

Los Angeles County Office of the CIO

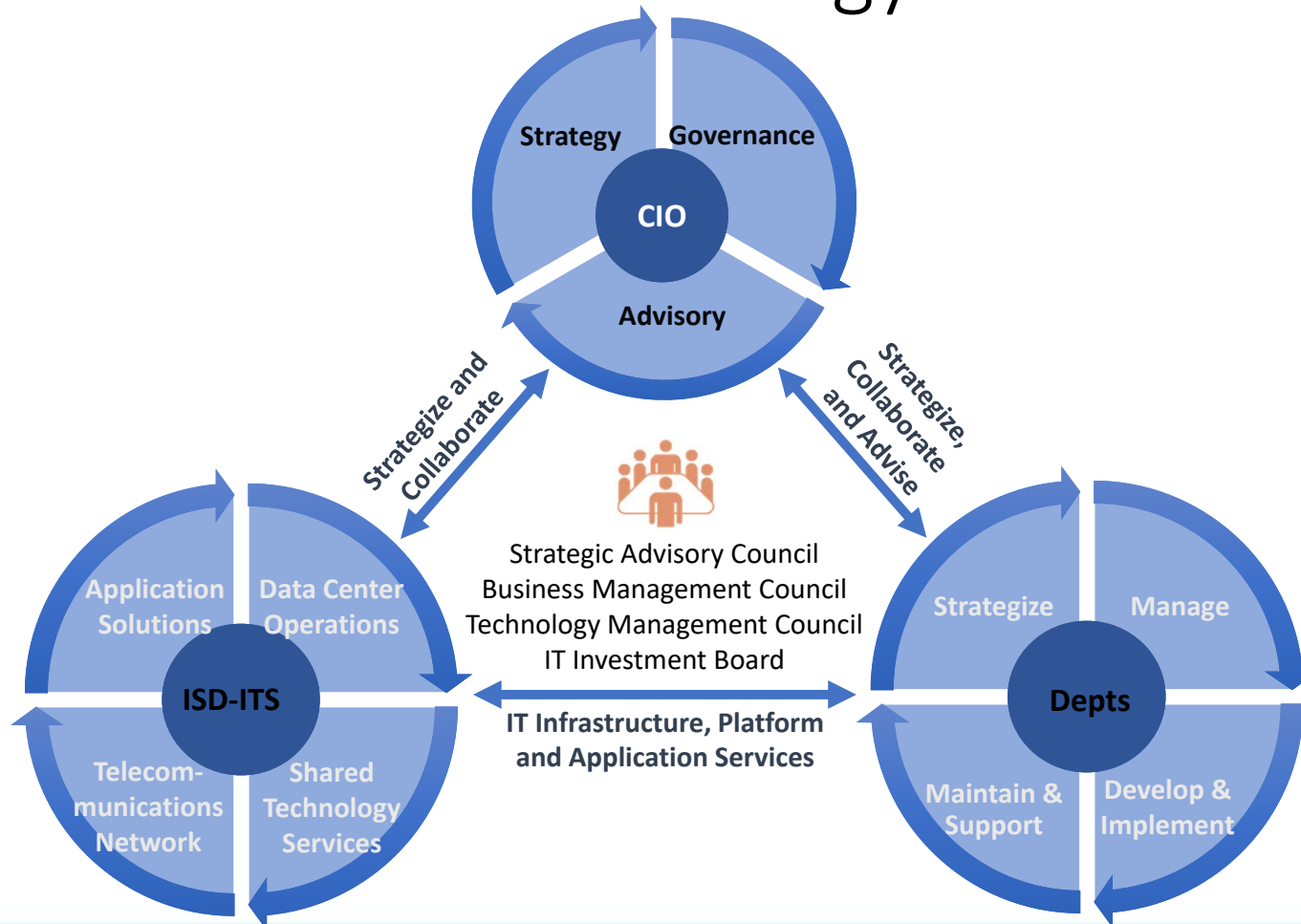


Data and Donuts
Strategy, Governance, & Analytics Center of Excellence

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LA County CIO

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Information Technology in LA County



Office of the CIO Functions

- Portfolio Management
- Strategic Planning
- Enterprise Architecture
- External IT Leadership

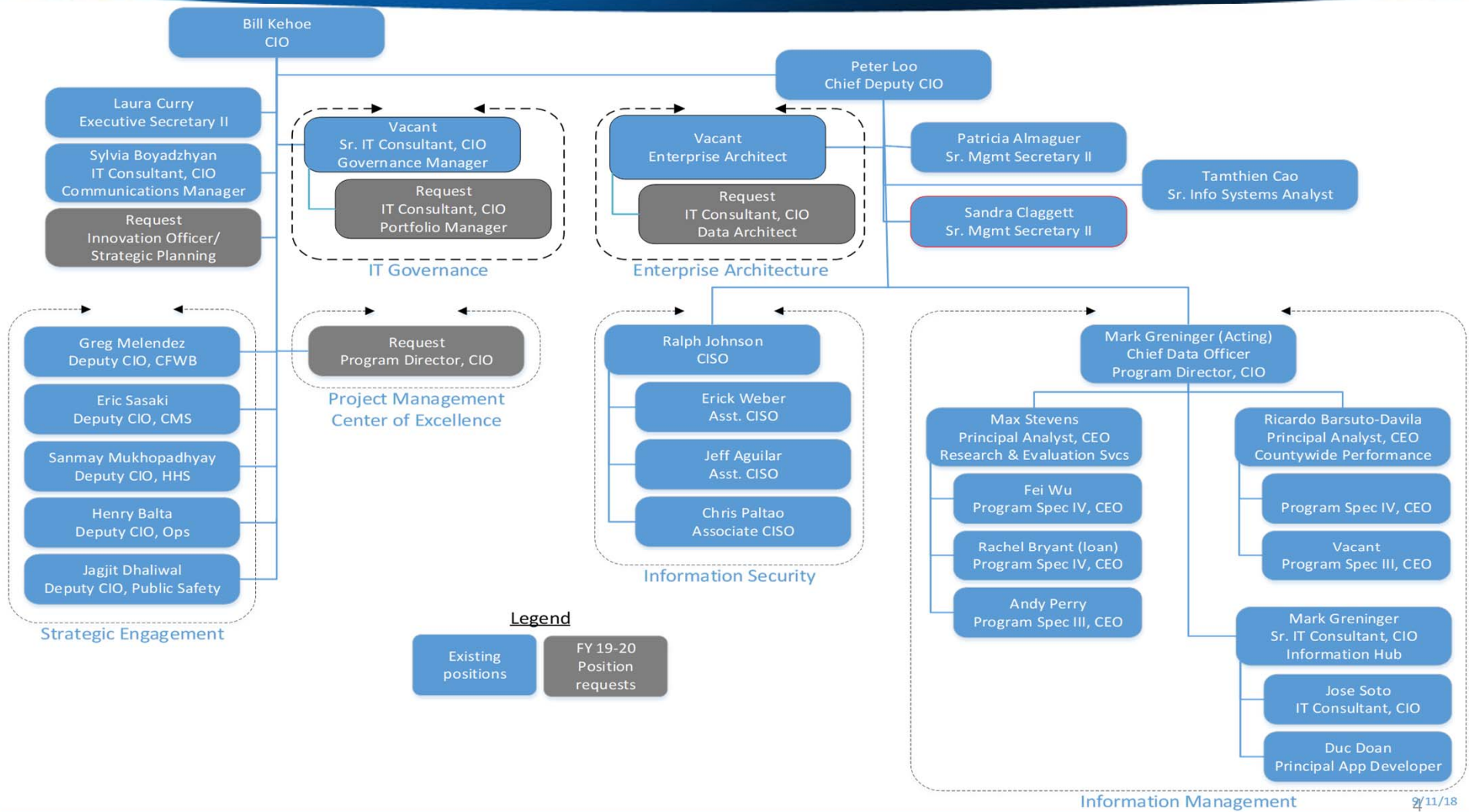


- IT Governance
- IT Policy & Standards
- Project Management Center of Excellence

- Strategic IT Consulting Services
- Security Program
- Information Management Program
- Innovation Program
- Communications

Existing OCIO Functions

New OCIO Functions



Strategic Planning – *Data as a Utility*

Governance

Analytics Center of Excellence (ACE)

Information Hub

Strategic Planning Milestones

- ✓ Facilitated five cluster-specific strategic planning workshops representing all departments and engaging over 150 participants.
- ✓ Analyzed and synthesized 1000+ ideas and 200+ themes.
- ✓ Results from workshops were used to prioritize the top five Enterprise IT Strategic Goals.
- ✓ Aligned the Enterprise IT Strategic Plan goals with the 2019 - 2020 budget requests.



STARTING WITH
USERS ISN'T JUST
HOW WE SHOULD
BE MAKING TECH.
IT'S HOW WE
SHOULD BE
MAKING GOVERNMENT.
-@CECILIA44 #CFASUMMIT





County Strategic Plan and Goals

Department Strategic Plans

Enterprise IT Strategic Plan and Goals

Mobility

Sponsor, Lead, Team Members

Data as a Utility

Sponsor, Lead, Team Members

Digital Civic Engagement

Sponsor, Lead, Team Members

Workforce Empowerment

Sponsor, Lead, Team Members

Transform Procurement

Sponsor, Lead, Team Members

Primary Stakeholder (s) & Functional Role (s)

BOS and CEO Leaders

Department Heads Leaders

Office of CIO Strategic Facilitator & Advisor

Department Leaders and Staff Drive Countywide Impact

Enterprise IT Strategic Goals & Proposed Objectives



Mobility

*Accelerate mobility for employees and residents to deliver services **anywhere at anytime***



- Increase **wireless capacity** and access for staff and public at County departments.
- Define and design an **enterprise unified communications strategy** to provide an integrated communications experience for staff (e.g., instant messaging, voice mail to email, and videoconferencing).



Data as a Utility

Build a Countywide culture that emphasizes data-driven decision making



- Improve **data maturity across departments** through advisory and consulting services.
- Build **governance structures and create data management resources** (e.g., playbooks, tools, platforms, data management architectures) that enable a data-driven environment and culture.



Digital Civic Engagement

Engage our residents and communities with a variety of digital methods to interact with their government



- Create capabilities to allow the public to interact with County through a **virtual “one-stop”** capability.
- Create models that support direct engagement with public to generate ideas and **identify user-needs to improve service delivery**.



Workforce Empowerment

Build a modern workforce that embraces evolving technologies that transform service delivery



- Improve **quality and speed of IT hiring, onboarding**, supported by customized recruiting to address department and program workforce needs.
- Enable a **culture of experimentation** that has immunity against failure and promotes iterating with purpose.



Transform Procurement

Revamp procurement processes for more speed and flexibility to accelerate improved delivery to residents



- **Improve acquisition cycles** for technology products and services through cooperative purchasing.
- Establish an **innovation process** that transforms traditional requirements and creates a new **certification platform**.

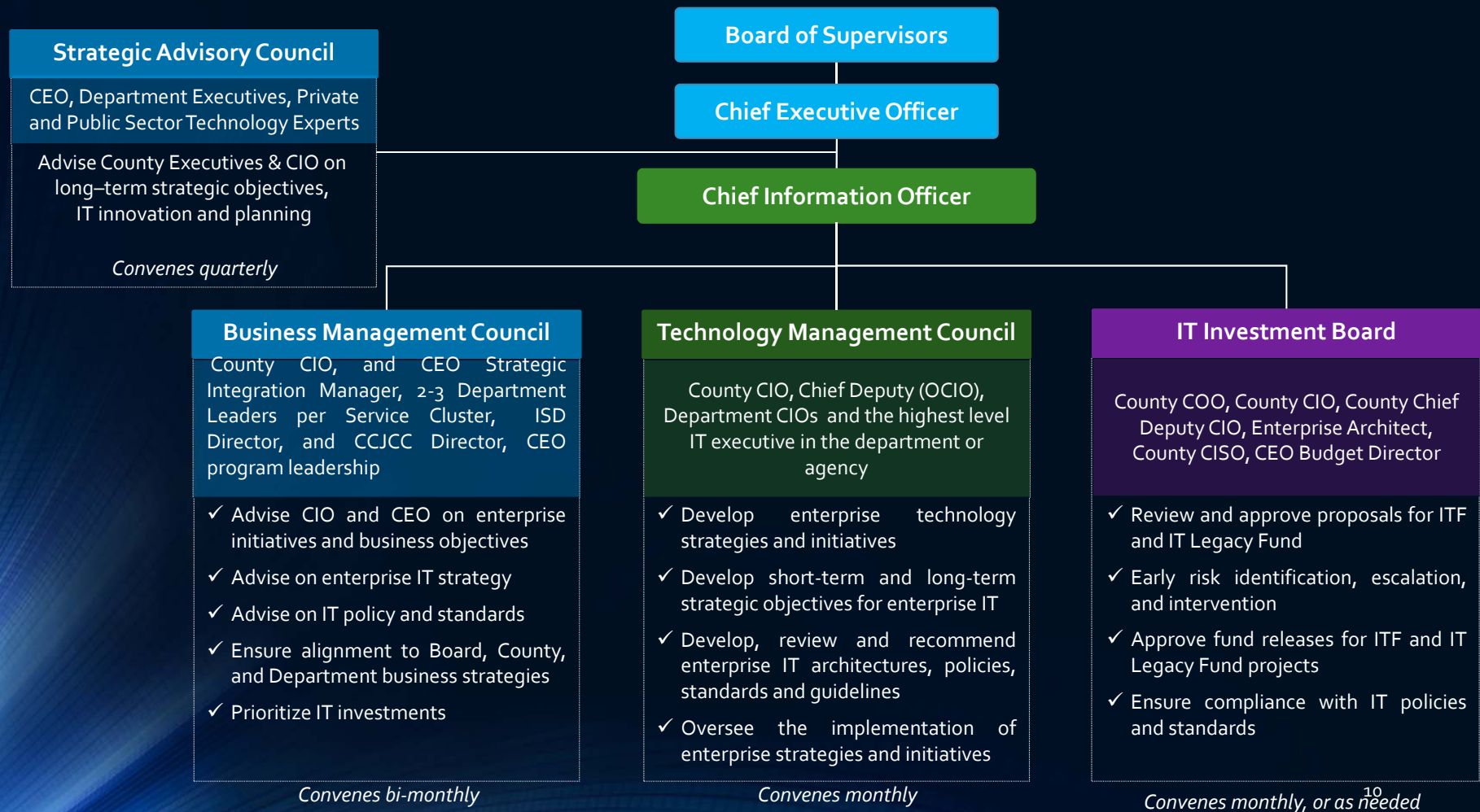
Strategic Planning – *Data as a Utility*

Governance

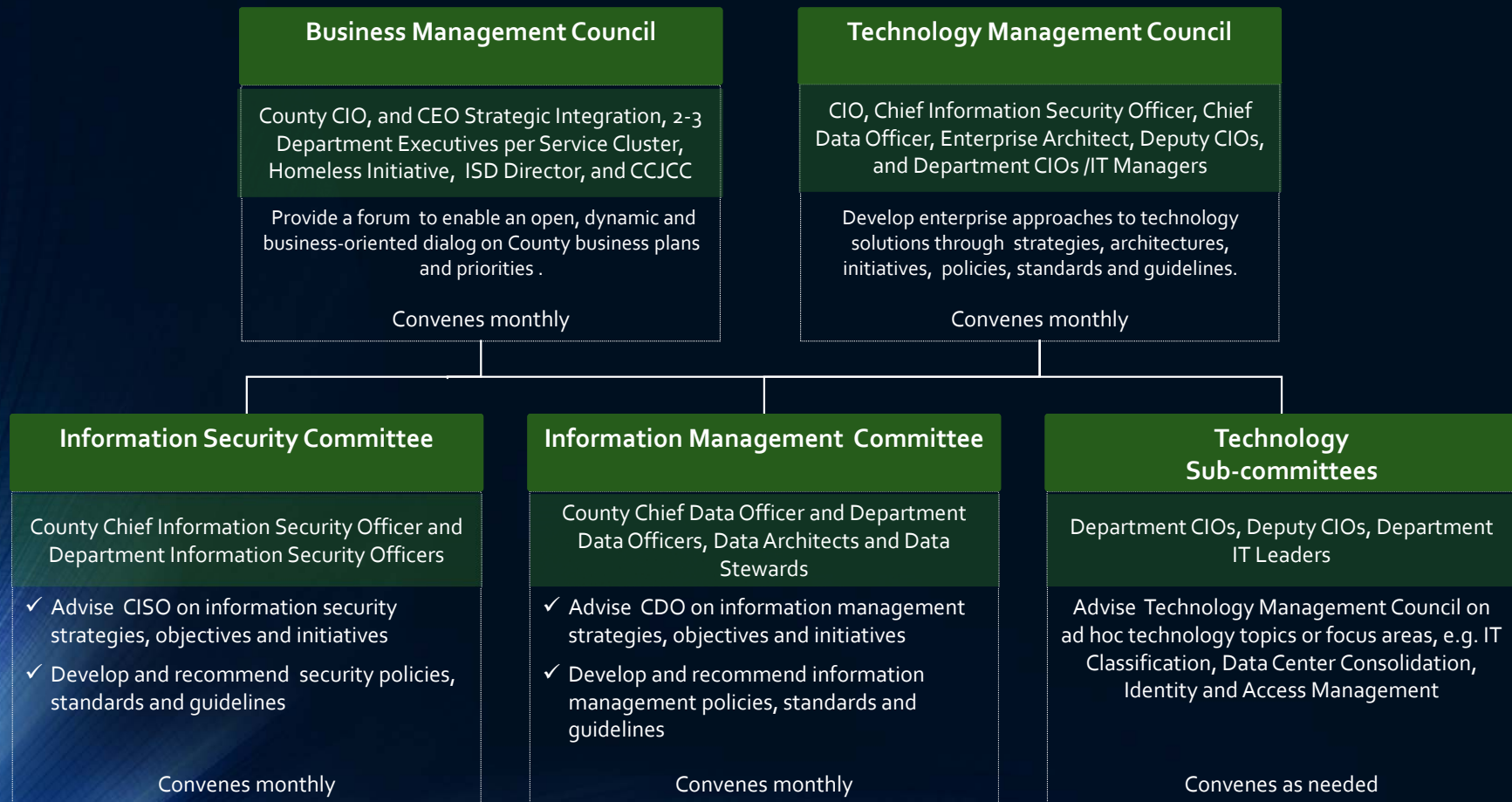
Analytics Center of Excellence (ACE)

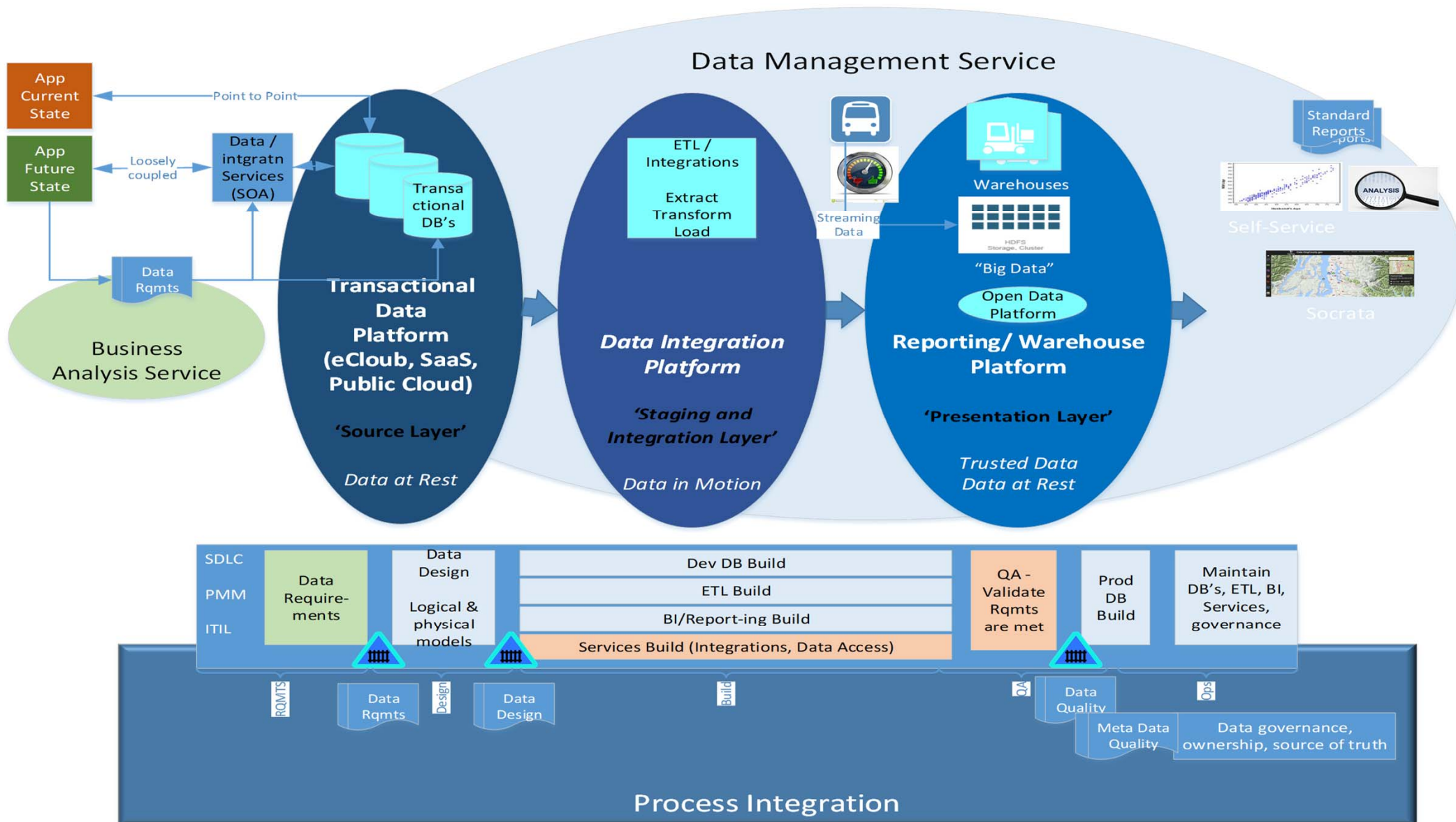
Information Hub

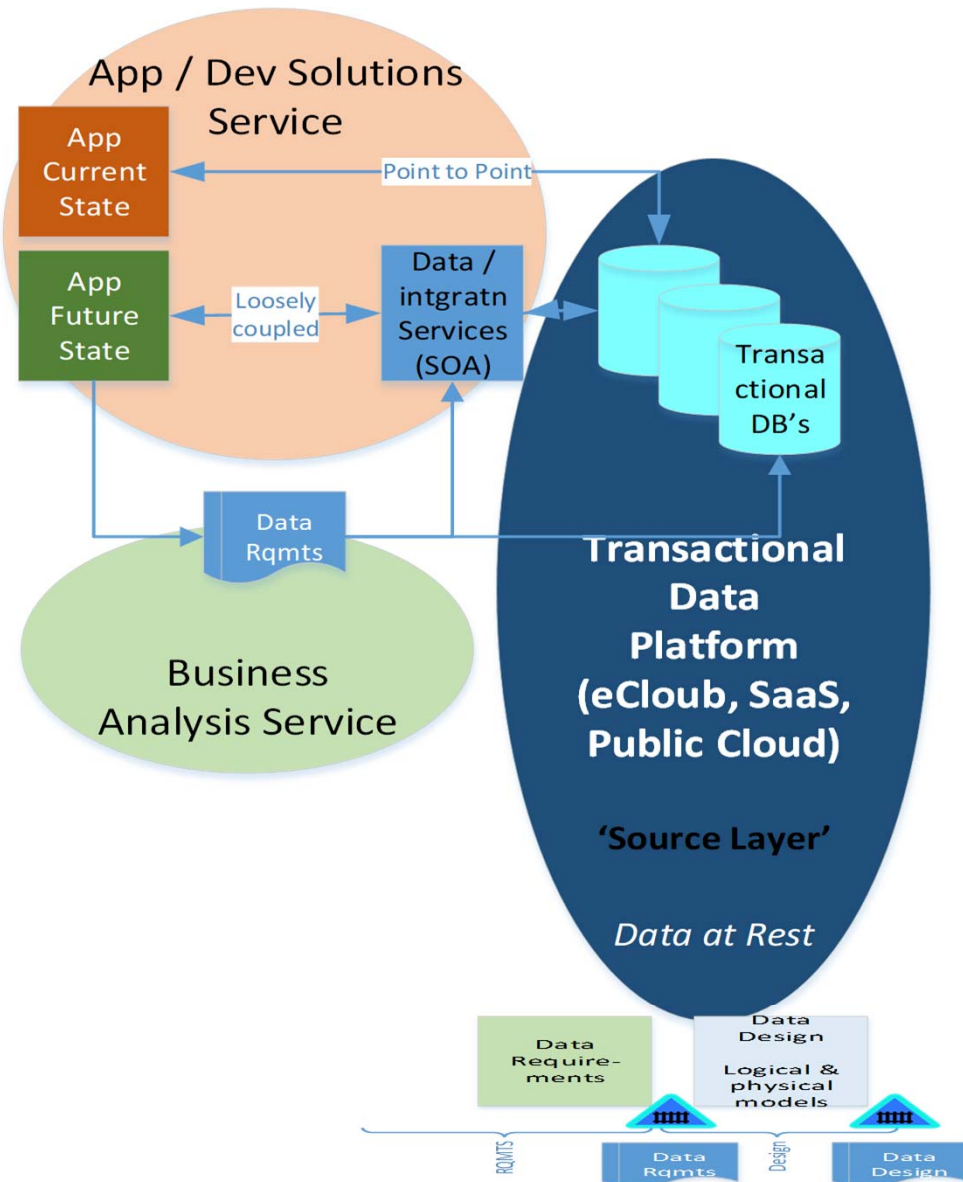
Information Technology Governance Framework



Technology Management Framework







Problem:

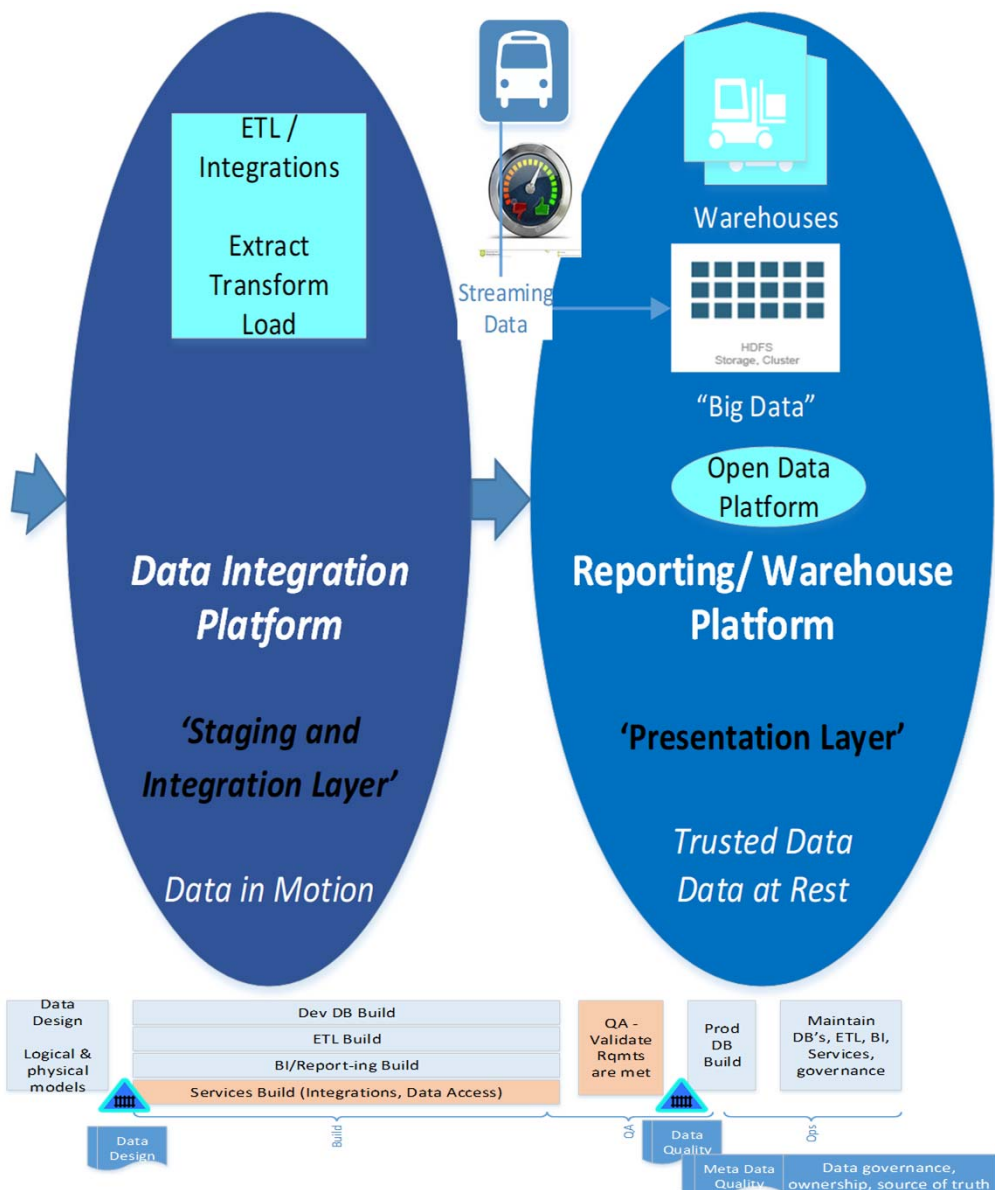
- Siloed data, legacy applications / data stores
- Lack of data awareness
- Point-to-point data integration
- Lack of overall application and information management architecture
- Lack of skilled resources (business analyst, data/applications solutions architect)

Potential Solutions:

- Application rationalization / modernization strategy
- Application / data inventory, understand the data
- Classify data according to the new data classification policy
- Data integration requirements for SaaS / COTS applications.
- Align applications and data to lines of business
- Prioritize data in terms of importance to required reporting, analytics, and dashboarding & define critical needs
- Resources to support data interpretation and evaluating data projects, studies, and dashboards
- Complete departmental data maturity assessments and road maps to support opportunities / scan of all county systems

Internal / Contract Resources:

- Business Analyst
- Application Solutions Architect
- Data Architect
- Line of Business SME's
- Data Base Administrators



Problem:

- Lack of data extract, transform, and load (ETL) processes
- Data quality concerns
- Tools to perform ETL functions
- Data Warehouse strategy / platform / solution
- Open data strategy
- Big data strategy / platform / solution
- Skilled resources
- Service / API Architecture / platform / solution

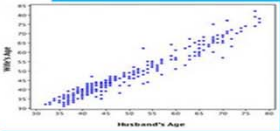
Potential Solutions:

- ETL / Data Quality platform (e.g. Informatica)
- Data Warehouse platform / architecture (e.g. Microsoft Azure. AWS)
- Data cleansing strategy
- Big data platform / architecture
- Open data strategy (e.g. public records requests)

Internal / Contract Resources:

- Business analyst
- ETL developers
- Data architect
- Data Base Administrators
- Solutions Architect (service layer / API's / integration)
- Line of business SME's

Standard
Reports
ports



Self-Service



Socrata

**BI / Analytics
Platform**

'Query Tools'

*Data to
Knowledge*

Problem:

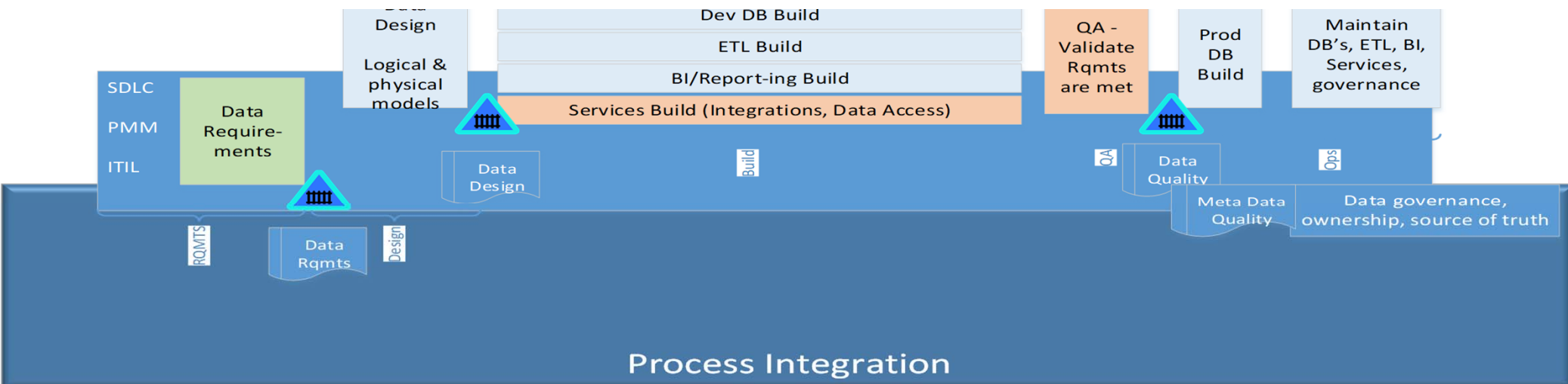
- Internal and external reporting requirements
- Awareness of data analytics capabilities
- Visual management and analytical tools
- Reliable data
- Consistent, repeatable results
- Culture of data driven decision making
- Resources to develop data visualizations / dashboards / reports
- Data analytics resources
- Open data strategy

Potential Solutions:

- Data visualization tools (e.g. PowerBI, Tableau)
- Analytical tools (e.g. SAS)
- Develop an overall data strategy with requirements (reporting, dashboards, analytics)
- Develop a platform / solutions analytics architecture

Internal / Contract Resources:

- Data Visualization developers
- Data scientists (analytics)
- Reporting developers
- Business analyst
- Data architect



Problem:

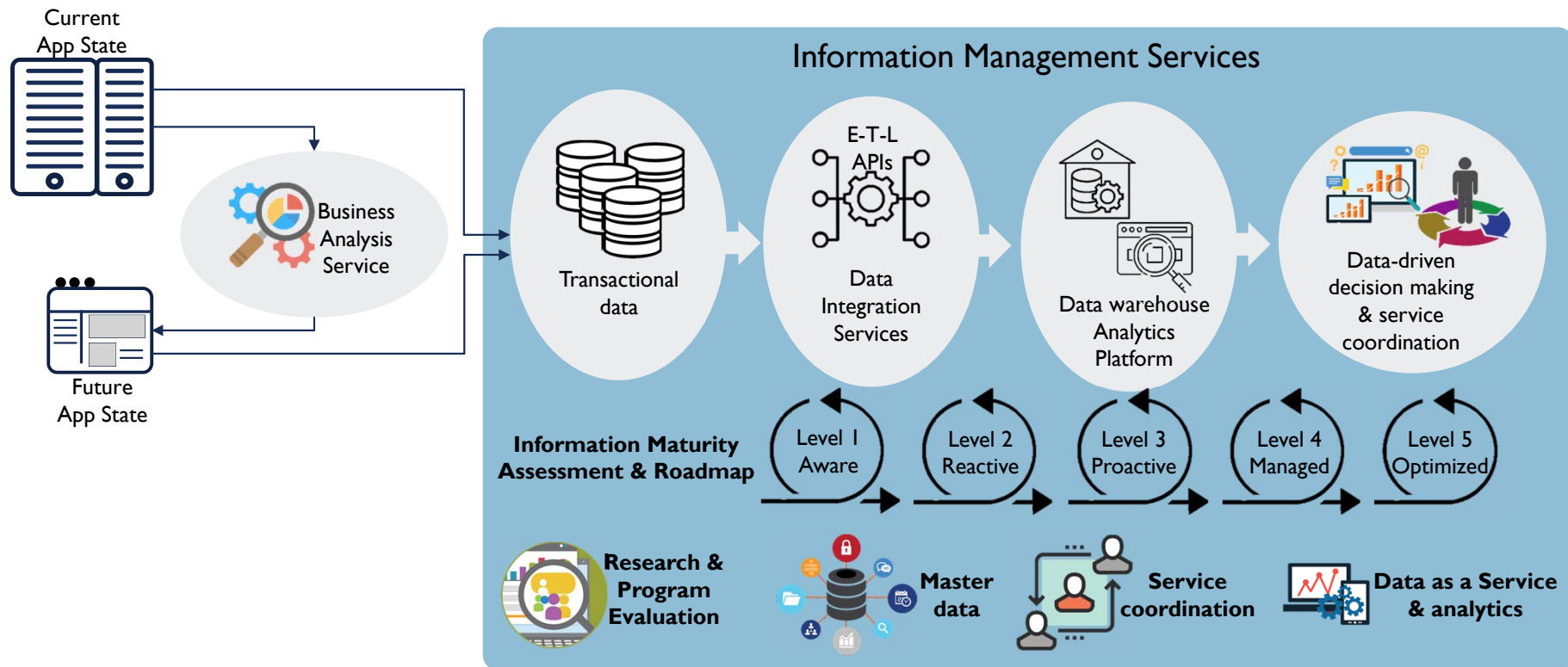
- Data Governance
- Business leadership awareness of data analytics principles
- Identification of line of business SME's
- Skilled resources
- Framework / platform / tools
- Culture
- Architecture
- Application development discipline / standards / methodology

Potential Solutions

- Develop the right classifications for data scientists
- Secure agreement on how data will be published and maintained
- Technical capacity + training needs to connect programming, business analytics, and QI feedback loop
- Establish common language regarding data and focus on commonalities across departments (*e.g., countywide data literacy and standardization of key metrics*)
- Onboard more departments to Countywide Master Data Management (CWMDM)

Internal / Contract Resources:

- Line of business SME's / data owners
- Business analyst(s)
- Data architect
- Application architect
- Training coordinator



Themes for the TMC Recommendations

- **Resources and Classifications**
- **Data Sharing**
- **Data Inventory & Architecture**
- **Assessment and Maturity**
- **Governance**
- **Change Management & Culture Change**

Themes for the BMC Recommendations

- **Governance**
- **Assessment & Data Maturity**
- **Data Resources**
- **Data Sharing (Dept. or Enterprise)**

Initial Recommendations from TMC

1. Collect inventory of available data
2. Develop common definitions to understand the data
3. Develop strategy to address data quality issues
4. Develop use cases for how to use the data
5. Develop a consistent data architecture
6. Establish appropriate data sharing agreements and necessary protocols for data sharing
7. Change the culture and challenge assumptions
8. Use trusted brokers to assist with data sharing
9. Provide a clear understanding of requests and needs – the requester should be specific
10. Obtain executive sponsorship
11. Establish successes to start the ball rolling
12. Standardize definitions – common language
13. Complete data maturity assessments – at departmental and enterprise levels
14. Identify silos and shadow systems and opportunities
15. Single source of truth for data and information (e.g., Data Steward, eCAPS)
16. Develop roadmap for engagement and how to improve data maturity
17. Develop a data dictionary – information and architectures
18. Change management – importance of data should be emphasized to change culture across LA County
19. Data Scientist Classifications – needed for County but also make sure the County provides training and development for resources who are part of business divisions
20. Legacy systems focused around data entry vs. access – need staff that can support accessing information
21. Data sharing agreements – pain point for most discussions about data sharing and no one can say who is the final decision-maker
22. Legacy data does not conform to current analytical systems
23. Identifying problems to be solved using data rather than random collection and analyses
24. Improve practices and processes to support organizing, sorting, and cleaning of data available given strong distrust with accuracy and quality

Initial Recommendations from BMC

1. **Data standardization.**
2. **Secure agreement** on how data will be published and maintained (i.e. Countywide Legal Analysis for data sharing)
3. **Establish a common language regarding data** (e.g., raising countywide level of data literacy, standardization of key metrics).
4. Engage external consulting assistance to perform **departmental data maturity assessments** and road mapping
5. Cull **successful models from all departments** and elevate applicability for countywide use.
6. Countywide **scan of systems** is needed.
7. Highlighting **opportunity presented by data maturity** efforts
8. **Supporting gap analysis efforts** → current vs. desired (cross departments data sharing)
9. Develop the right **classifications for data scientists**.
10. For departments that are not large enough, perhaps establish Data Scientist as service (similar to the concept of Department Information Security Officer as a service)
11. **Invest in technical capacity + training needs** to align business analytics to department program needs with a quality improvement feedback loop
12. **Resources needs regarding data interpretation / limitations regarding research** → enhance who and how resources are evaluating data projects, studies, dashboards
13. Build awareness and utilize existing county enterprise data platforms such as the OCIO Information Hub, ISD Big Data Platform, and Data Warehouse and Hosting platforms to minimize cost and time for departments to mature their data management program.
14. Identify and focus on **commonalities across departments** related to data needs. Build platforms or define the interface based on common needs that can be customized to department users (i.e. data governance, data sharing, data integration)
15. Define **critical data needs** instead of focusing data by systems (what are departments being asked to produce – dashboards, reports, analytics)
16. **Choosing right data based on goals and priorities** (what are departments being asked to produce – dashboards, reports, analytics)

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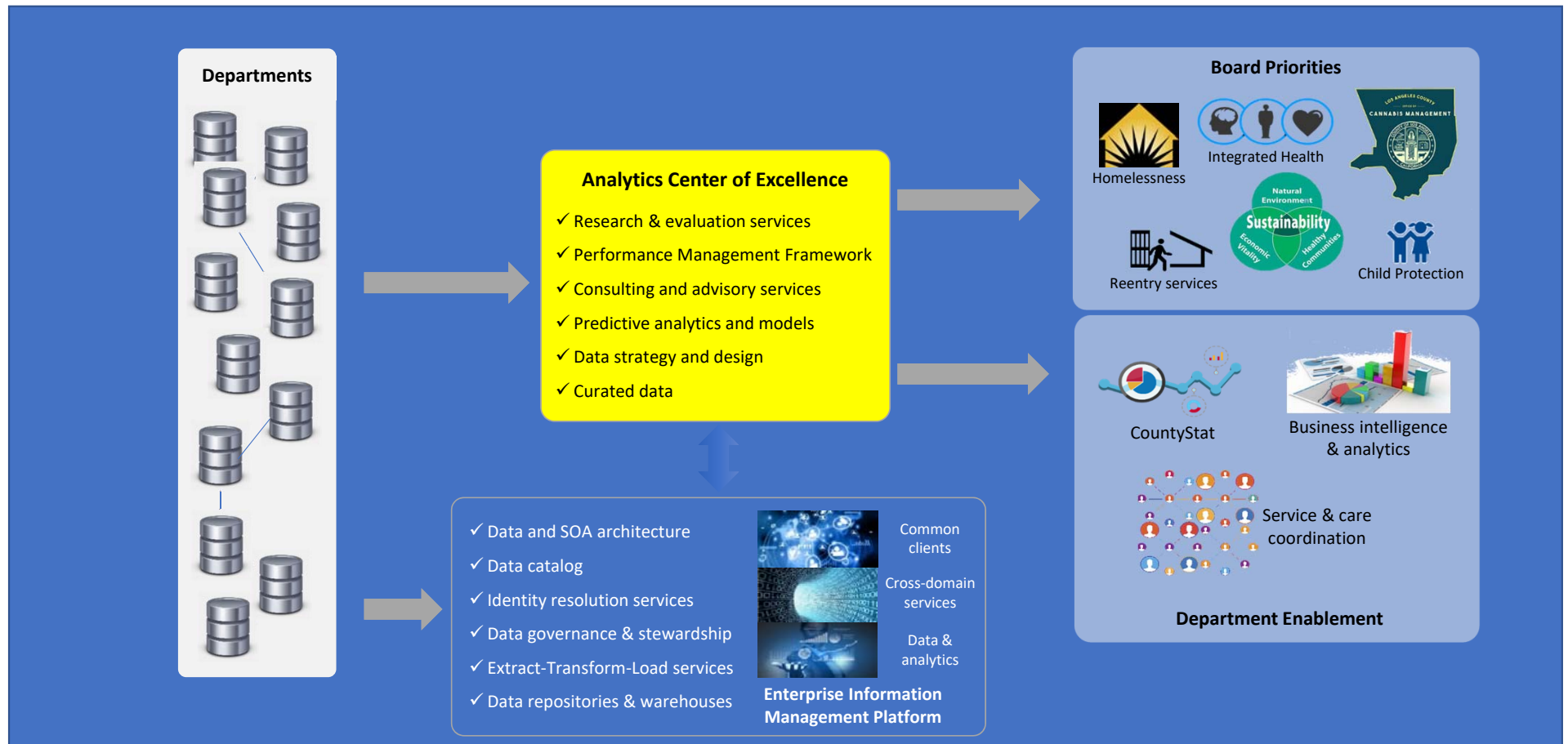
Analytics Center of Excellence (ACE)

Information Hub

Analytics Center of Excellence (ACE)

- 12 person team
- Economists, researchers, Data Scientists, analysts
- Depth of experience across team members spans organizations from the private-sector, government, academia, and nonprofits.
- Focused on engagement with LA County's 34 departments to ultimately improve data maturity and support a data-driven culture

IM Vision & Analytics Center of Excellence



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