



Road to Intelligent Cities : Quezon City Experience

Speaker:

**Quezon City City Administrator
Michael Victor N. Alimurung**



Quezon City Profile



Overall Land Area

161.1 sq. km.



Total Population

More than 3 Million Residents



Legislation Districts

6 Districts, 142 Barangays



Legend:

- Road
- Highway
- Barangay Boundary
- District I
- District II
- District III
- District IV
- District V
- District VI



Quezon City is the largest urbanized city in the Philippines.



Why build Smart Cities?



Data Driven
Decision Making



Efficiency/
Effectiveness
of Service



Proper Allocation of
Limited Resources



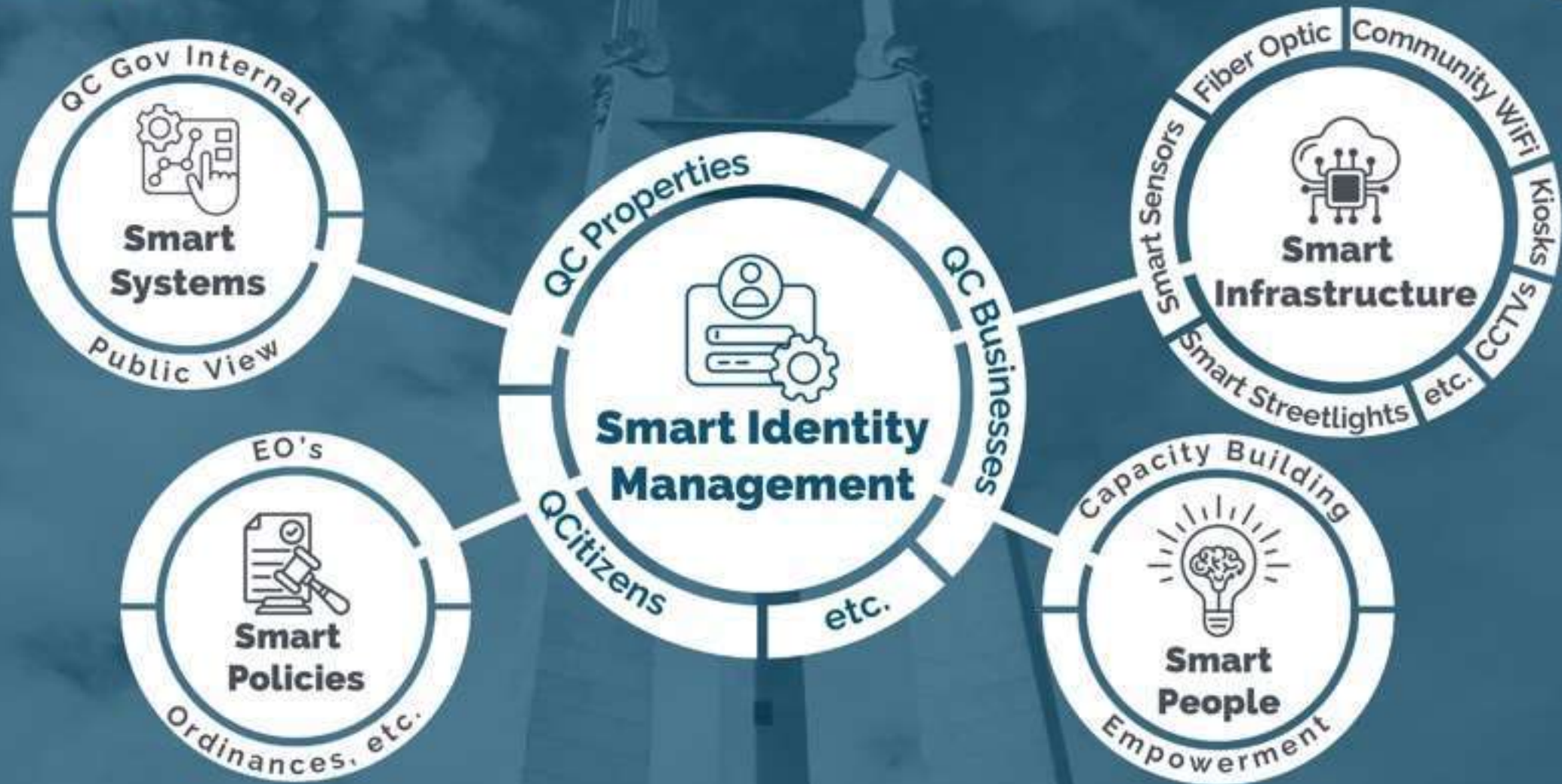
Quality of Life
Enhancements



*don't ask for anything we already know



How did QC implement?





What is Quezon City's Vision of eGovernance?



Accountability



eGovernance



**Information
Accessibility,
Availability**



Transparency



**Effective and
Efficient**



**Empowerment
/Participation**



Responsive



**Equity and
Inclusivity**



QC Experience

2019 : Nothing Online

**Where is QC now
vs 2019?**



Smart IDentity : QCID



Launched on JANUARY 2021
through City Ordinance SP-3041, S. 2021

The city's unified QCitizen ID has four types:

 **Regular Resident Card**

 **PWD Card**

 **Senior Citizen Card**

 **Non-Resident Card**



The **QCitizen ID** has become the heart and center of the city's services that leads into a better way of dispensing programs such as QC Bus, application for Alagang QC, Scholarship Program, Pangkabuhayang QC, among others.



QCID Dashboard



as of November 4, 2023



1,038,925

Total Approved Applications



QC Gov Internal



Smart Systems

Public Access





Key Elements of QC Smart Digital Systems



- All services available online using any device capable of accessing the internet (web-enabled)
- All services accessible via a single online platform (qceservices.quezoncity.gov.ph)
- The online platform is hosted on the cloud for reliability and scalability
- Access to the platform Uses single sign-on (email, Gmail, Facebook, Apple ID)
- The various services within the platform share data and updates via secure APIs (Application Programming Interface)
- Uses a robust server architecture that separates publicly accessible web servers from database servers, protecting data from unauthorized access
- Uses industry leading web application firewalls (WAF)
- Users are empowered to be responsible for their own personal data
- Data access is done through encrypted, tokenized sessions
- Conforms and complies with all applicable data privacy laws



Quezon City's Digitization and Automation



BEFORE		AFTER
Pen and Paper Application	→	Online Application
In-person, at City Hall	→	Virtual
Long lines, Sequential	→	No Lines, Simultaneous
Synchronous	→	Asynchronous
Slow, Red Tape	→	Efficient, Transparent
Fixers and Corruption	→	Ownership and Accountability
Siloed System	→	Integrated



23 Smart Online Public Systems Live (more to go live soon)



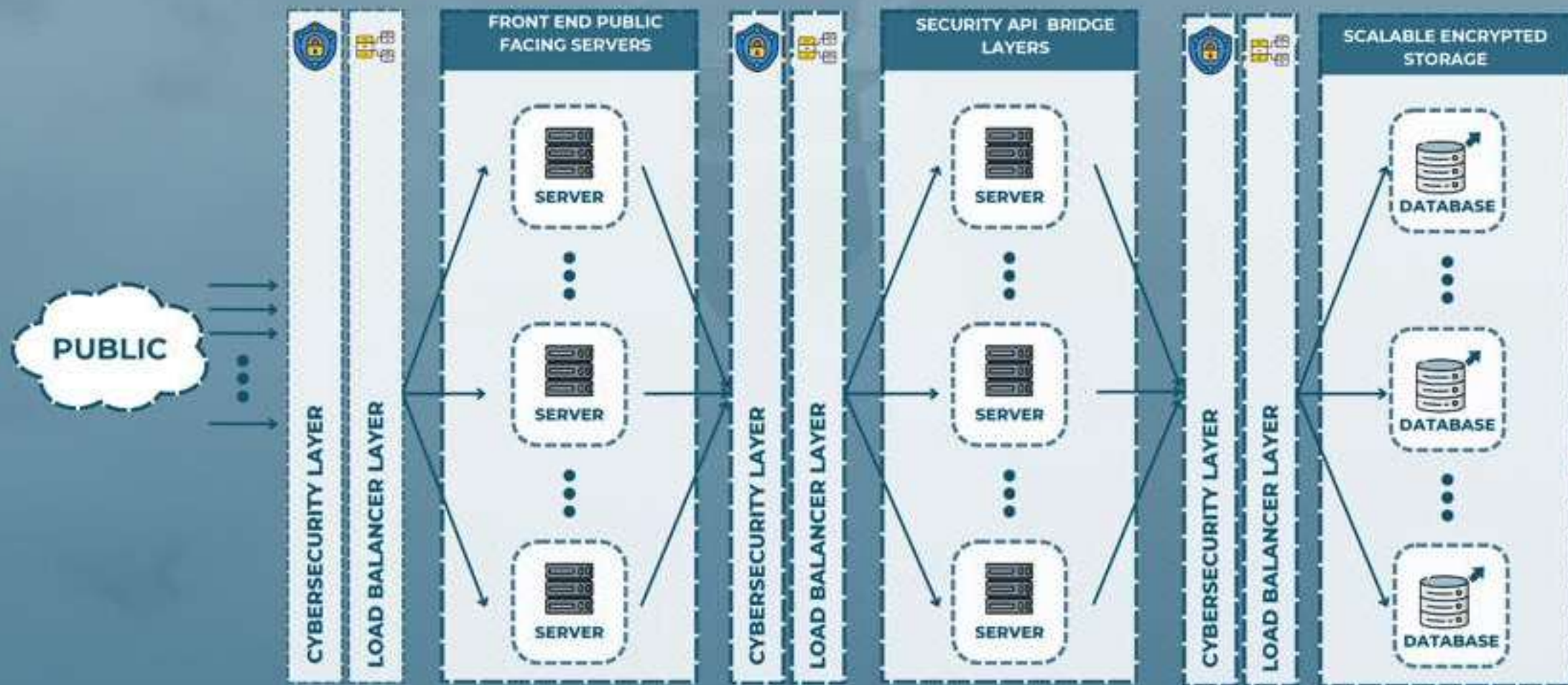


8 Smart Internal Systems Live (more to go live soon)





Digital Backbone Architecture





GIS Project : Involving 22 Offices



Office of the
City Assessor
(OCAS)



City Planning and
Development
Department (CPDD)



Department of the
Building Official
(DBO)



City Real Estate
Management and
Control Office
(CREMCO)



Zoning
Administration
Unit (ZAU)



General Services
Department (GSD)



Information
Technology and
Development
Department (ITDD)



Business Permits
and Licensing
Department
(BPLD)



Parks
Development and
Administration
Department



Task Force
Streetlight



Quezon City Health
Department
(QCHD)



Disaster Risk
Reduction and
Management
Council



Department of
Public Order and
Safety



Traffic and Transport
Management
Department (TTMD)



Climate Change and
Environmental
Sustainability
Department (CCESD)



Joy of Urban
Farming



Department of
Sanitation and
Cleanup Works of
Quezon City (DSOC)



Quezon City
Department of
Engineering
(QCDE)



Housing Community
Development and
Resettlement
Department (HCDRD)



City Architect's
Department



Schools
Division Office



Quezon City
Public Library



GIS Project: Some Practical Implementations



1. OFFICE OF THE CITY ASSESSOR

- Parcel Management
- Enhanced Tax Mapping Projects

2. DEPARTMENT OF BUILDING OFFICIAL

- Building Footprints

3. ENGINEERING DEPARTMENT

- Infrastructure Projects

4. BUSINESS PERMIT AND LICENSING DEPARTMENT

- Business Permits

5. DEPARTMENT OF RISK REDUCTION MANAGEMENT OFFICE

- Emergency Response, Scenario Planning

6. PARKS DEVELOPMENT ADMINISTRATION DEPARTMENT

- Beautification of Parks and Playgrounds
- Inventory of Trees



GIS Internal View



CAO Statistical Dashboard

Quezon City Unified Geographical Information System

Select Assessment District: 41

Parcels for Residential Subclass

District	Count
Ra-1	1,685
Ra-2	11,254
Ra-3	65,895
Ra-4	88,172
Ra-5	88,124
Ra-6	10,228

As of SEPTEMBER 2022

TAXABLE Parcel Distribution per District

District	Count
Dist 21 - 89,409	89,409
Dist 26 - 46,915	46,915
Dist 18 - 34,168	34,168
Dist 19 - 31,802	31,802
Dist 17 - 14,524	14,524
Other - 11,244	11,244

As of SEPTEMBER 2022

Parcels for Commercial Subclass

District	Count
Ca-1	128
Ca-2	219
Ca-3	1,022
Ca-4	6,362
Ca-5	3,907
Ca-6	3,471

As of SEPTEMBER 2022

EXEMPTED Parcel Distribution per District

District	Count
Dist 18 - 245	245
Dist 26 - 268	268
Dist 21 - 268	268
Dist 03 - 103	103
Dist 12 - 142	142
Other - 910	910

As of SEPTEMBER 2022

Parcels for Industrial Subclass

District	Count
Ia-2	180
Ia-3	18
Ia-4	694

As of SEPTEMBER 2022

Total Number of Parcels

314,485

As of SEPTEMBER 2022

Barangay

- Alicia
- Antihan
- Agulero-Sanson
- Bansa
- Bagong
- Bagong Lipunan ng Crime
- Bagong Pag-asa
- Bagong Silangan

CITY ASSESSOR'S OFFICE

Quality Policy Statement

"We are committed to provide Quality Service through efficient, effective and people-centered governance that includes continuing organizational and sustainable urban development."

Parcels

City Code: 114
District Code: 09
Barangay Code: 021
Section Code: 007
Parcel No: 010
PIN: 11429021007010
Barangay: CENTRAL
Street:
Address:
Lot No: 17
Block No: 117
Survey No: (SRCPSD-63867)
Tax Code: 8
Subclass: Ca-5



GIS Public View



QCTIZEN REAL PROPERTY VIEWER DEMO

TUESDAY, MAY 16 2023, 03:35:18 PM

QCE SERVICES BETA VERSION

Logged in as: SHERRY-ANN BOBROMEO








- SEARCH CENTER
- BARANGAY HALL
- COLLEGE
- HIGH SCHOOL
- ELEMENTARY SCHOOL
- HOSPITAL
- POLICE STATION
- MARKET
- FIRE STATION

esri





Smart Infrastructure

 FIBER OPTION	None	→	200KM ONGOING
 CCTV	400 known but only 50 working	→	1331 INSTALLED
 COMMUNITY WIFI	None	→	QC WIFI 4000 APS SITES
 KIOSKS	None	→	70
 STREETLIGHTS	SMART STREETLIGHTING PROJECT		
 SENSORS	MONITORING SYSTEM	20 AIR QUALITY SENSORS	6 AUTOMATED WEATHER STATIONS
 LAPTOPS, TABLETS	300,000++ TABLETS FOR STUDENTS		6,500++ LAPTOPS FOR TEACHERS

EO's, Policies



**Smart
Policies**

Ordinances, etc.





Sample Policies



ORDINANCES



QCID
Ordinance



Scholarship
Ordinance



Alagang QC
Ordinance



Social
Welfare
Ordinance



Pangkabuhayan
QC Ordinance

EXECUTIVE ORDERS



Creating
CART EODB



Quezon City
Strategic HR Unit



Cyber Security

Capacity Building



**Smart
People**

Empowerment





Reminder



**Data Driven
Decision Making**



**Efficiency/
Effectiveness
of Service**



**Proper Allocation of
Limited Resources**



**Quality of Life
Enhancements**

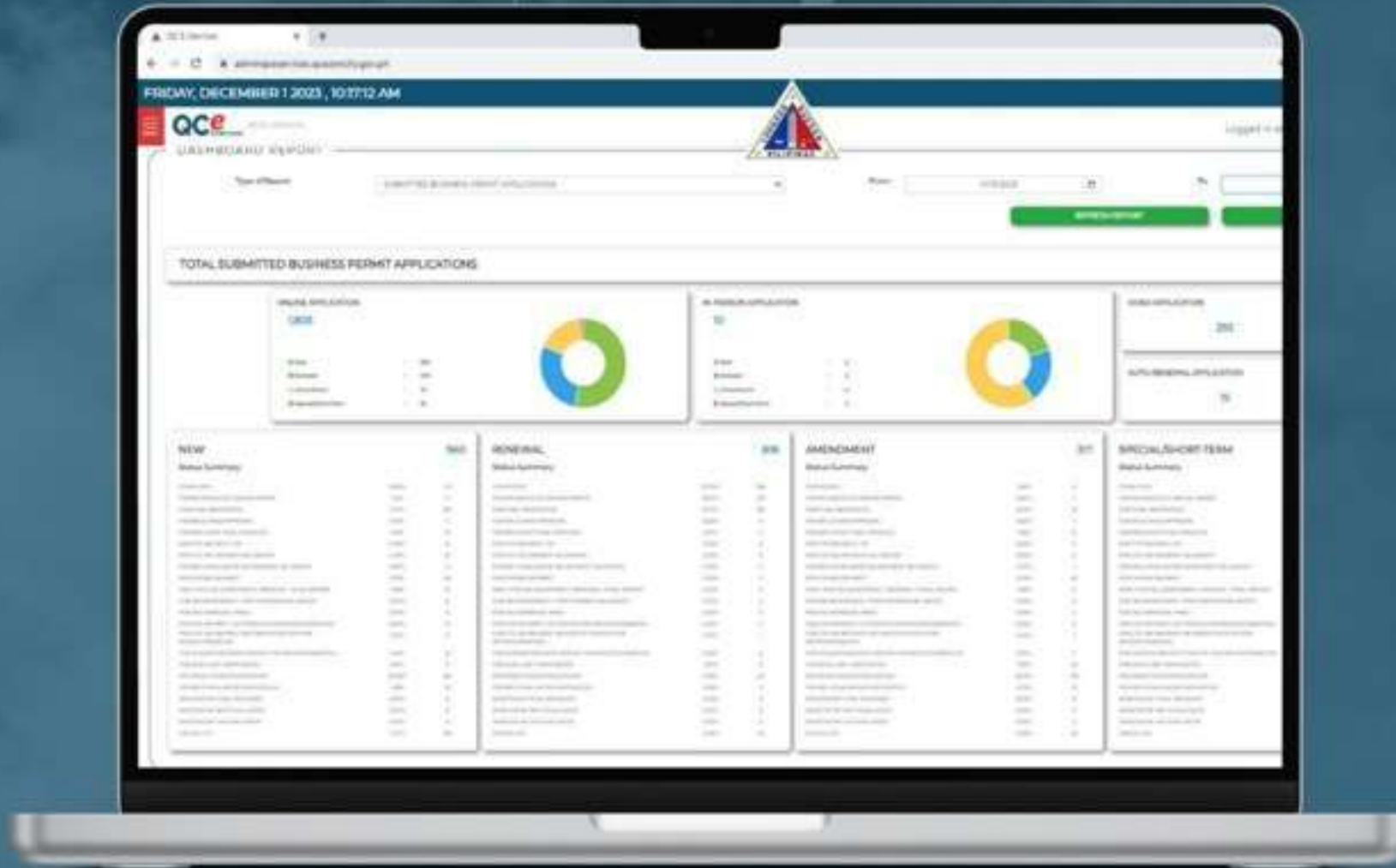


Smart City

***don't ask for anything we already know**



QC's BPLD System





QC's Hospital Info System



QC-HIS Dashboard (July – to date)

Summary Numbers

165,014

Registered Patients

215,889

Total Visits

237,761

Total Consults

Registered Patients Patient Visits

91

Number of Sites

Number of Sites



Count

2,983

Registered QC IDs

Gender and Age Bracket Summary

Totals from the Patient Database

Gender Distribution (Pie Chart)



64,694

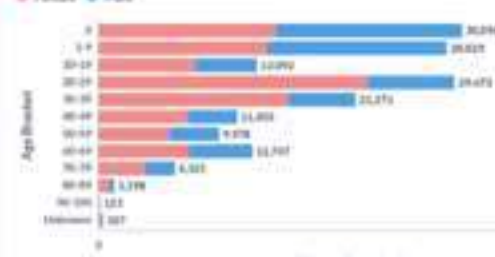
Males

100.3k

Females

Age Bracket & Gender Counts

Female Male



Patient Count by Gender



QC's HR System





RESULTS & AWARDS



Sample Results

23

ONLINE SYSTEMS

14

ONLINE SERVICES ACCEPTING E-PAYMENTS

NEARLY

0

QUEUES

IN LIVE SERVICE SYSTEMS



Scholars and Pangakabuhayan no longer *"palakasan"* based



Automated Business Permit Physical Copy Delivery



The **First in the country** for Automated Business Inspection Tool



Patient Records available in all **90+ health centers and clinics**



Sample Results

100

SEMINARS CONDUCTED

BY THE HR LEARNING AND DEVELOPMENT SYSTEM



Occupational Permit now issues in **minutes online vs days before**

15K

REGISTERED USERS

ON THE HR LEARNING AND DEVELOPMENT SYSTEM



QC Library from **2077 library cards to effectively 1M Library Cards** (Online QC library soon)



SSDD SERVICES ARE NOW DIGITAL



OF BUSINESS OWNERS PROCESS PERMIT APPLICATIONS ONLINE



OF QC EMPLOYEES ARE REGISTERED INTO LEARNING AND DEV SYSTEM



Sample Awards



LOCAL AWARDS RECEIVED

Unqualified COA Opinion (2020-2022)

Seal of Local Good Governance (2021-2023)

Most Competitive City 2021-2023

Government Best Practices Recognition (2023)

Digital Governance Award G2B Category (2022)



INTERNATIONAL AWARDS RECEIVED

Stevies Gold Award for Innovation in Government Publications
(July 2021; Made in QC)

Global Smart Award : Best Practice of Innovative Technology

IDC Future of Enterprise Award (2022)





Challenges



**People Technical
Capabilities**
(Internal, Public)



Budget
(per Capita)



**Finding the
right partners**



**Actual Processes:
Exceptions Bound**



Scope Creep
(almost always expands)



Service vs. Revenue



Challenges



**Leadership
Matters**



**People Dependent
(Integrity)**



What is next for QC?



What's Next

Comprehensive Digitization of QC Documents



Online Systems Coming Soon:

- CSO
- QC Public Library
- QC Pet Registration and Adoption System



More of Everything Online

- Paperless QC Government
- Zero Physical Queues
- 100% Online Payments
- Online Validation of Public Documents
- Industry & Tourism Maps



Expand and Strengthen

- SMART Systems
- SMART Infrastructure
- SMART Policies
- SMART People





QCID Merchant



Possible Programs and Benefits



PRIVILEGE CARD

- access to courtesy lanes and pay facilities or priority queue to special events
- benefits on birthday and city's special occasion



DISCOUNT CARD

- outright discount
- freebies or upsize of products



PREFERRED SERVICE

- Additional premium perks to card holders



LOYALTY CARD

- card holder can earn points on purchases for future rewards



QCID AS PRIMARY IDENTIFICATION CARD

- for client verification
- Bank account opening
- automatic enrollment to specific programs



**END
THANK YOU**

Sa QC, Kasama ka sa Pag-unlad