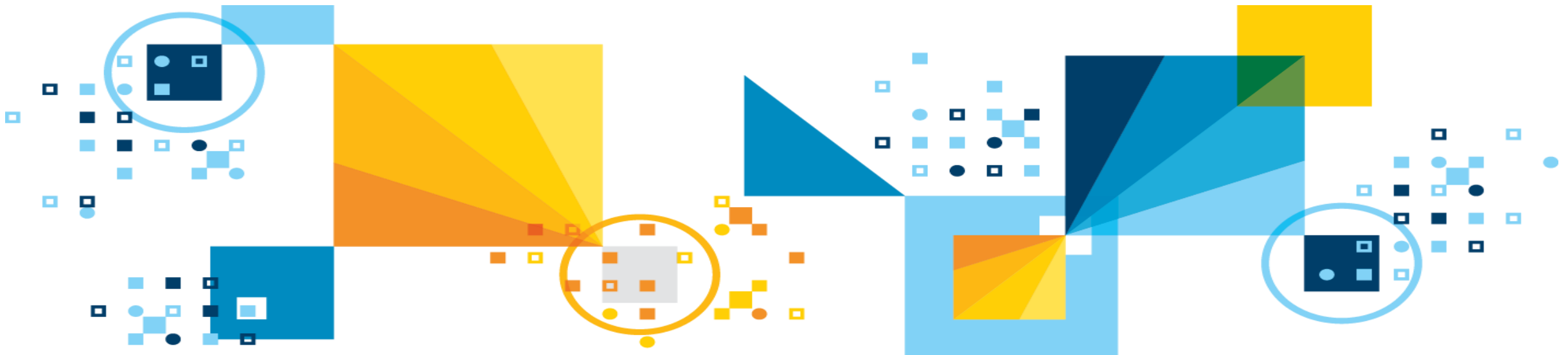
Analytics Platform Offerings – Quick Reference

Offering	Summary	Offering	Summary
	DB2 for z/OS is a high-end, market leading OLTP system. This is where the DB2 brand started 30+ years ago. It's strengths are continuous availability and high-end OLTP. It runs on the mainframe (z/OS).		BigInsights is our offering providing an open source base component layer (Hadoop, Map Reduce, YARN, Spark, etc) with high value, enterprise-ready components to help clients evolve to a LDW. BigInsights is available on Linux.
	DB2 for LUW handles high-end OLTP with continuous availability, leveraging a component of DB2 called pureScale. It runs on the Linux, Unix and Windows platform.		Streams is our offering to deal with data in motion. It allows for real-time analytics on the data while it is still in motion and then the ability to decide which data you want to harden into Hadoop, Spark or a traditional relational data store.
	Informix is a simple, easy to manage, OLTP engine. It is easy to embed within applications and has a strong partner ecosystem. It runs on the Linux, Unix and Windows platforms.		Cloudbant is a NOSQL database which specializes in Java Script Object Notation (JSON) data. JSON is the primary used in the exchange of data between mobile devices. Cloudbant can be used as both an OLTP and analytic engine for JSON data.
	PureData System for Analytics (Netezza) is a market leading appliance for analytic and reporting workloads. It is simple to use and has deep embedded analytic functionality for high performance.		dashDB is converged analytic engine of DB2 with BLU Acceleration and the deep embedded analytic functions of PDA (Netezza). dashDB is available as a service on Bluemix. dashDB is the first offering with our common analytic engine.
	DB2 for LUW handles high-end OLAP, including analytics, reporting, operational analytics, ODS and mixed workloads. It leverages BLU Acceleration for these workloads. It runs on the Linux, Unix and Windows platforms.		DB2 in the Cloud is available on SoftLayer and can be used for either OLTP or OLAP type workloads. Since this is DB2 for LUW, this means that applications can move seamlessly between DB2 on-premises and DB2 in the Cloud.
	IBM DB2 Analytics Accelerator (IDAA) is an accelerator for analytic and reporting workloads running on DB2 for z/OS. IDAA leverages the PDA technology and is application transparent to the DB2 for z/OS environment.		SQLDB is available as an OLTP database engine on Bluemix. SQLDB is DB2 for LUW-based, so, this means that applications can move seamlessly between DB2 on-premises and SQLDB on Bluemix.
	Informix Warehouse Accelerator (IWA) is an accelerator for analytic and reporting workloads running on Informix. IWA leverages an early generation of BLU Acceleration and is application transparent to the Informix environment.	Data Server Manager	Data Server Manager (DSM) is a toolset which is available for DB2 for z/OS, DB2 for LUW, BigInsights and dashDB. DSM focuses on management and monitoring of these offerings and provides for a common skill-set regardless of deployment.
Industry Models	Industry Models are a great, industry specific, accelerator for processes, services and physical model implementations. They cover industries such as banking, finance and healthcare and require services as well.	Data Virtualization / Fluid Query	Data Virtualization is a key component of our overall architecture which includes multiple offerings and components such as DSM, Federation (built into DB2), Fluid Query (built into PDA) and open source components such as Sqoop.

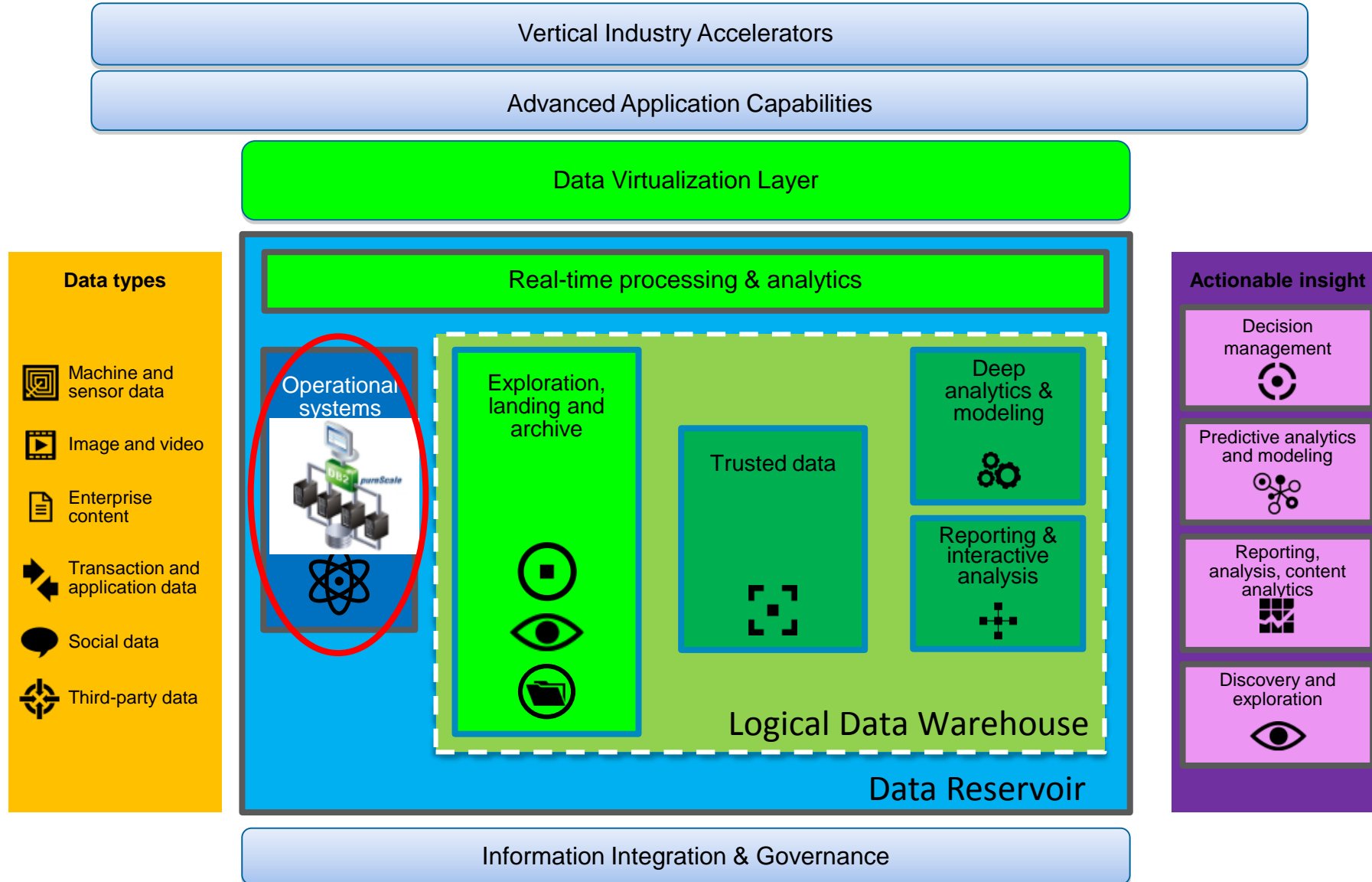
Analytics Platform: Components



DB2 LUW for OLTP



Analytics Platform: Relational OLTP Offerings – DB2 LUW



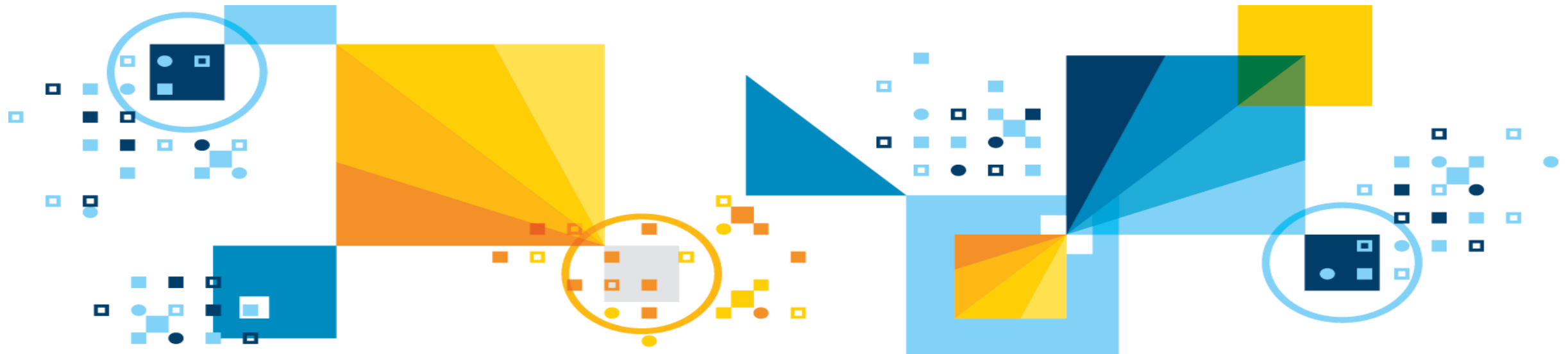
Analytics Platform: Relational OLTP Offerings – DB2 LUW

- Line of Business Pressures
 - Support of thousands of concurrent user transactions and reports
 - Require high availability with zero unplanned outage
 - Expecting large growth of data volume
 - Ability to keep applications up despite data centre loss
 - Oracle competitive and take-out opportunities
 - Across many industries
 - Low Total Cost of Ownership
- Deployment Options

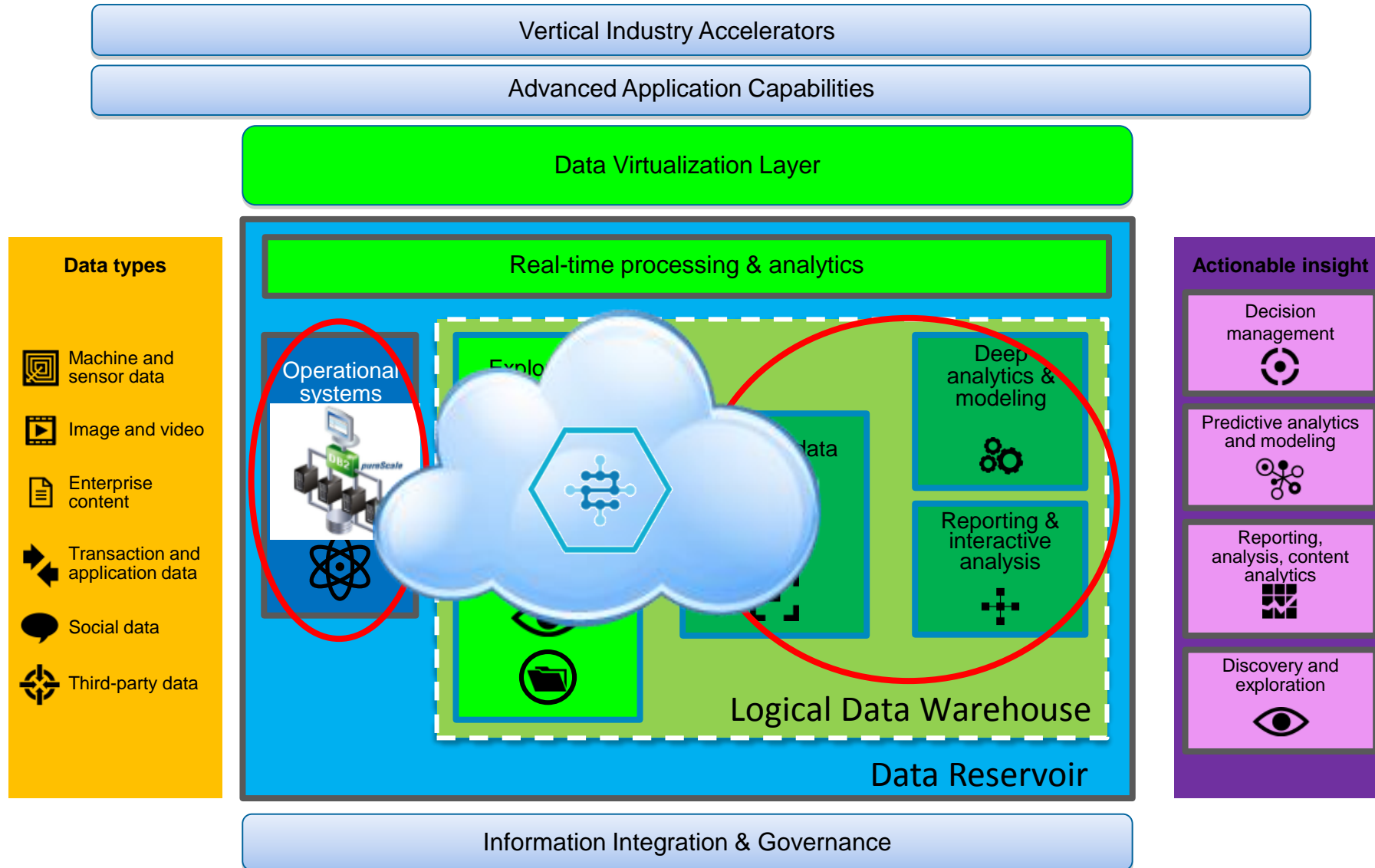


On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
Not Available	DB2 for LUW	Windows Linux	AIX Linux	DB2 LUW for zLinux	DB2 on Cloud	dashDB for Transactions

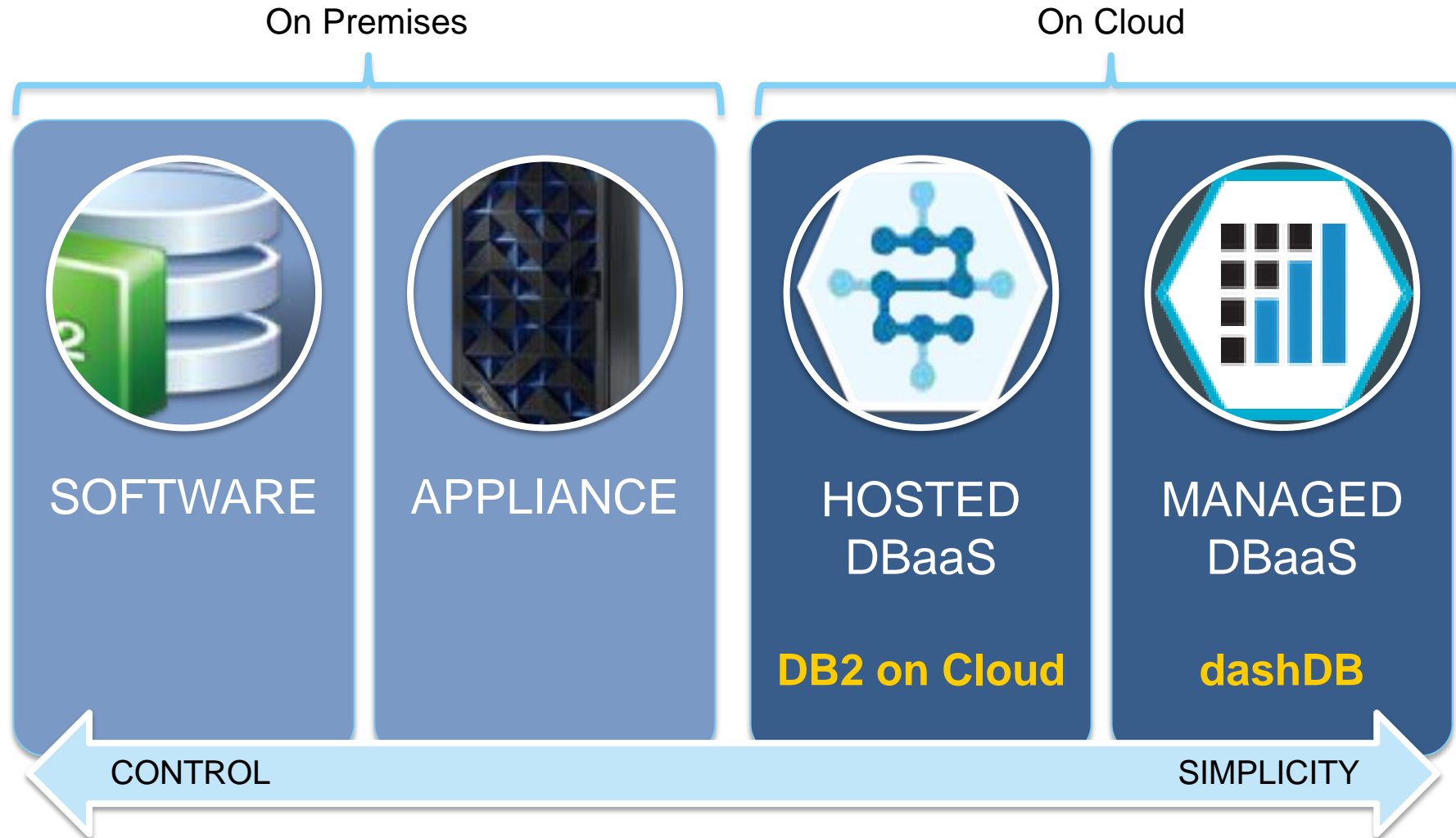
DB2 on Cloud



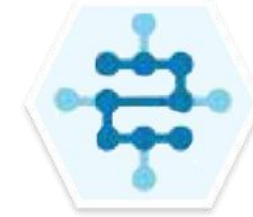
Analytics Platform: Relational OLTP/OLAP Offerings – DB2 on Cloud



DB2 Deployment Options



IBM DB2 on Cloud



- Provides a hosted DB2 environment that is
 - Hosted on IBM SoftLayer (virtual private nodes/bare metal) or AWS (virtual private nodes) cloud platforms
 - Administered by your organization's DBA
 - Paid on a month-to-month basis via subscription model (support included)

- Benefits include
 - Convenience without the loss of control on cost effective infrastructure
 - Five high performance hardware configurations and two database software tiers to match capability and affordability needs
 - BLU Acceleration
 - Native encryption support included in all configurations ensuring data remains secure in the cloud
 - HADR for high availability and disaster recovery
 - Unlimited ability to create databases to fully utilize the cloud infrastructure

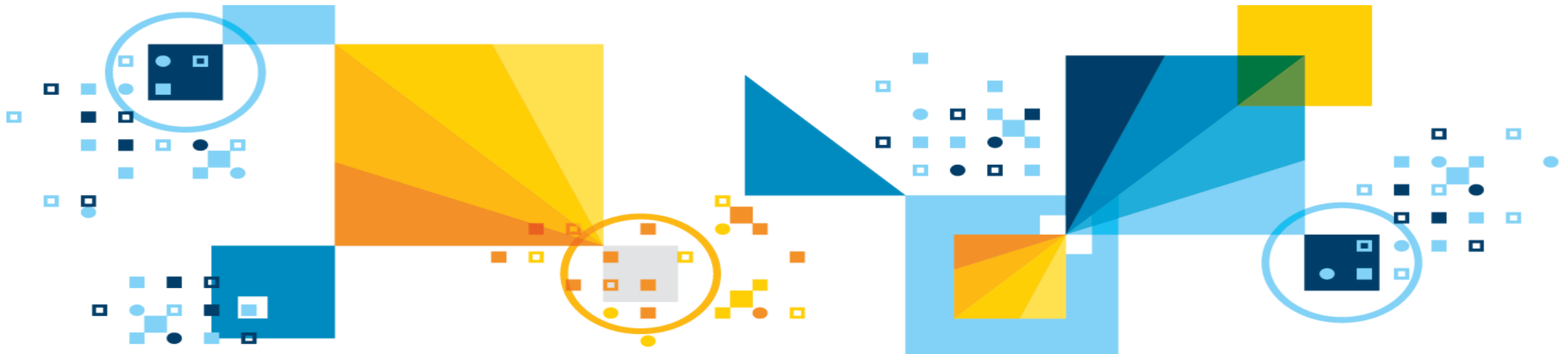
- Options
 - Choice cloud provider: SoftLayer or AWS
 - Five t-shirt sized configurations: Small, Medium, Large, X-Large, 2X-Large
 - Two versions of DB2 available: Standard and Advanced

Target Use Cases Addressed by DB2 on Cloud

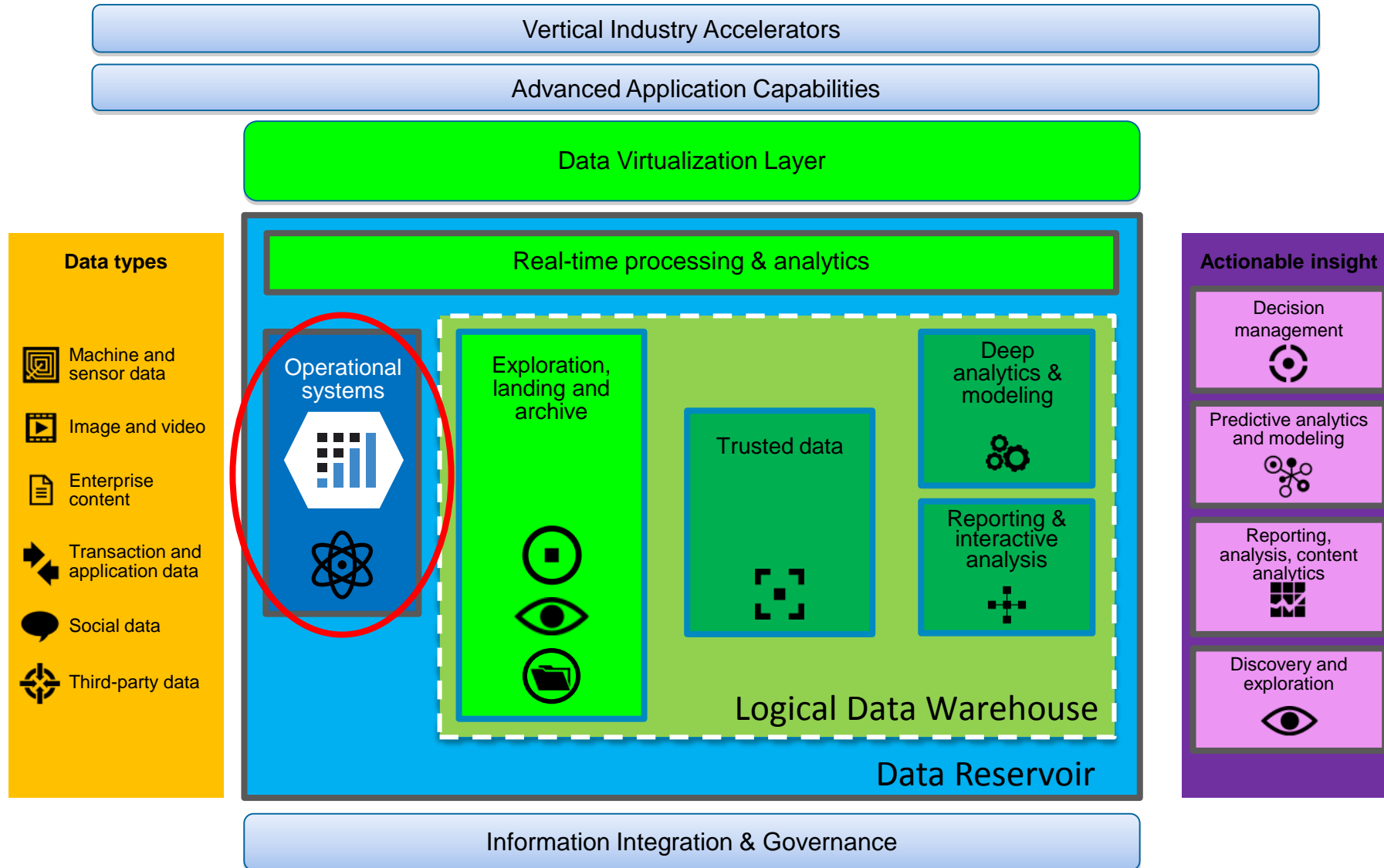
DB2 on Cloud is a great way to lift and shift an existing app to the cloud, but there are other ways to take advantage of this offering as well:

Use Case	Goal	How DB2 on Cloud Helps
Prototyping proof of concept (POC) development projects	Take advantage of the latest DB2 technologies	Experiment in a cost effective environment that doesn't take up data center space or management bandwidth
	Retain relevance to LOB initiatives	Quickly demonstrate a positive ROI associated with IT projects Manage year-to-year budget growth
Redundancy without building a new data center	Mitigate risks for unplanned downtime	Easy setup of secondary environment, monthly charges, SoftLayer data centers
Consolidation of smaller on premises databases	Leverage cloud to consolidate sprawling on-premises systems	Streamline initial move to cloud with automated deployment, and use all of your on-premises management processes/tools.
	Reduce CAPEX	Take Advantage of a monthly charge model

dashDB for Transactions



Analytics Platform: Managed Relational OLTP on Cloud – dashDB for Transactions



Analytics Platform: Managed Relational OLTP on Cloud

dashDB for Transactions

- Line of Business Pressures
 - Want to run a transactional application and need the flexibility of cloud
 - Extremely high requirements for security and availability
 - Ability to easily move transactional applications on-premises to the cloud
 - Lowering the cost of running on-premises applications on Oracle
 - Reduce the cost of infrastructure and personnel managing the database

- Deployment Options

On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
No available	DB2 LUW	Linux Windows	AIX Linux	DB2 for zOS	DB2 on Cloud	dashDB for Transactions

IBM dashDB for Transactions

Transactional database capabilities for best performance atop a **fully-managed instance**

 dashDB **for Transactions**

Excellent
Transactional
Performance



Oracle
Compatibility



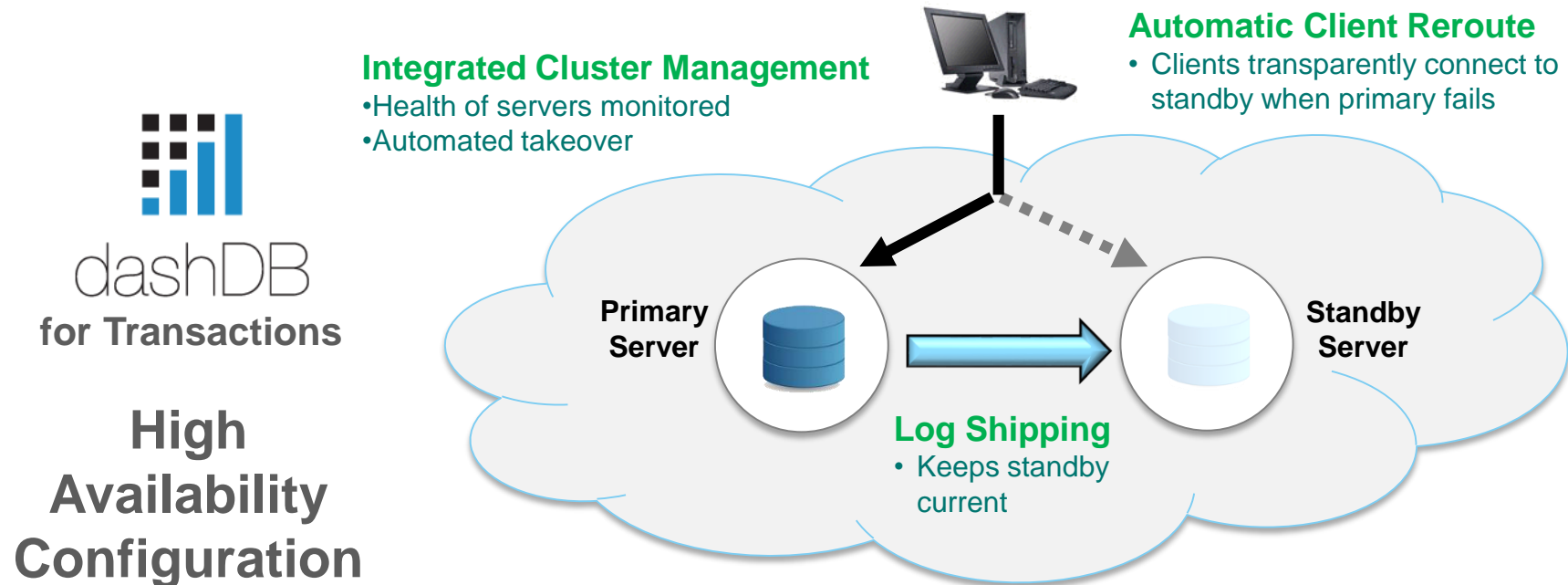
Robust Security



- Fully-managed transactional database as a service
- **Row-organized tables for high transactional performance**
- **Oracle compatibility**
- On disk data encryption and secure connectivity
- Two Enterprise plans plus HA versions
 - 2 cores, 8 GB memory, 500 GB SAN
 - 12 cores, 128 GB memory, 1.4 TB SSD

dashDB for Transactions – High Availability Configuration

- Reduced outage times for unplanned outages and maintenance activities
- Configuration includes both a primary server plus a warm standby server
- Log shipping keeps standby up-to-date for fast failovers
- Simplified client configuration – floating IP address always points to current primary
- Not logged operations that compromise data recoverability are blocked



IBM dashDB for Transactions – A Fully Managed OLTP Database Solution

Relieving the provisioning and management burden on your DBA staff



sets up, optimizes, and manages all aspects of the dashDB environment

- OS and database software installation
- Optimized configuration for transactional workloads
- Ongoing OS and database software maintenance
- Automated daily backups
- 24/7 monitoring and restart after hardware or software failure
- Ongoing risk assessment and security monitoring
- Upgrade support moving to a larger dashDB size

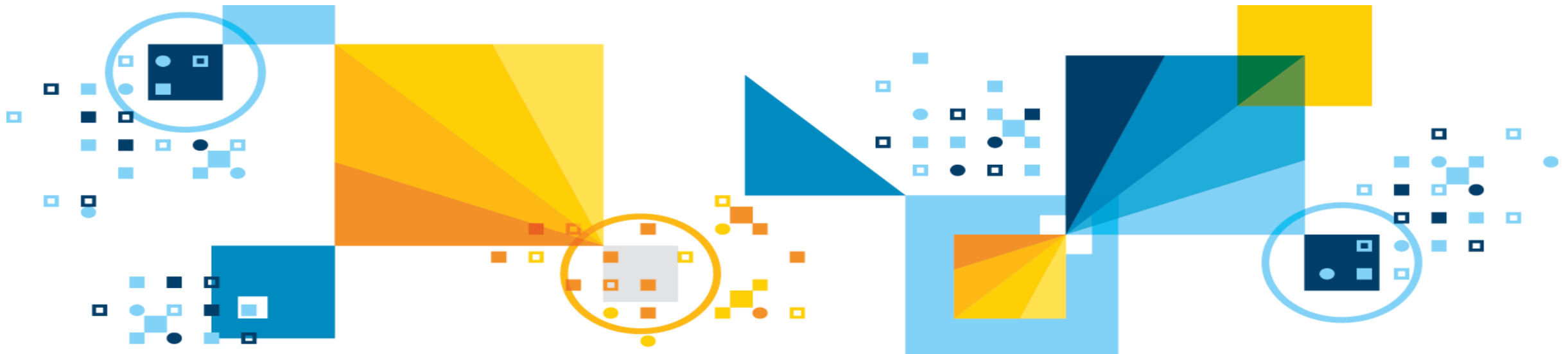


DBA only has to focus on data delivery

- Schema definition
- Data loading
- User management and database access control
- Application, ETL connectivity

dashDB for Transactions now provides Transactional capability

Cloudant



Analytics Platform: NoSQL Database as a Service

Cloudant

- Line of Business Pressures
 - Rapid development of mobile applications
 - Scalable and flexible platform with guaranteed uptime
 - Availability 24x7x365 globally despite hardware/server failure
 - Want flexibility of cloud while maintaining control of their data
 - Need to modernize applications for an ever changing requirements

- Deployment Options

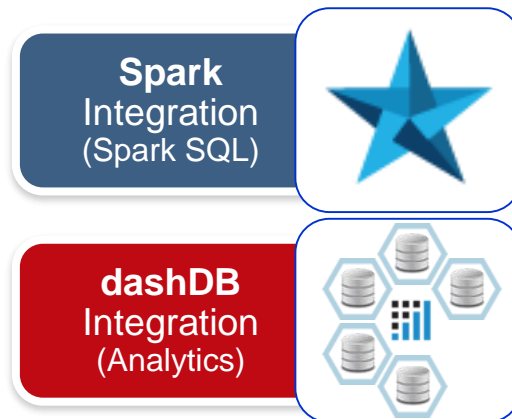
On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
Not available	Cloudant	Cloudant	Not available	Not available	Cloudant	Cloudant

Cloudbant – NoSQL Database as a Service

Cloudbant delivers a fully-managed database in service to the **Analytics**, **App**, and **API** economy

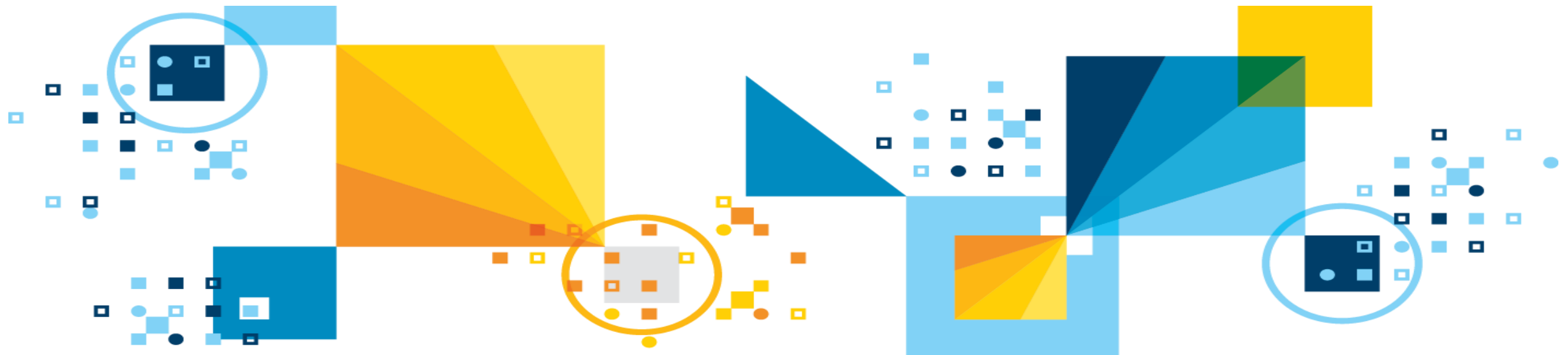


A fully-managed NoSQL database layer that can be **developed & deployed in days**

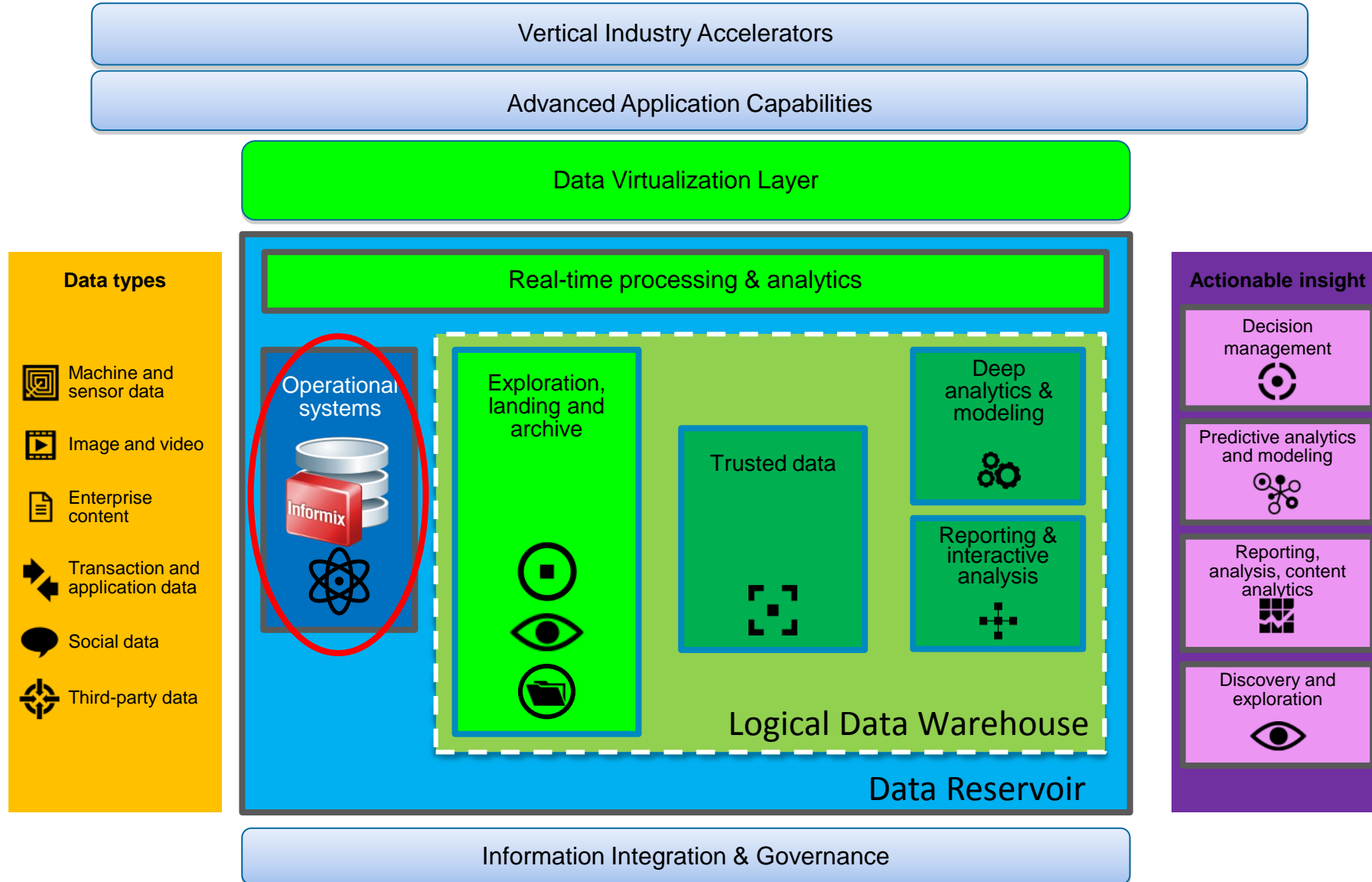


- Operational NoSQL JSON store
- Master-less architecture for maximum **scalability & availability**
- Advanced APIs
 - REST (HTTPS) API
 - Replication & synchronization
 - Geo-load balancing
 - Incremental MapReduce indexes
 - Military-grade Geospatial indexes
 - Lucene full-text search
- Offline access to mobile apps & data

Informix



Analytics Platform: Relational OLTP Offerings - Informix



Analytics Platform: Relational OLTP Offerings – Informix

- Line of Business Pressures
 - “Light weight” OLTP engine
 - Desire to easily embed a database into an application
 - Need to integrate JSON with traditional relational data
 - Need to run analytics and reporting in existing Informix OLTP environment



Deployment Options

On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
Not Available	Informix	Windows Linux	AIX Linux	Linux	Time Series Database	Time Series Database

Informix 12.1 – The Intelligent Database

- Informix is proven technology as an embedded database. A **small footprint** with a fully featured enterprise database server that can scale huge.
- Built in autonomies with self healing, self configuration and automation with the DB scheduler
 - Automated space provisioning
 - Automated Memory Management
 - Dynamically tuned Engine parameters



- **Embedding Informix in consolidation devices on the edge of the network of IoT allows for:**

- Complex store and forward capabilities with transformation and aggregation of data
- Business decisions made on the edge, closer to the producer of the data



© Can Stock Photo - csp3309629



Informix 12.1 – The Intelligent Database

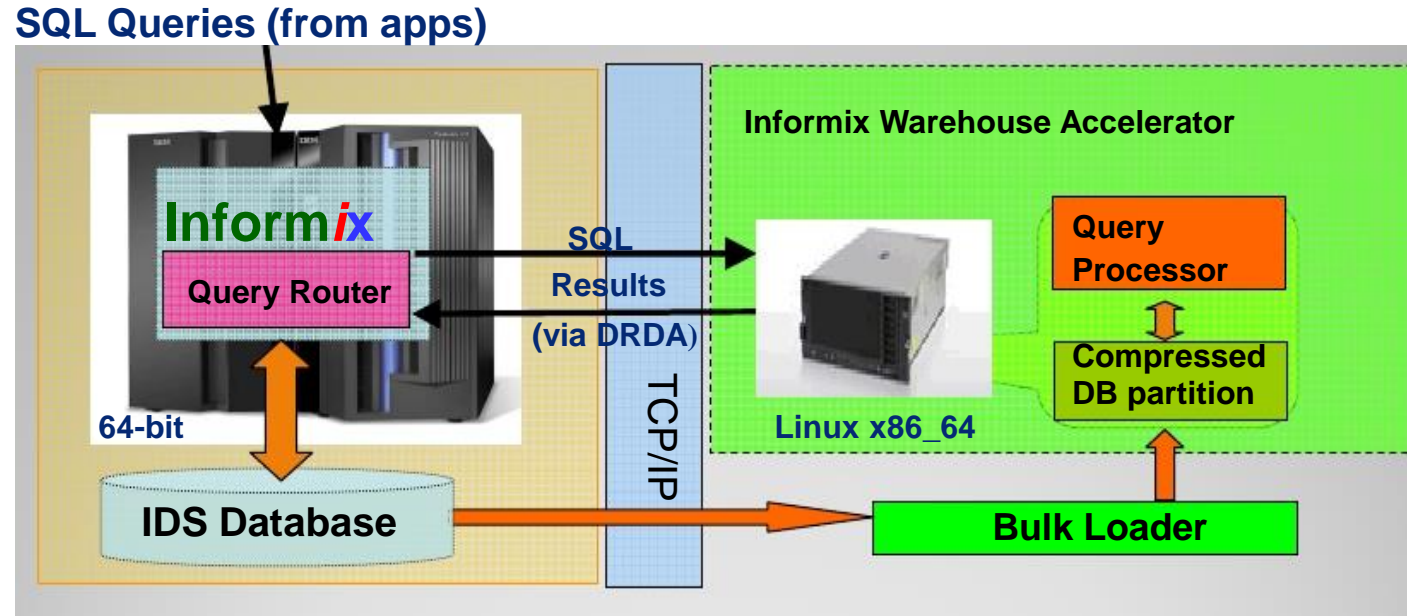
- Application Developers Paradise
 - Flexibility in schema / or schema-less
 - Ease of application development, reducing cost
 - Native support for new data types (JSON and BSON),
 - Data Access is not restricted by Data Models
 - TimeSeries, Spatial, JSON and SQL data in the same db
 - Enhanced API support
 - REST API support enables use of existing communication protocols, e.g. HTTP

Access to Relational Tables & JSON Collections

	Relational Table	JSON Collections
SQL API	Standard ODBC, JDBC, .NET, OData, etc. Language SQL.	Direct SQL Access. Dynamic Views Row types
MongoDB API (NoSQL)	Mongo APIs for Java, Javascript, C++, C#, etc.	Mongo APIs for Java, Javascript, C++, C#, etc.



Informix Warehouse Accelerator (IWA): Seamlessly Integration with Informix/IDS



Informix optimizer:

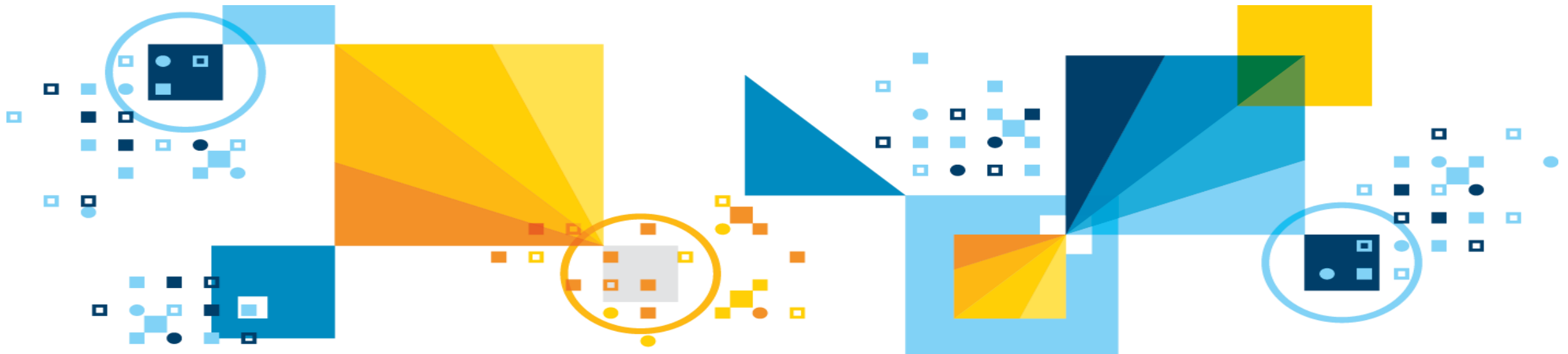
- Routes SQL queries to the Accelerator
- User need not change SQL or applications
- Can always run query in Informix if not accelerated

Informix Warehouse Accelerator:

- Connects to Informix via TCP/IP
- Analyzes, compresses and loads in-Memory persistent ...
- ...a copy of (portion of) Informix data
- Processes route SQL queries with extraordinary speed
- Returns results/answer back to Informix/IDS

Informix Warehouse Accelerator (IWA) transparently accelerates Informix warehouse/analytic queries up to 100 times or more!

Compose



Analytics Platform: Open source DBaaS

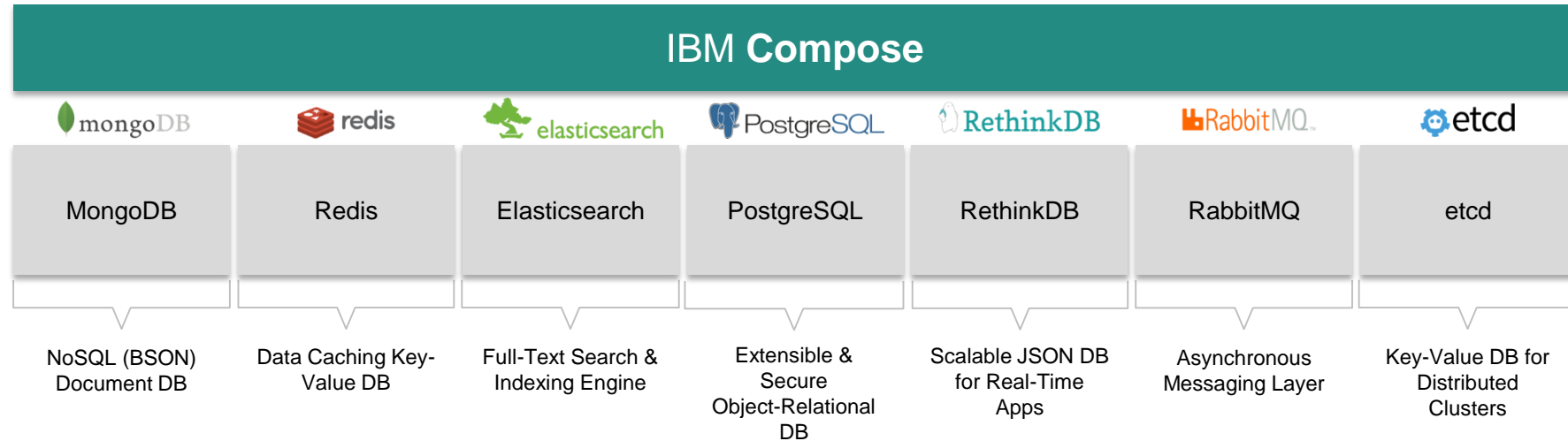
Compose

- Line of Business Pressures
 - Start small and later grow database infrastructure easily
 - Reduce CAPEX expenditure for database infrastructure
 - Support a wide variety of application workloads
 - Want flexibility of cloud while maintaining control of their data
 - Do not want to hire new DBA resources for project

- Deployment Options

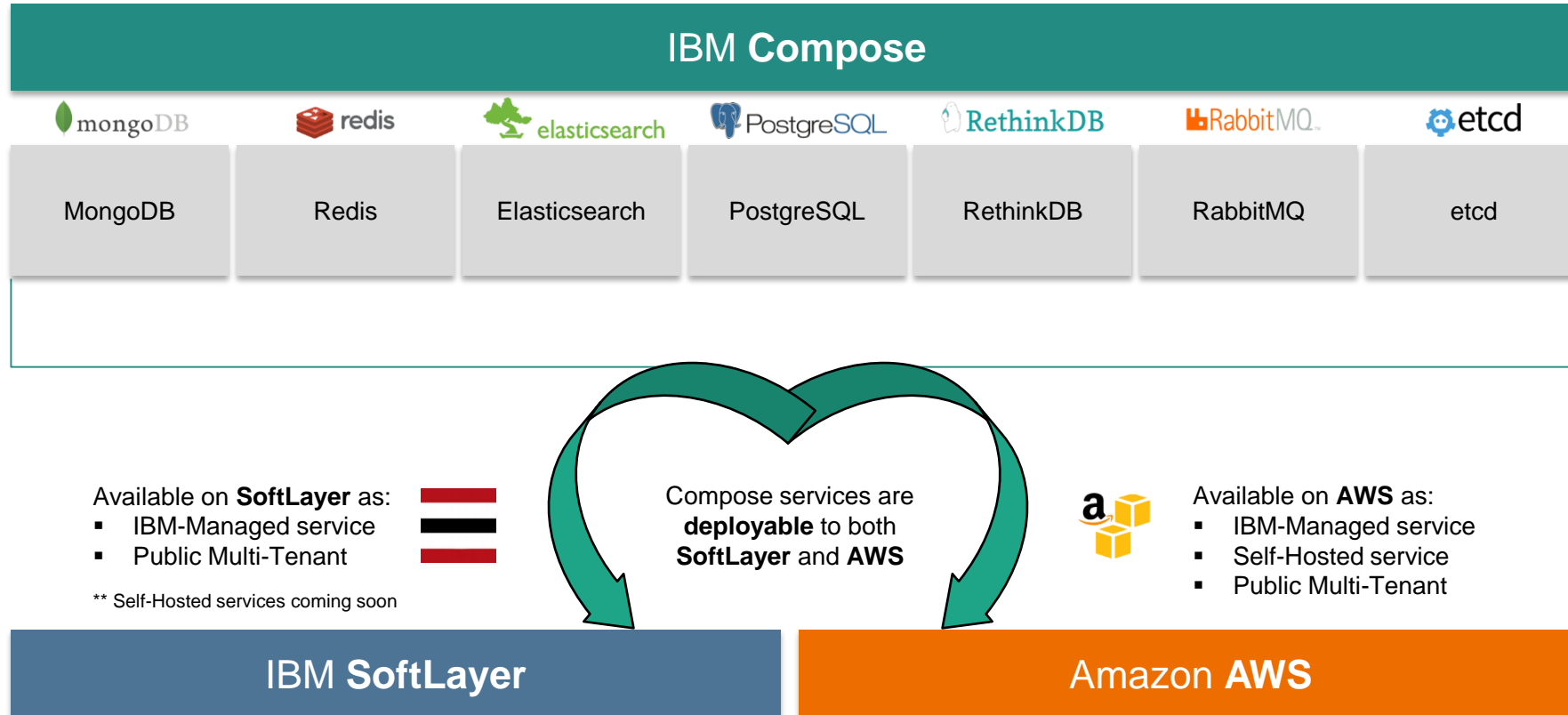
On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	On-premises Hosted	Off-premises Managed
Not available	Not available	Not available	Not available	Not available	Compose	Compose

IBM Compose – Services & Deployments



- **Compose is a cloud DBaaS platform that delivers IBM-Managed, Self-Hosted, and Public open source database services that can be adopted individually or as part of a fit-for-purpose production data strategy**
 - Compose databases are delivered as a complete, production-ready configuration
 - Daily backups and weekly / monthly snapshots
 - Intuitive dashboards with integrated monitoring and alerting

IBM Compose – Services & Deployments



Compose Managed Platform of DBaaS Offerings

Compose is a cloud Managed Platform of Databases as a Service (DBaaS) that delivers a **set self-service, production-ready Open Source** services that can be adopted individually or as part of a **fit-for-purpose data strategy**



Leader in the field of JSON document databases.



An open-source, blazingly fast, low maintenance, key/value store, often used for data caching



Combines the power of a full text search engine with the indexing strengths of a JSON document database



A powerful, open source object-relational database that is highly customizable.

RethinkDB

A JSON document based, distributed database with an integrated administration and exploration console

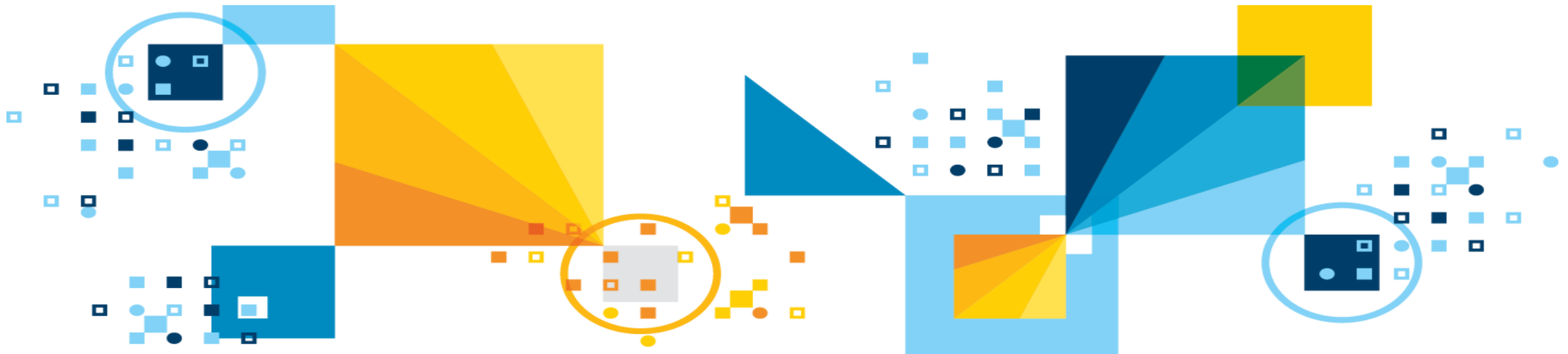
RabbitMQ

Asynchronously handles the messages between your applications and databases, allowing you to ensure separation of the data and application layers

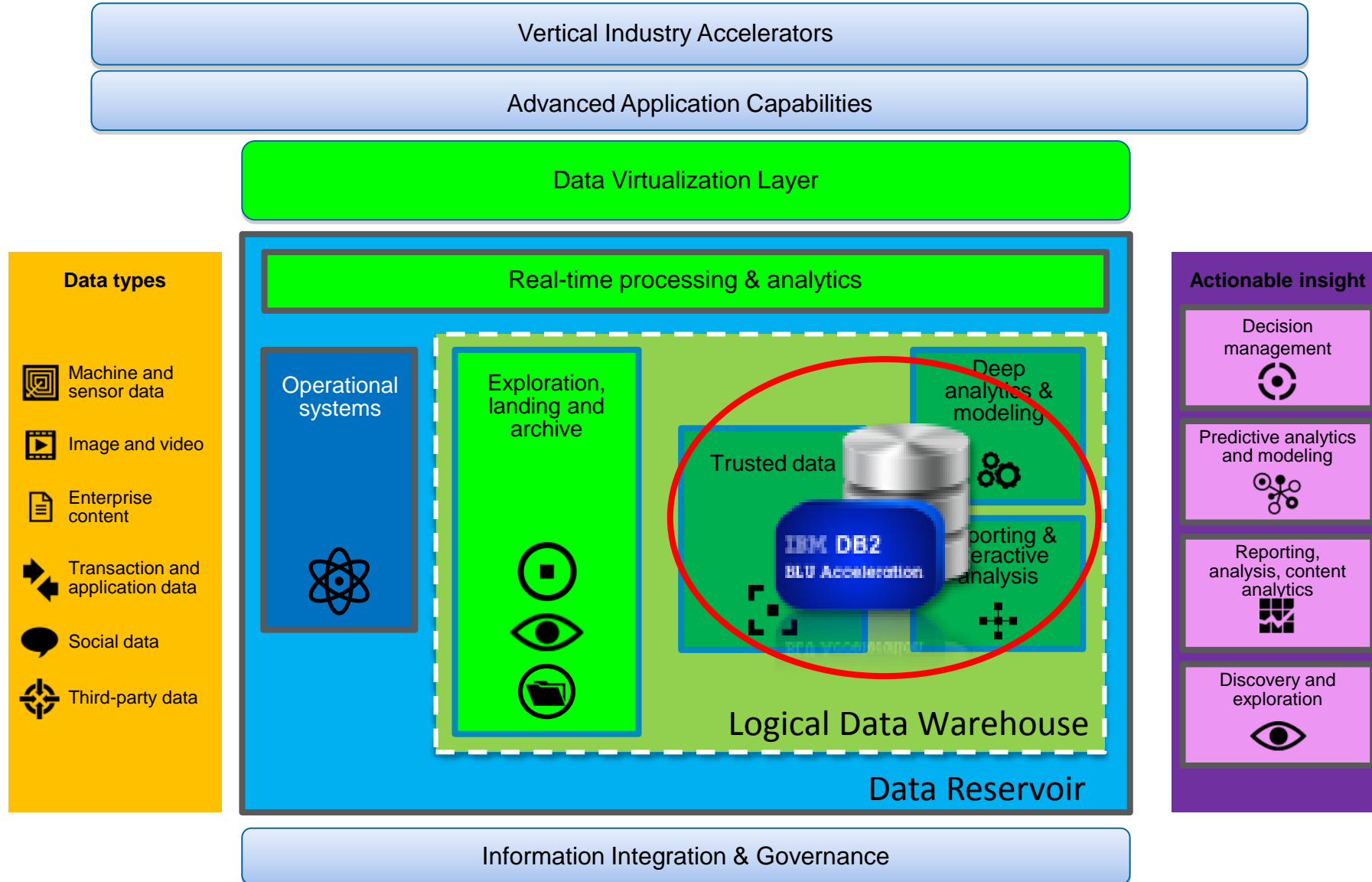
etcd

This key/value store holds the always-correct data you need to coordinate and manage your distributed applications server clusters

DB2 LUW for Analytics



Analytics Platform: Relational OLAP Offerings – DB2 LUW



Analytics Platform: Relational OLAP Offerings – DB2 LUW

- Line of Business Pressures
 - Need to handle large volumes of data in a WH
 - Need to handle mixed workloads
 - Need to address poorly performing analytic queries
 - Need to reduce costs of vastly growing data volumes
 - Trying to evolve into a big data analytics ecosystem
 - Oracle competitive and take-out opportunities



Deployment Options

On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
Coming soon	DB2 for LUW	Windows Linux	AIX Linux	Linux	DB2 in the Cloud	dashDB

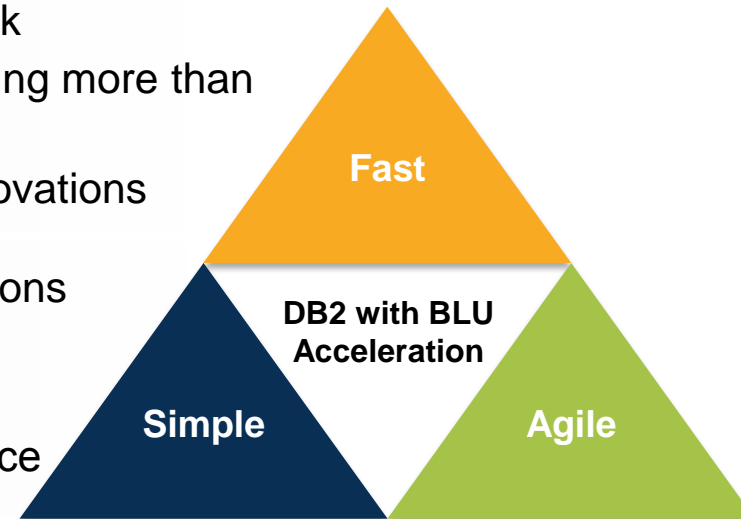
DB2 BLU Acceleration In-Memory Offering

Fast Answers. Simply Delivered.

- Instant insight from real-time operational data for growing revenue, reducing cost and lowering risk
- 35x to 73x faster analytics, with some queries running more than 1400x faster^{1,2}
- Next generation in-memory with IBM Research innovations

- Simplified IT landscape with reporting and transactions in the same system
- No need for indexes, aggregates or tuning
- Operational simplicity with “load and go” performance

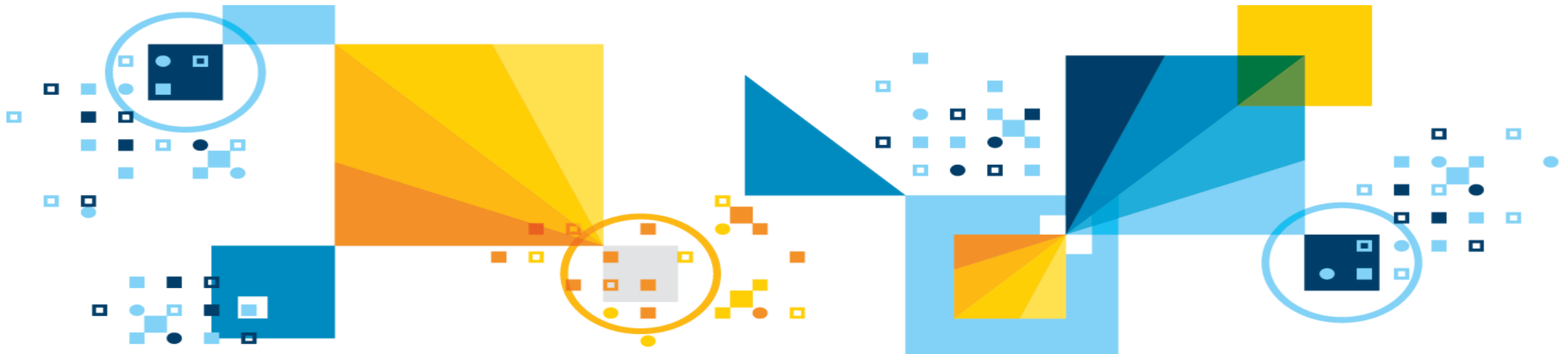
- *“When we consider the indexes and aggregates we no longer need, the database is **14.7x smaller after BLU Acceleration!**”* - Mohankumar Saraswatipura, Lead DBA, Reckitt Benckiser
- Simple, low-risk upgrade from Oracle Database
- Included in Advanced Workgroup and Advanced Enterprise Editions
- **Available for Enterprise and Workgroup Editions**



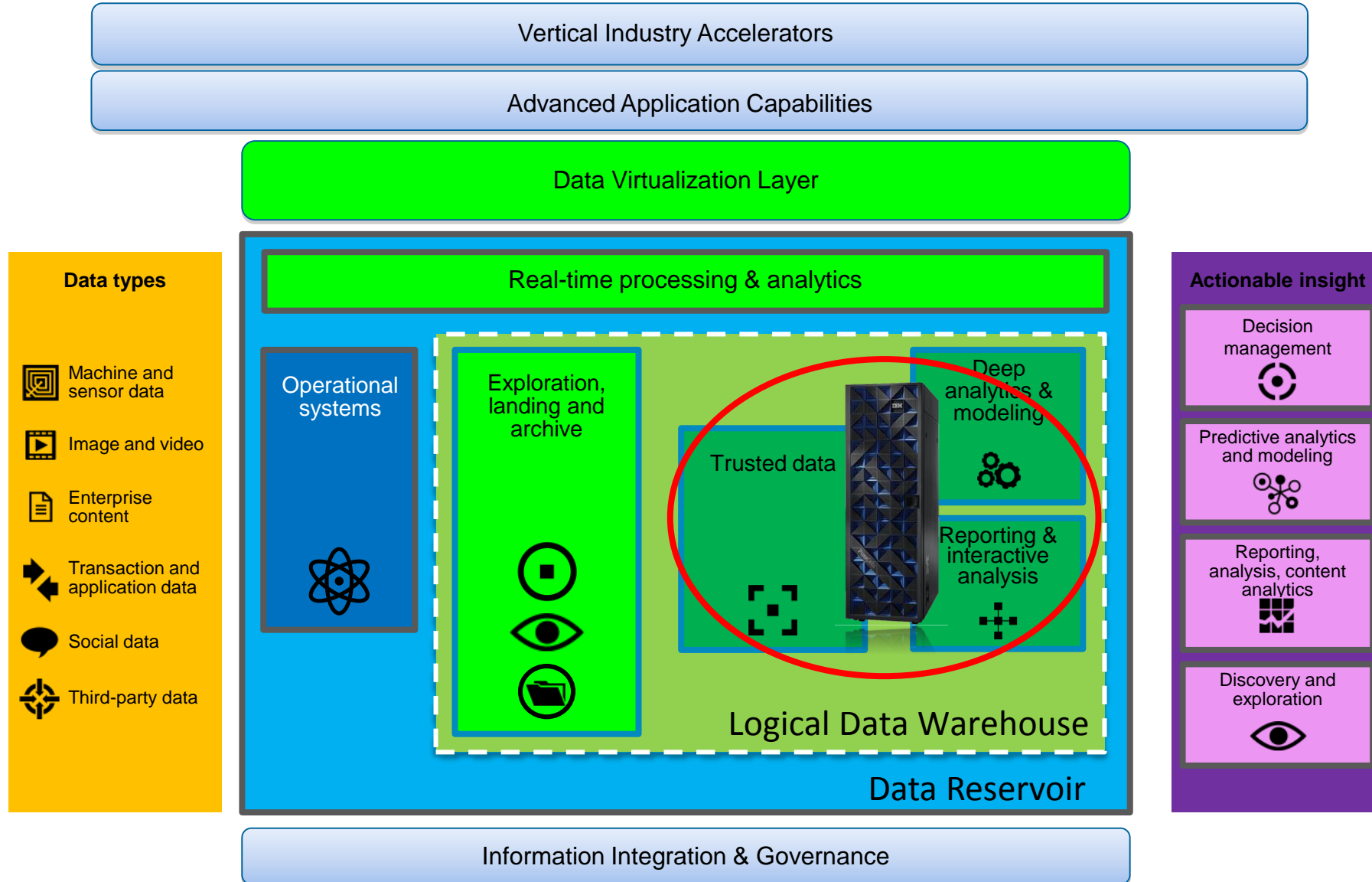
1. Based on internal IBM testing of sample client analytic workloads comparing queries accessing row-based tables on DB2 10.1 vs. columnar tables on DB2 10.5 with BLU Acceleration. Performance improvement figures are cumulative of all queries in the workload. Individual results will vary depending on individual workloads, configurations and conditions.

2. Based on internal IBM tests of analytic workloads comparing queries accessing row-based tables on DB2 10.1 vs. columnar tables on DB2 10.5 with BLU Acceleration. Results not typical. Individual results will vary depending on individual workloads, configurations and conditions, including size and content of the table, and number of elements being queried from a given table.

PureData System for Analytics (PDA)



Analytics Platform: Relational OLAP Offerings – PDA



Analytics Platform: Relational OLAP Offerings

PureData System for Analytics

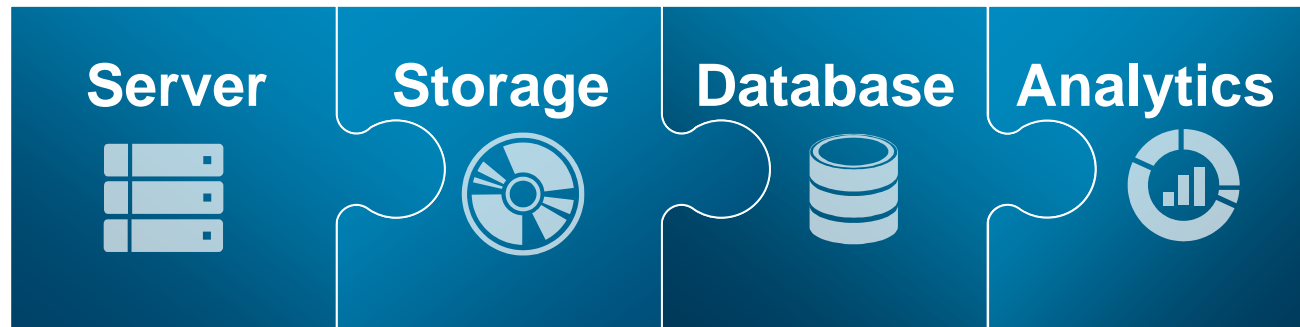
- Line of Business Pressures
 - Need to handle large volumes of data in a warehouse
 - Want to have the simplicity of an appliance
 - Want to have the fast time to value of an appliance
 - Need to address poorly performing analytic queries
 - Need to reduce costs of vastly growing data volumes
 - Trying to evolve into a big data analytics ecosystem
 - Want to reduce costs in a Teradata environment

Deployment Options

On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
PureData System for Analytics	dashDB Local	Not Available	Not Available	IDAA	Not Available	dashDB

Simplify ... Move Analytics into the Data Warehouse

- Integrate the server, storage and database into one optimized package
- Move complex analytics into the database
- Leverage proven technology that accelerates analytics with no tuning or storage administration



IBM PureData System for Analytics

The Simple Data Warehouse Appliance for Serious Analytics



- *Purpose-built analytics appliance*
- *Integrated database, server and storage*
- *Standard interfaces*
- *Low total cost of ownership*

What makes it different?

Speed - 10-100x faster than traditional custom systems¹

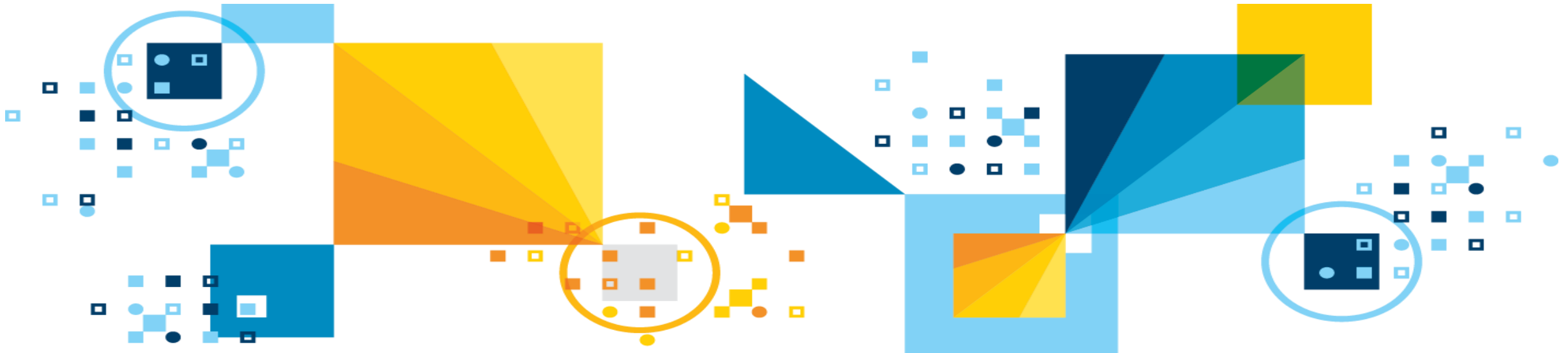
Simplicity - minimal administration and tuning

Scalability - petabyte+ scale user data capacity

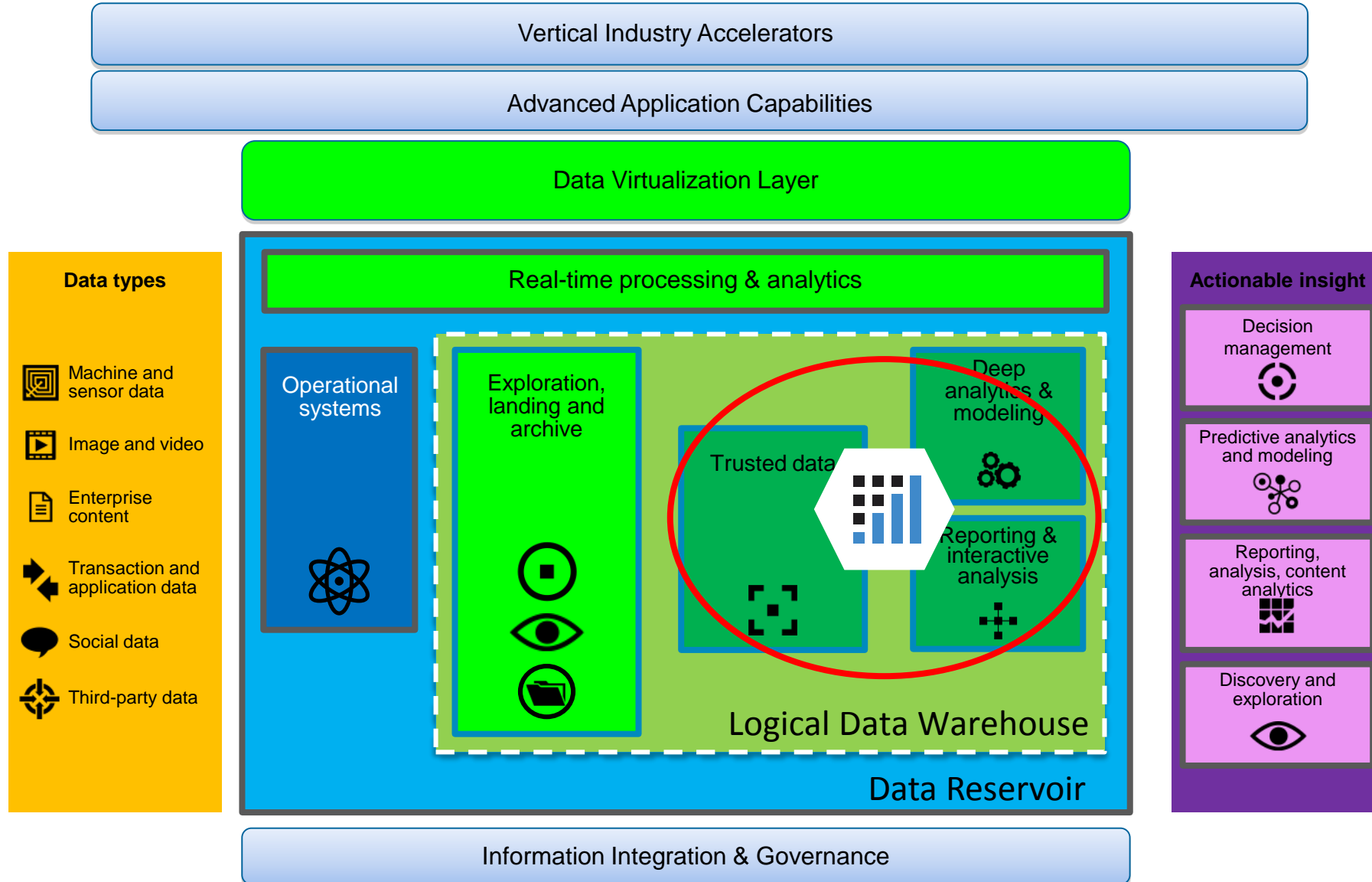
Smart - high performance, advanced analytics

¹ Based on IBM customers' reported results. "Traditional custom systems" refers to systems that are not professionally pre-built, pre-tested and optimized. Individual results may vary.

dashDB for Analytics & dashDB Local



Analytics Platform: Relational OLAP Offerings – dashDB



Analytics Platform: Relational OLAP Offerings

dashDB

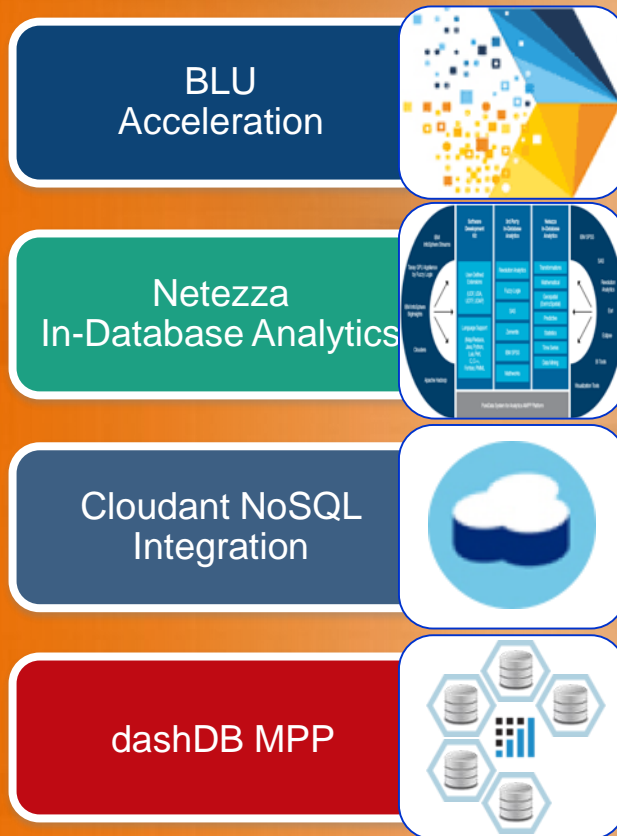
- Line of Business Pressures
 - Want an SaaS Analytical solution for a large data warehouse for rapid deployment
 - Want flexibility of cloud while maintaining control and security of their data or hybrid data warehouse
 - Move workloads between private cloud and appliance as needs fluctuate
 - Bridge to the cloud through a private cloud option as the first use of cloud
 - Need to modernize the data warehouse and interested in a hybrid architecture

- Deployment Options

On-premises Appliance	On-premises SW only	On-premises X86	On-premises Power	On-premises z System	Off-premises Hosted	Off-premises Managed
PureData System for Analytics	dashDB Local (Beta)	dashDB Local (Beta)	Not available	Not available	dashDB Local (Beta)	dashDB

IBM dashDB – Analytics Warehouse as a Service

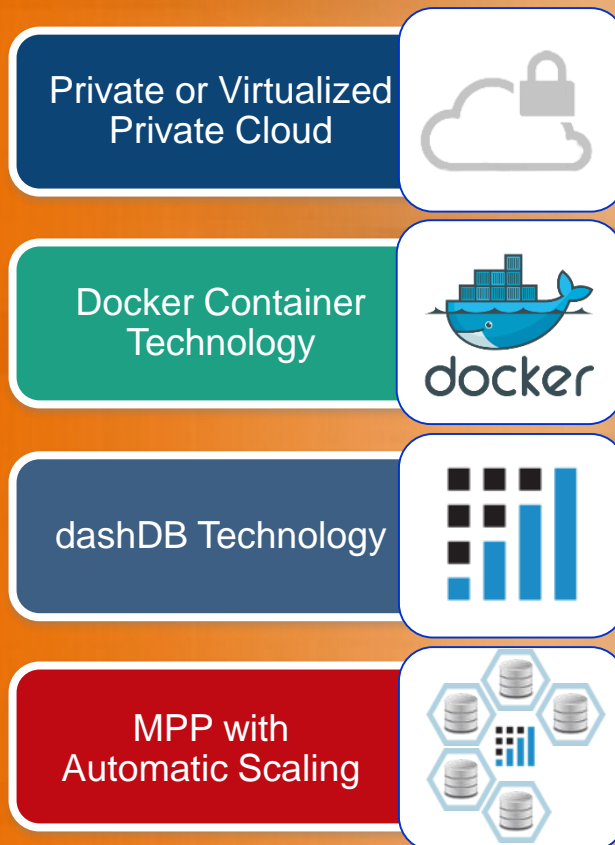
In-database analytics capabilities for best performance atop a **fully-managed warehouse**



- Fully-managed data warehouse on cloud
- **BLU Acceleration** columnar technology + **Netezza** in-database analytics
 - BLU in-memory processing, data skipping, actionable compression, parallel vector processing, , “Load & Go” administration
 - **Netezza** predictive analytic algorithms
 - Fully integrated RStudio & R language
- Oracle compatibility
- Massively Parallel Processing (**MPP**)
- On disk data encryption and secure connectivity

Coming Soon IBM dashDB Local

Benefits of dashDB Technology with Fast Deployment into Private Cloud Environment



- Highly flexible data warehouse
- Optimized for fast and flexible deployment into **private or virtual private clouds**
- Uses **Docker** container technology
- Built on top of **dashDB technology**, it shares the benefits of
 - BLU Acceleration in-columnar technology
 - Netezza In-database Analytics
 - Oracle Compatibility
- Massively Parallel Processing (**MPP**) with automated scaling capabilities to increase infrastructure efficiency

The dashDB family

Managed Public Cloud Service



- IBM-managed
- Agile and simple to use
- Pay-as-you-go model
- Data mart to support existing data warehouse
- Ideal for “born in the cloud” data
- “Co-located” DW cloud service supporting other cloud services & applications

Private Cloud / Software-defined



- Client-managed
- Utilize existing infrastructure
- Dynamic, short-lived data warehousing needs
- Hadoop alternative for structured data
- Platform service for MSPs (Managed Service Providers), offering their own applications and data warehouse services

IBM dashDB – A Fully Managed Analytics Warehouse

Relieving the provisioning and management burden on your data warehouse DBA staff



sets up, optimizes, and manages all aspects of the dashDB environment

- OS and database software installation
- Optimized configuration for analytics workloads
- BLU Acceleration "load and go" simplicity
 - No need for creating auxiliary structures like indexes or aggregates
 - Automatic memory management
 - Automatic statistics gathering
 - Automatic space reclamation
 - Pre-configured workload management
- Ongoing OS and database software maintenance
- Automated daily backups
- 24/7 monitoring and restart after hardware or software failure
- Ongoing risk assessment and security monitoring
- Upgrade support moving to a larger dashDB size

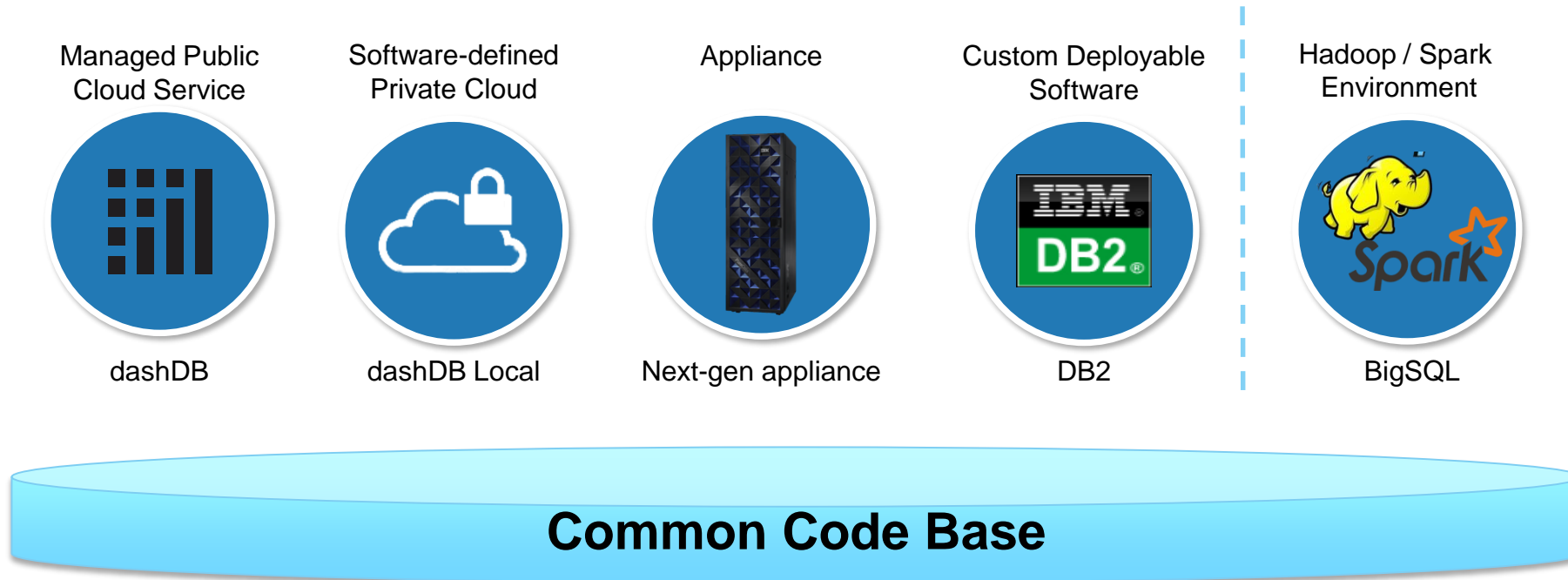


DBA only has to focus on data delivery

- Schema definition
- Data loading
- User management and database access control
- Application, ETL connectivity

IBM's Logical Data Warehouse Product Strategy & Vision

2016 Cloud-first Convergence



- **Application compatibility:** Write once, run anywhere
- **Operational compatibility:** Reuse operational and housekeeping procedures
- **Licensing:** Flexible entitlements for business agility & cost-optimization
- **Integration:** Common Fluid Query capabilities for query federation and data movement
- **Standardized analytics:** Common programming model for in-DB analytics
- **Ecosystem:** One ISV product certification for all platforms

End of Presentation – Questions?

