



## Smart City as Foundation for eGovernment

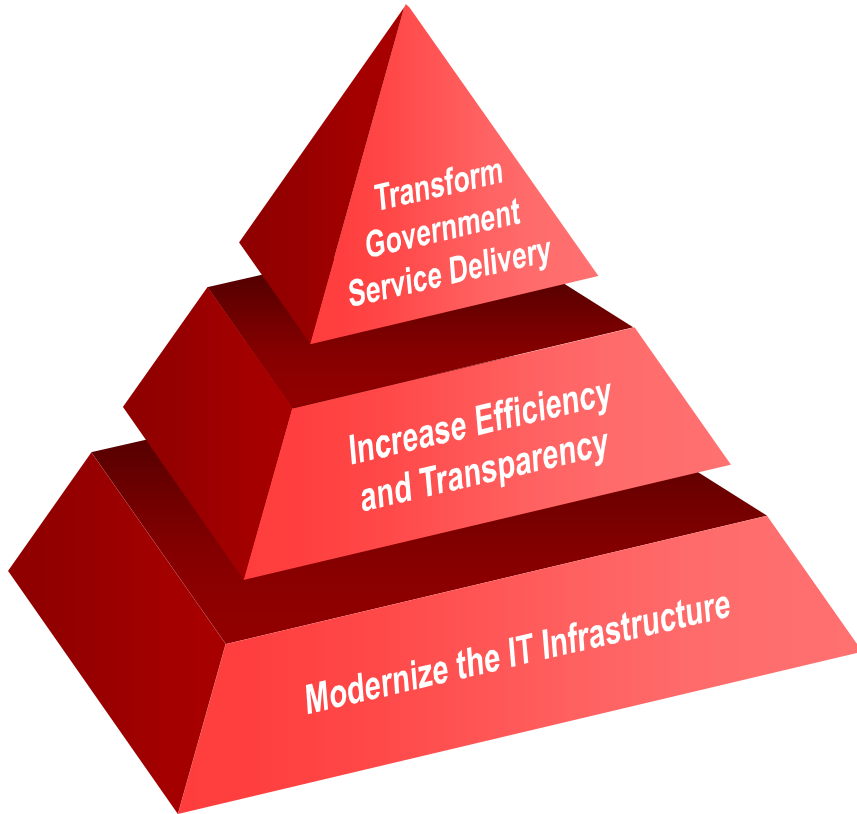
**Engr. (C.itp) Abdullahi Tijjani SULAIMAN, FNIEE, MNSE, FIMC, CMC**



# Presentation outline

- ▶ 1. What is a Smart City
- ▶ 2. What is eGovernment
- ▶ 3. e-Government Vision
- ▶ 4. Age of Cities
- ▶ 5. Advantages of Cities
- ▶ 6. 21<sup>st</sup> century Challenges faced by Cities
- ▶ 7. Key Government challenges
- ▶ 8. Smart City Concepts
- ▶ 9. 21<sup>st</sup> Century Global Smart Cities
- ▶ 10. Innovative Citizen Management and Interaction
- ▶ 11. Smart City Architecture Overvieww
- ▶ 12. Conclusion

# eGovernment Vision

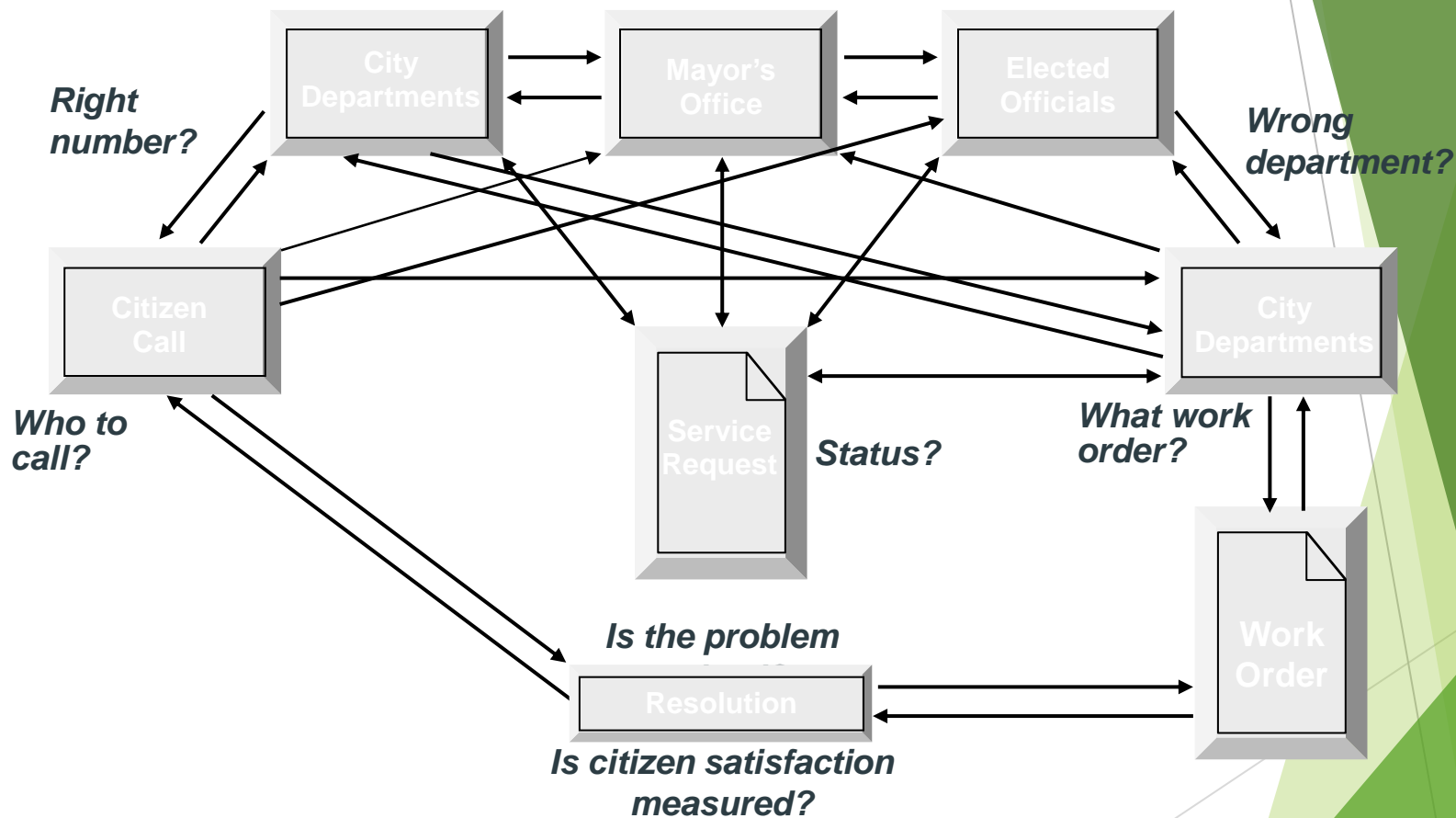


- Modernize the IT Infrastructure
  - Open Standards and Interoperability
  - Grid Computing and Virtualization
  - Migrate to SOA
  - Secure, Controlled Access
- Increase Efficiency & Transparency
  - Deliver Shared Services
  - Streamline Business Processes
  - Assure Governance, Risk and Compliance Controls
- Transform Government Service Delivery
  - Common Service Delivery Platform
  - Manage Master Data
  - Enable Self-Service
  - Embed Business Intelligence and Analytics
  - Automate Policy through Rules and Exception Handling Automation

# eGovernment Vision - Today's Government Service Delivery

Example: The City Hall Shuffle

## Citizens Bouncing between Departments



# The Age of the Megacity

## Megacities: 2021

### URBAN AREAS WITH MORE THAN 10 MILLION POPULATION

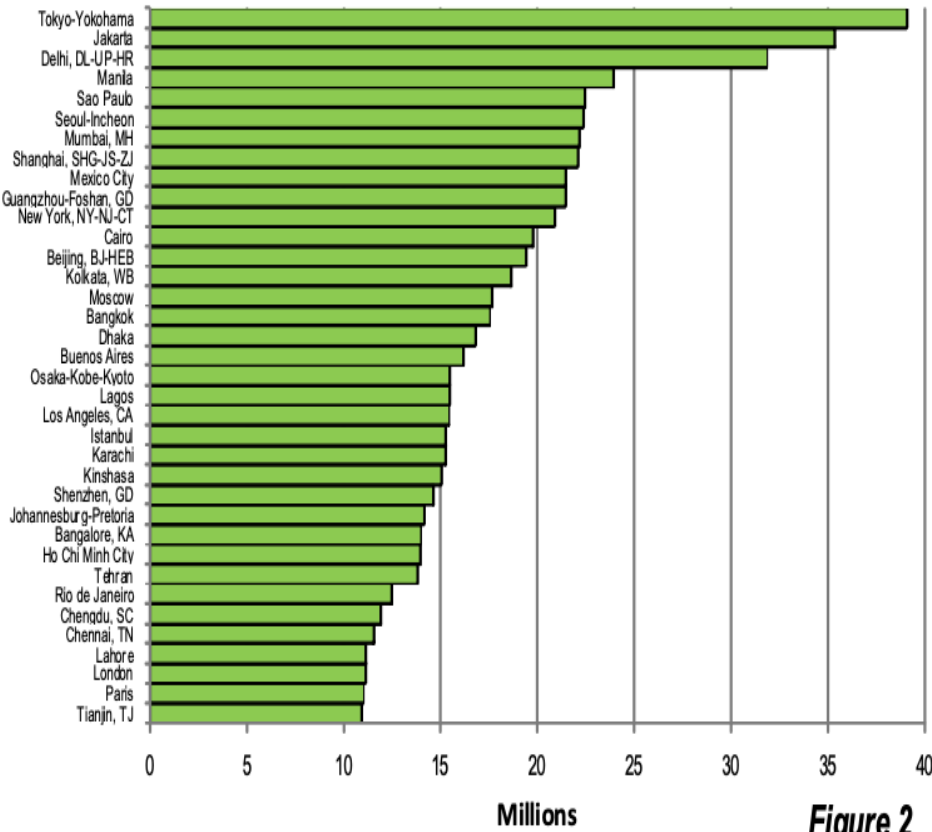
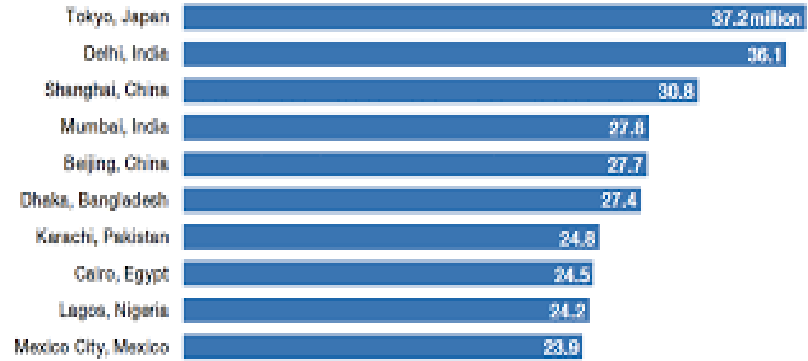


Figure 2

## These will be the world's biggest cities in 2030

Forecast population, in millions, according to the UN World Urbanization Prospects, 2014 revision



Source: UN World Urbanization Prospects, 2014 revision

## KEY TAKEAWAYS

- Over half the world's population is urban as of 2008, 2/3rds by 2050
- Over 790 cities in EMEA with at least 166K and 158 with 1 Million plus
- Europe/Middle East will be the worlds most urbanized populations by 2050

Source: United Nations Population Estimates

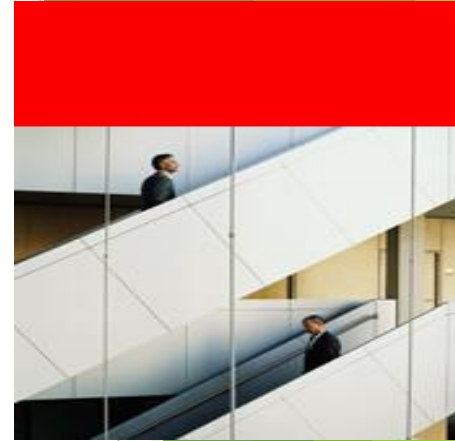
# The Advantages of Cities

- ▶ Economies of Scale
  - ▶ Safety
  - ▶ Education
  - ▶ Healthcare
  - ▶ Tax-base
  - ▶ Infrastructure  
(utilities, transportation, communications)
- ▶ Economic Growth & Innovation
  - ▶ Regional, national and global business magnets
  - ▶ National prestige
  - ▶ Pinnacle of civilization



# 21<sup>st</sup> Century Global Challenges Faced by Cities

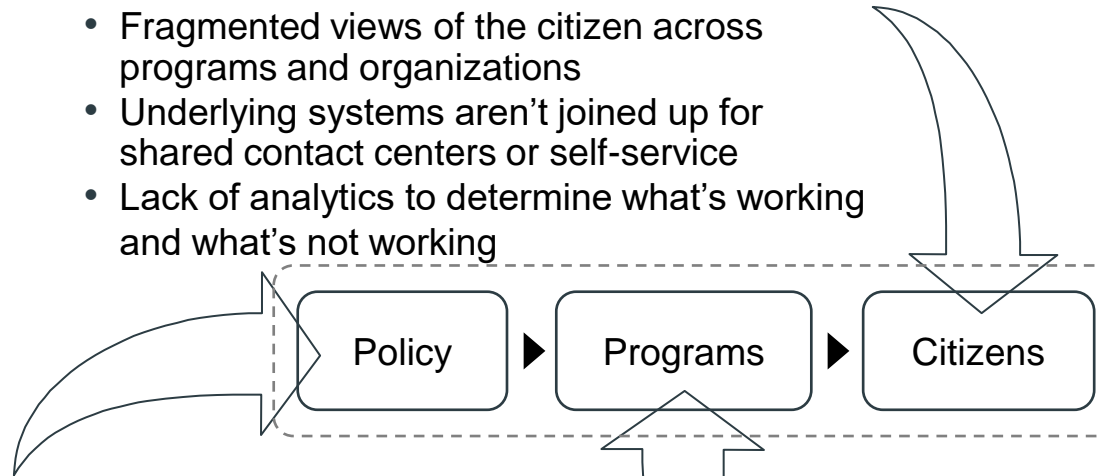
- Urban Poverty & Public Health
  - Social safety net, employment & housing development
  - Combating communicable diseases
- Global Warming
  - Smog & pollution
- Global Crime & Terrorism
  - Combating criminal gangs, terrorist cells
  - Stemming potential increases in crime during economic downturns
- Beating the Competition
  - Modernization and extension of infrastructure
  - Universal baseline K-12 education combined with merit-based higher-ED systems
  - Maintaining industry-specific competitive edge
- Making the City More than Livable



# Key Government Challenges

## Program gaps and overlaps deliver poor and inconsistent client outcomes

- Fragmented views of the citizen across programs and organizations
- Underlying systems aren't joined up for shared contact centers or self-service
- Lack of analytics to determine what's working and what's not working



## Inability to adapt to changing legislation and program policies

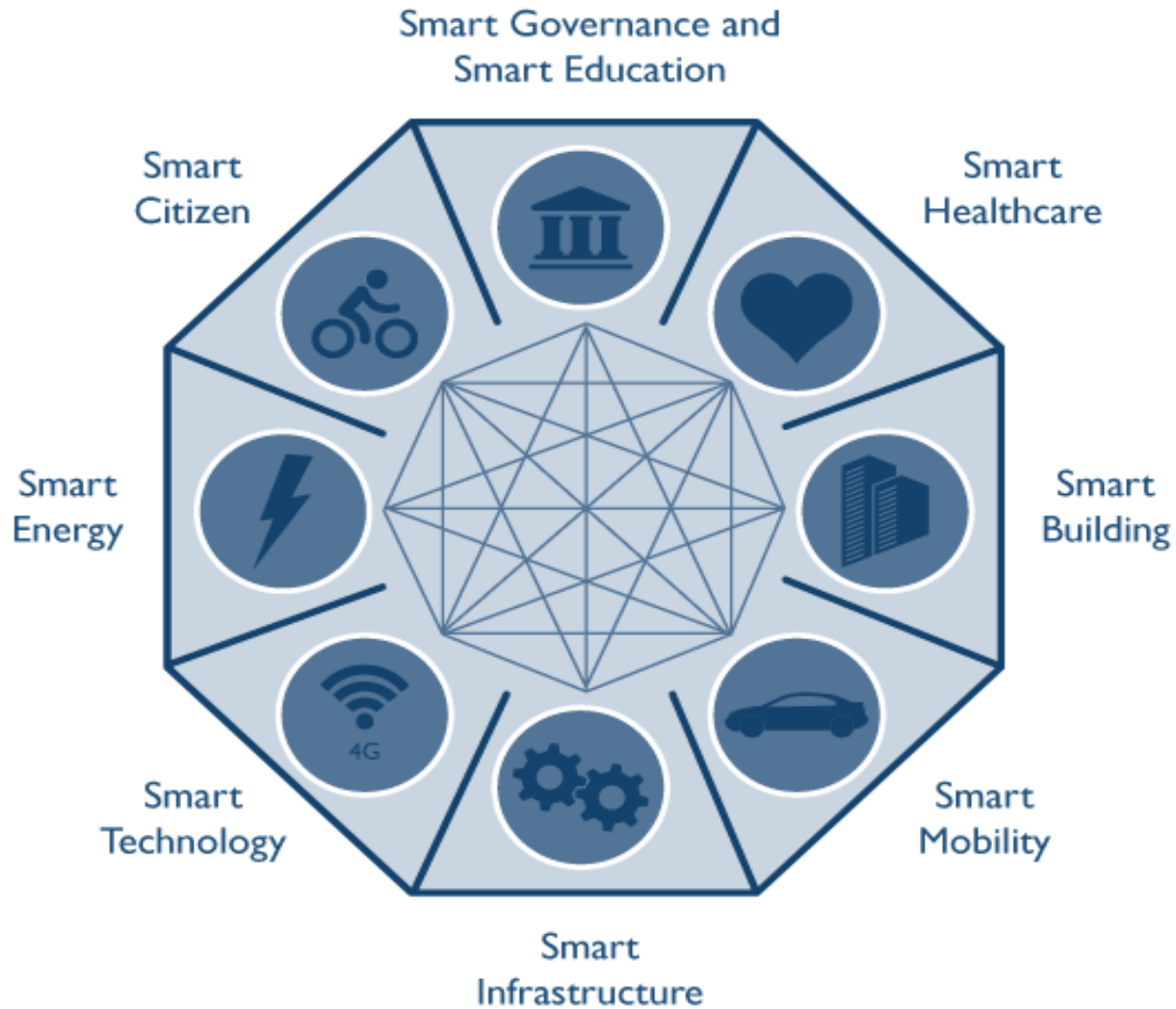
- Difficulty in translating legislative directives into program rules and operational process
- Inconsistent and undocumented eligibility decisions and responses to changes in client circumstances and retroactive payment adjustments
- Inability to gauge impact of proposed legislation, regulations, and policy changes of proposed amendments

## High administrative costs and slow responsiveness to change

- Skilled resources unable to leverage IT in a secure, role-based mobile fashion for their day-to-day workflow
- Multiple programs with duplicative resources and inflexible underlying proprietary systems preclude economies of scale
- Legacy platforms absorb 80% of IT budget, preventing IT from supporting program transformation

Source: Oracle Customer Experience and Oracle Research

# SMART CITY CONCEPTS



# 21<sup>st</sup> Century Global Smart City:

## Using IT to Drive Civil Livability and Economic Viability

- Citizens are securely and privately connected to their government, 24x7 through multiple channels
- Government planning, decisions and operations are transparent to citizens and across multiple departments and agencies
- Build and maintain infrastructure to attract and retain high-valued business, residents and tourist
- Modernized baseline, *integrated* public welfare systems: health, education, social safety nets, and establishment of key indicators to track continuous improvement
- Strive to make even the largest city “feel” like a structured set of small, safe, green communities

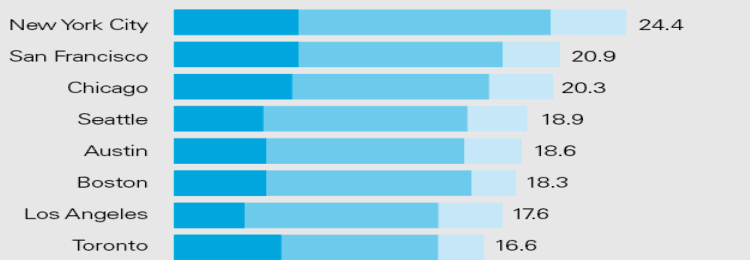
# Global Leaders with 21<sup>st</sup> Century Smart City Initiatives

**Cities in Europe, North America, China and East Asia have the most developed technology bases, while those in Latin America, Africa and India lag behind**

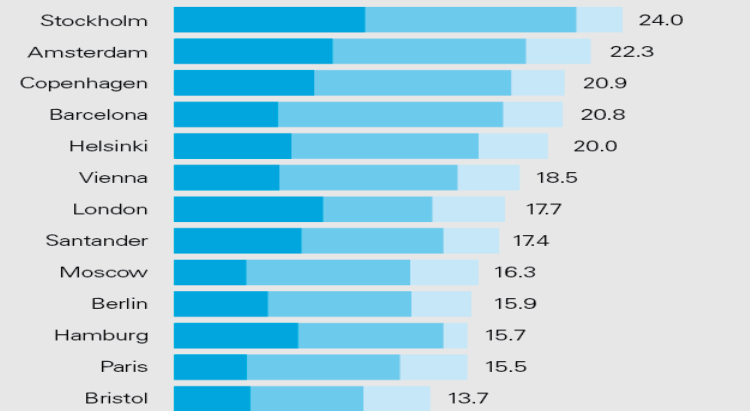
### Strength of smart city technology base

Maximum of 37 points

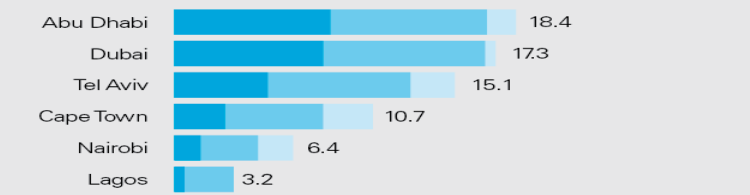
#### North America



#### Europe



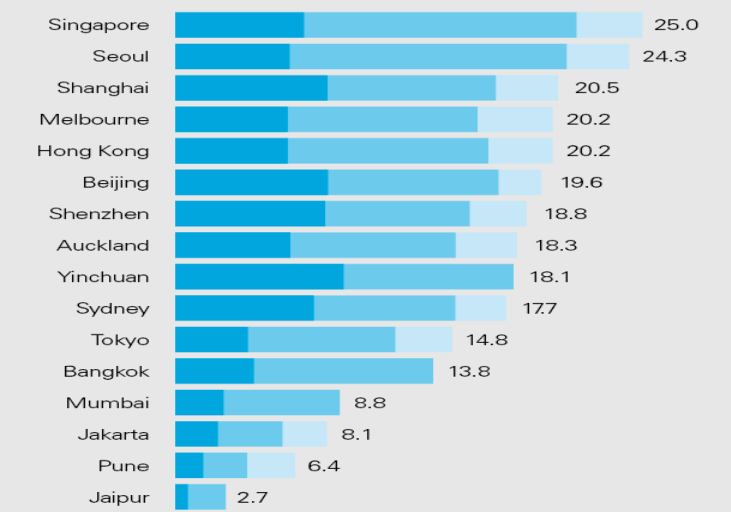
#### Middle East and Africa



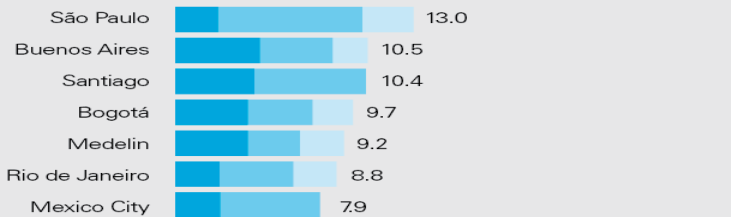
### Components of technology base

■ Sensor     
 ■ Communication     
 ■ Open data portal

#### Asia-Pacific



#### Latin America



Source: McKinsey Global Institute analysis

Note: Based on smart city deployment in 50 cities globally, assessed in three areas: the strength of technology base; the number and extent of applications implemented; and public awareness, usage and satisfaction with the applications

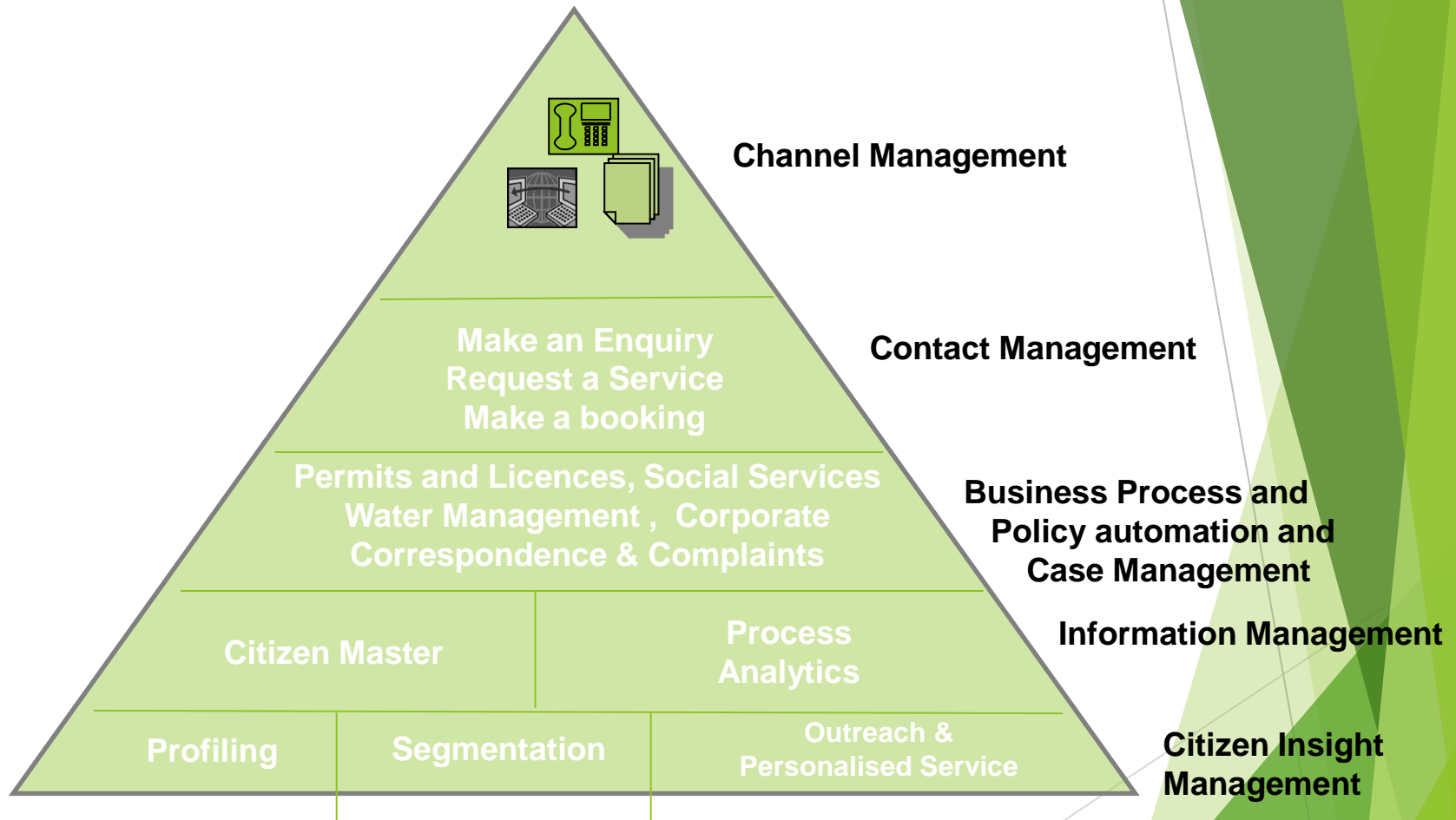


# Global Leaders in Smart City ICT: Hong Kong Digital 21 Initiative

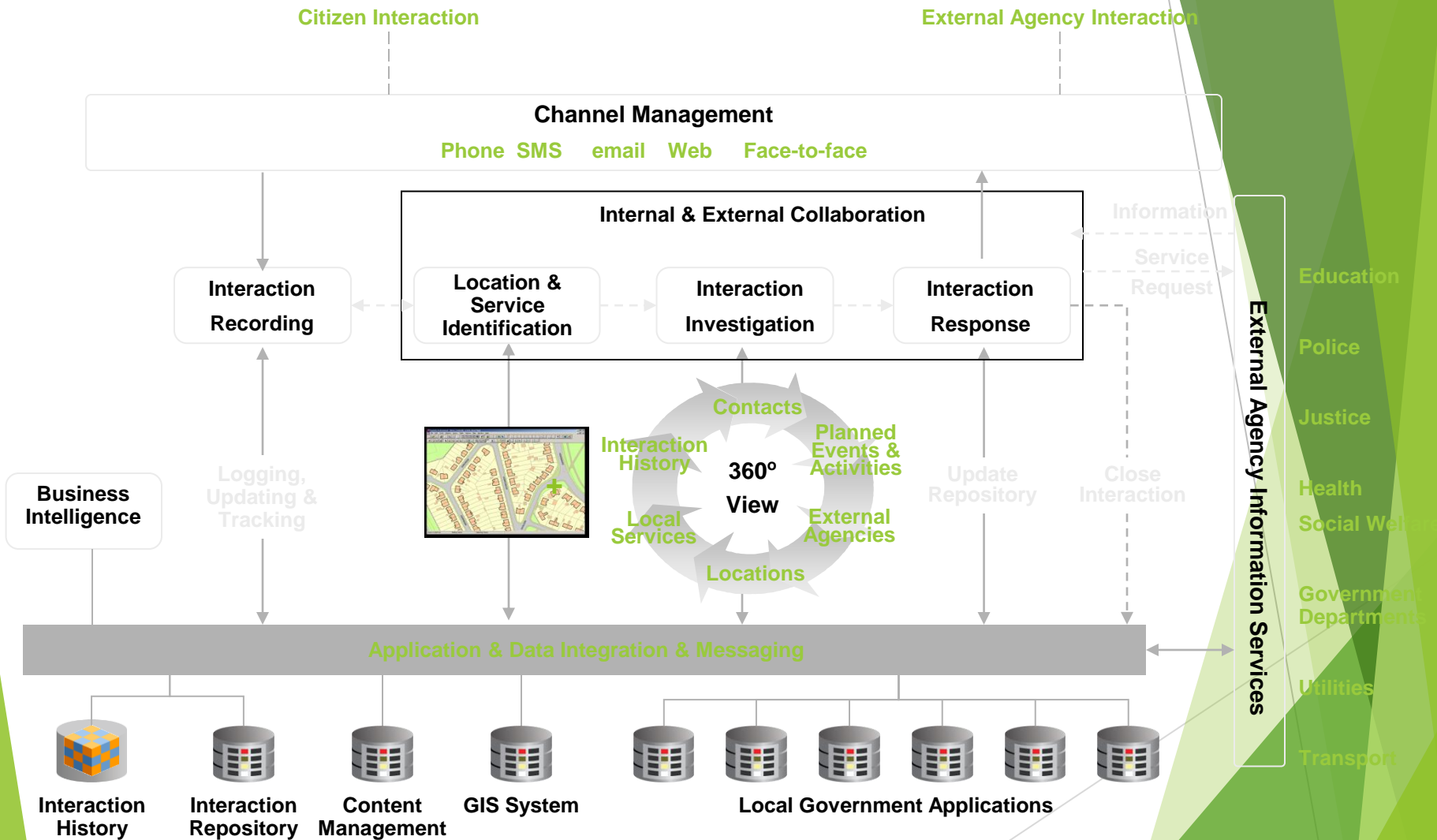
- Key areas of emphasis
  - Citizen-centric ICT-based services
  - Shared services across government departments
  - Technology, information and process interoperability across government departments
  - Economic development targeted at Hong Kong's key vertical industries: trade, ICT, tourism
  - Baseline public welfare with next-generation public services

Formulation of vision and strategic thrusts				
Review & Trends	<u>Latest technology development</u>		<u>Review of Hong Kong's current ICT development</u>	
SWOT analysis	Strength	Weakness	Opportunity	Threats
Vision	Smarter Hong Kong, Smarter Living			
Strategic Thrusts	<u>Empowering everyone through technology</u>	<u>Igniting business innovation through exploitation of technology</u>	<u>Supporting a thriving Hong Kong ICT industry and R&amp;D</u>	<u>Transforming and integrating public services through technology</u>

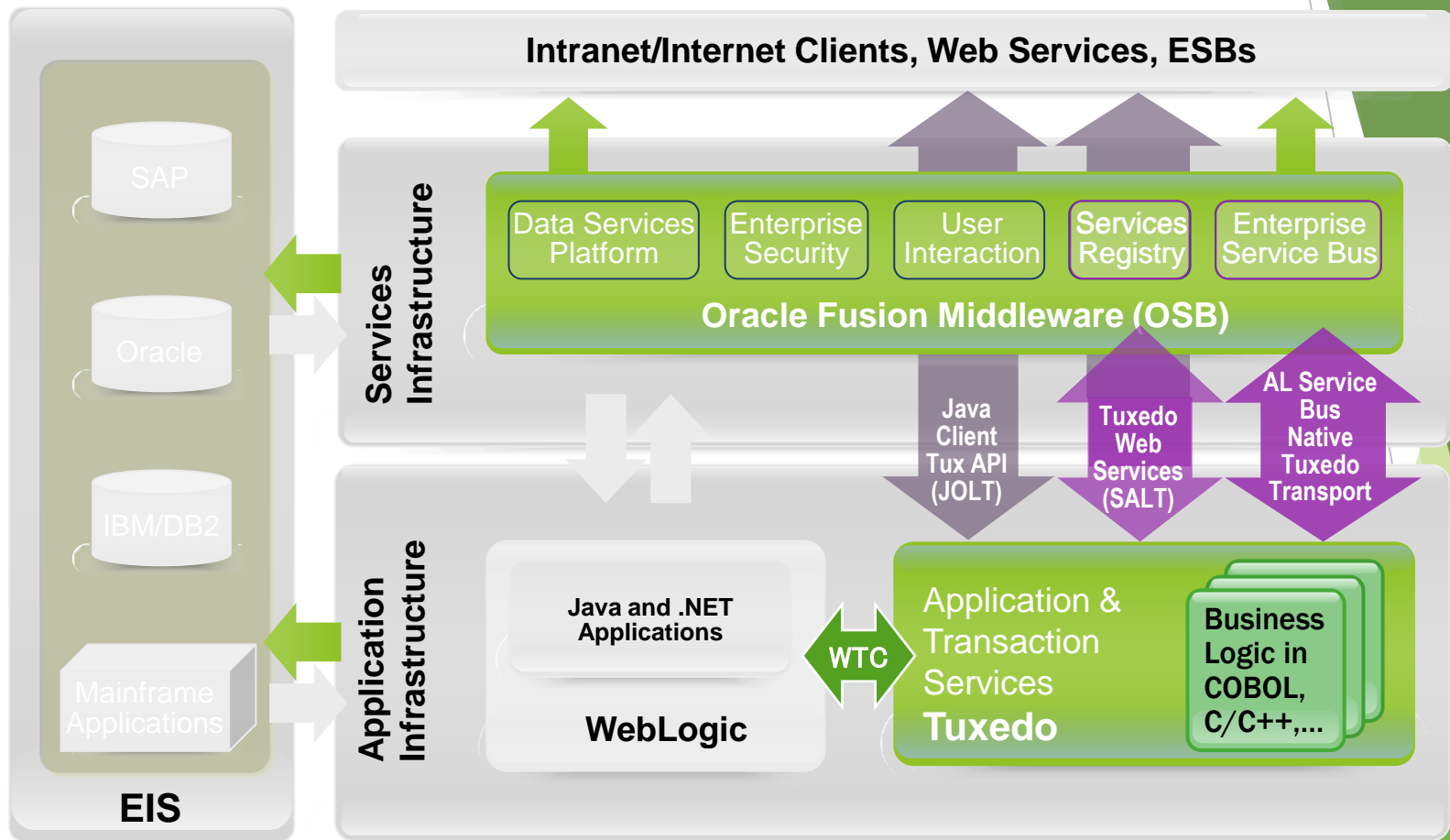
# Innovative Citizen Management and Interaction



# Smart City Architecture Overview

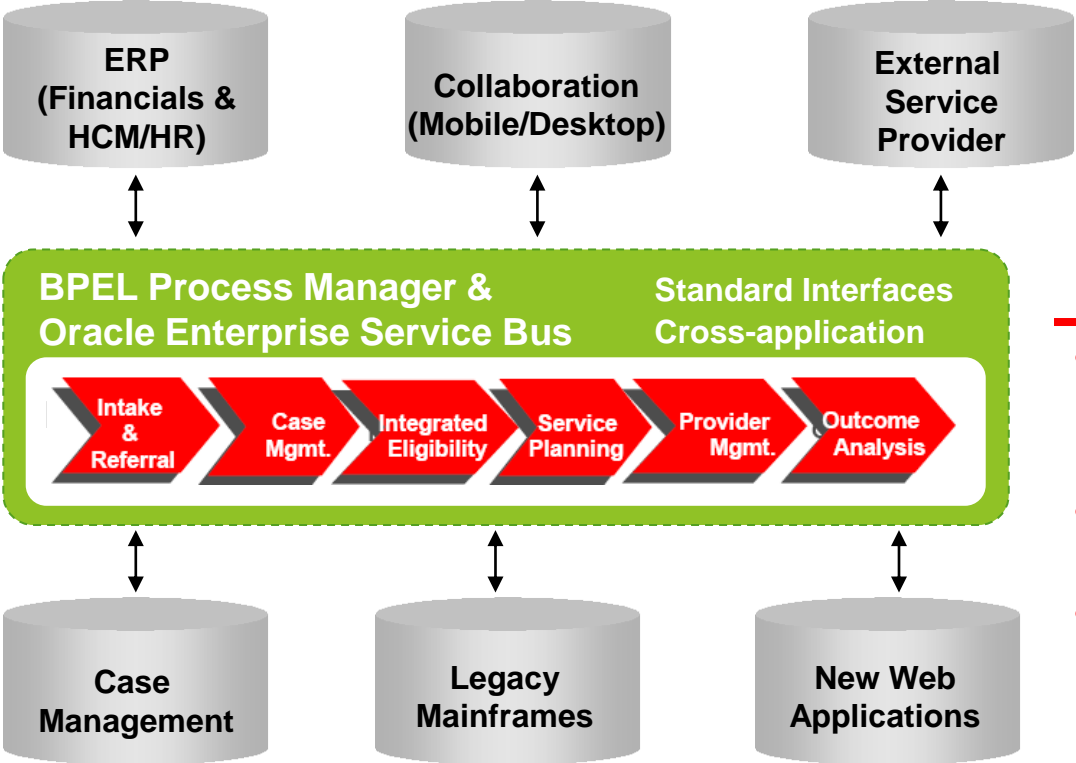


# Smart City Architecture Overview- SOA



# Smart City Architecture Overview

Process automation across 3rd party & legacy apps

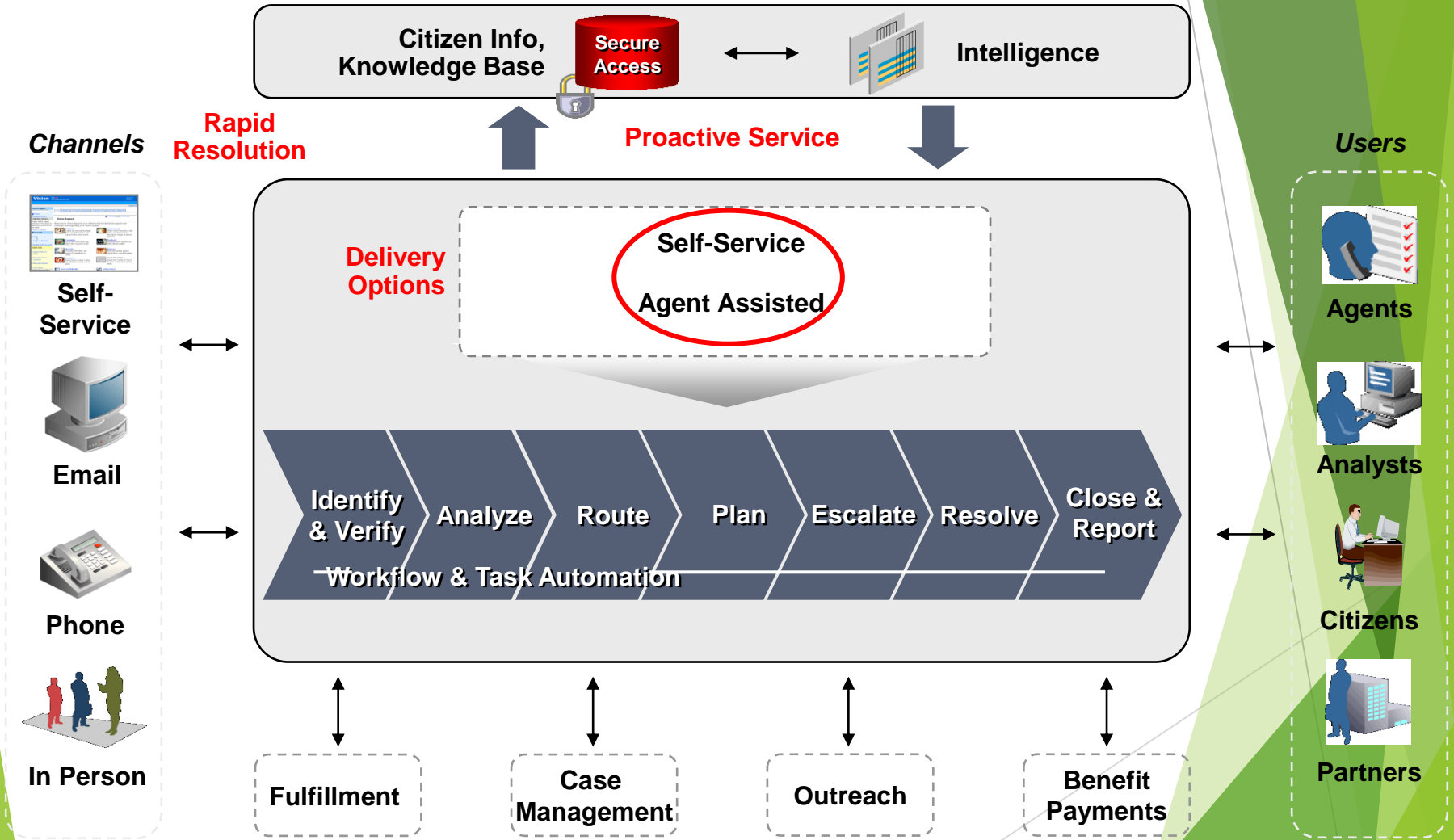


## KEY BENEFITS

- Quickly integrate heterogeneous applications using an intuitive, graphical UI
- Manage system performance via web with a user-friendly console
- Reduce connectivity headaches with pre-packaged, standard interfaces for applications and legacy systems
- Built on widely adopted industry standard language (BPEL)

# Smart City Architecture Overview- Using CRM to Transform Citizen Services

## Better and Consistent Service Access



# Smart City Architecture Overview - Business Intelligence Platform

## Flexibility, Extensibility, Standardization

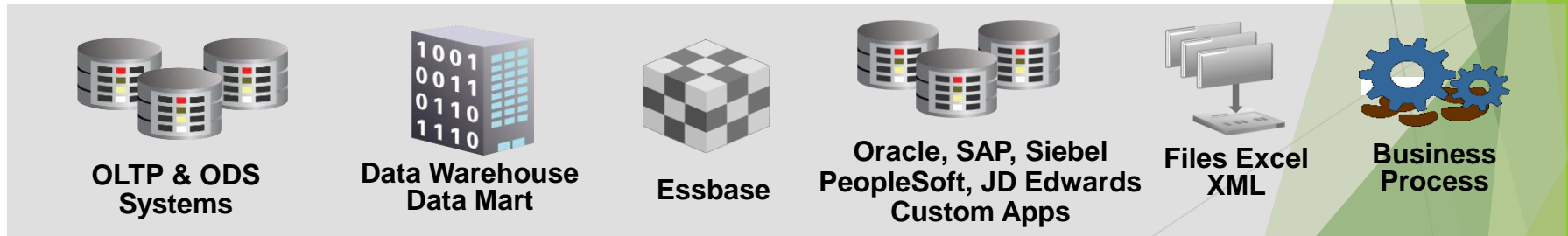


### Common Enterprise Information Model

Integrated Security, User Management, Personalization

Multidimensional Calculation and Integration Engine

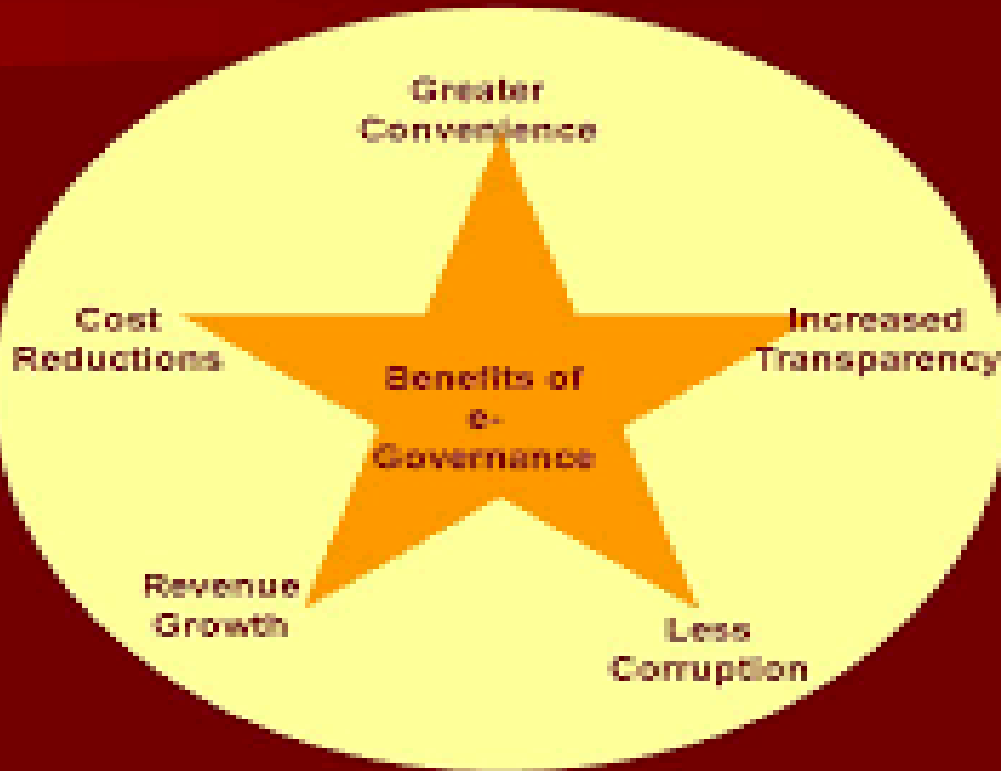
Intelligent Request Generation and Optimized Data Access Services



# CONCLUSION:

In Summary, Smart City Transformation Can Help in ALL Key Areas Required to Realize Your e-Government Vision

## Benefits of e-Governance



*Thank you For listening*