



Understanding the Challenges in Metro Cebu:

The Metro Cebu Development and Coordinating Board Experience

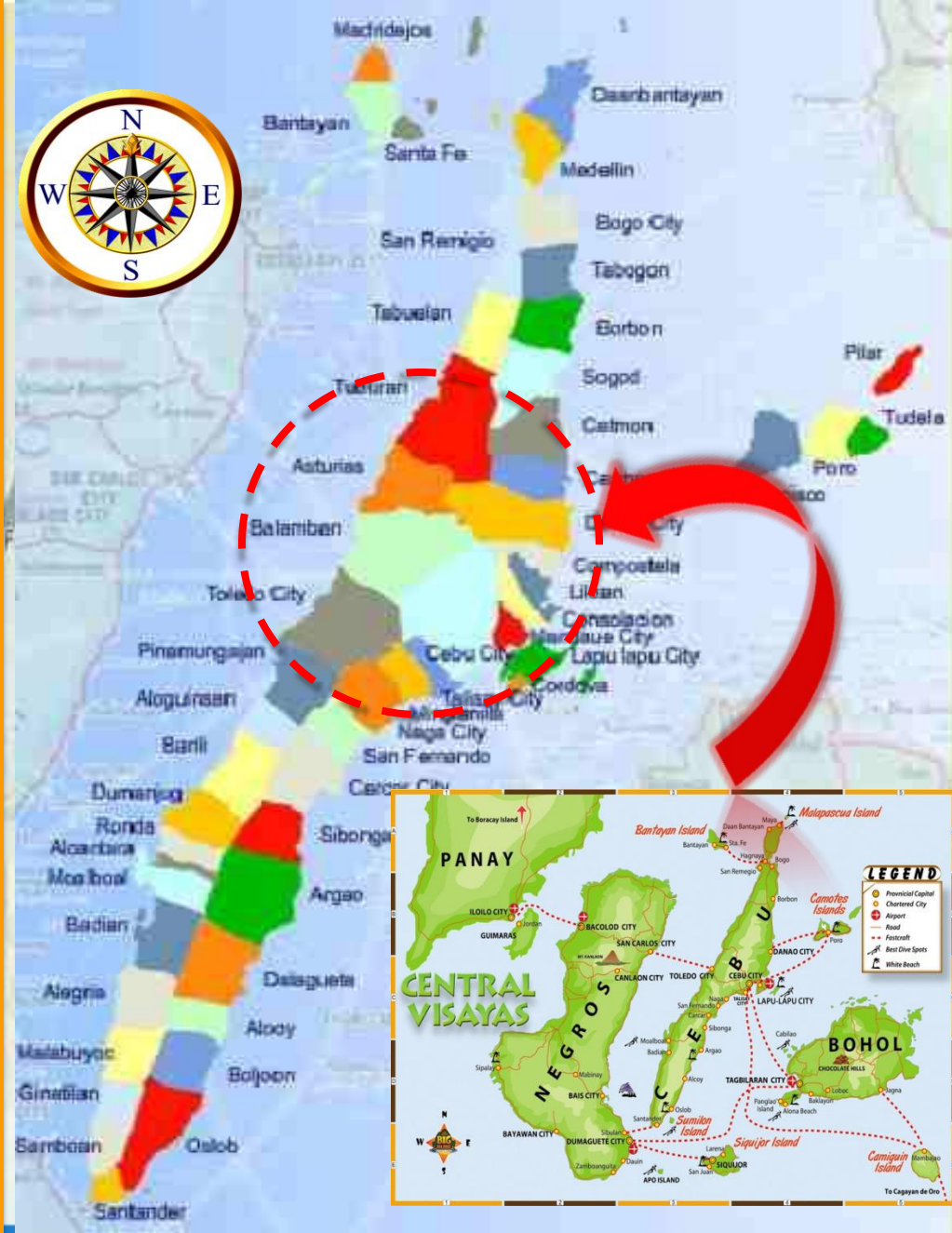
March 13, 2017



CEBU, PHILIPPINES

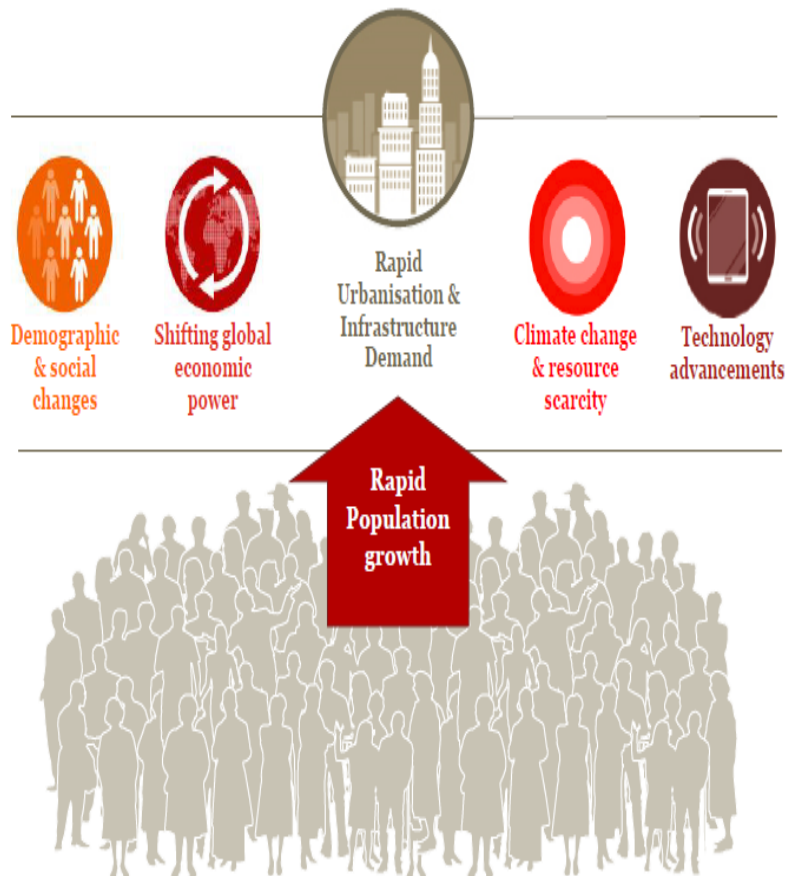
- ❖ Founded in August 6, 1569
- ❖ Island in Central Visayas
- ❖ 9 Cities & 45 Municipalities
- ❖ Capital: City of Cebu
- ❖ 365 miles south of Manila
- ❖ Population: 4.13 Million (2010)

QUALITY OF LIFE FOR ALL

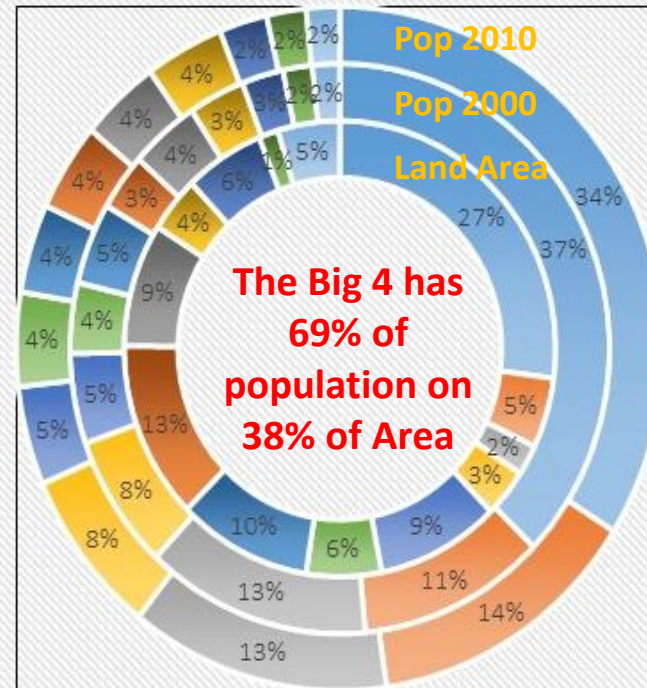


Megatrends

Direct impact now to our urban areas



PwC



- Cebu City
- Lapu-Lapu City
- Mandaue City
- Talisay City
- Danao City
- Minglanilla
- Carcar City
- Consolacion
- Naga City
- Liloan
- San Fernando
- Cordova
- Compostela

2.5 million persons in 2010
growing at 3.3% p.a. vs 1.4% for the country

“Cities have difficulties in abundance, because they have people in abundance.”

Jane Jacobs, Urban Activist

The Rise of the City: Urbanisation by numbers

Over **80 %**
of global GDP
is generated in
cities

93% of urban
population
growth will take
place in
developing
countries

Over **70 %**
of global
greenhouse
gas emissions
come from
cities

1.4 million
people move to
cities each week –
55% of people now
live in cities

Over **75%** of
the global
urban
population live
in developing
countries

Over **\$50
trillion** of
investment is
needed in urban
infrastructure by
2050

More than
30% of
global city
dwellers live
in slums



PwC

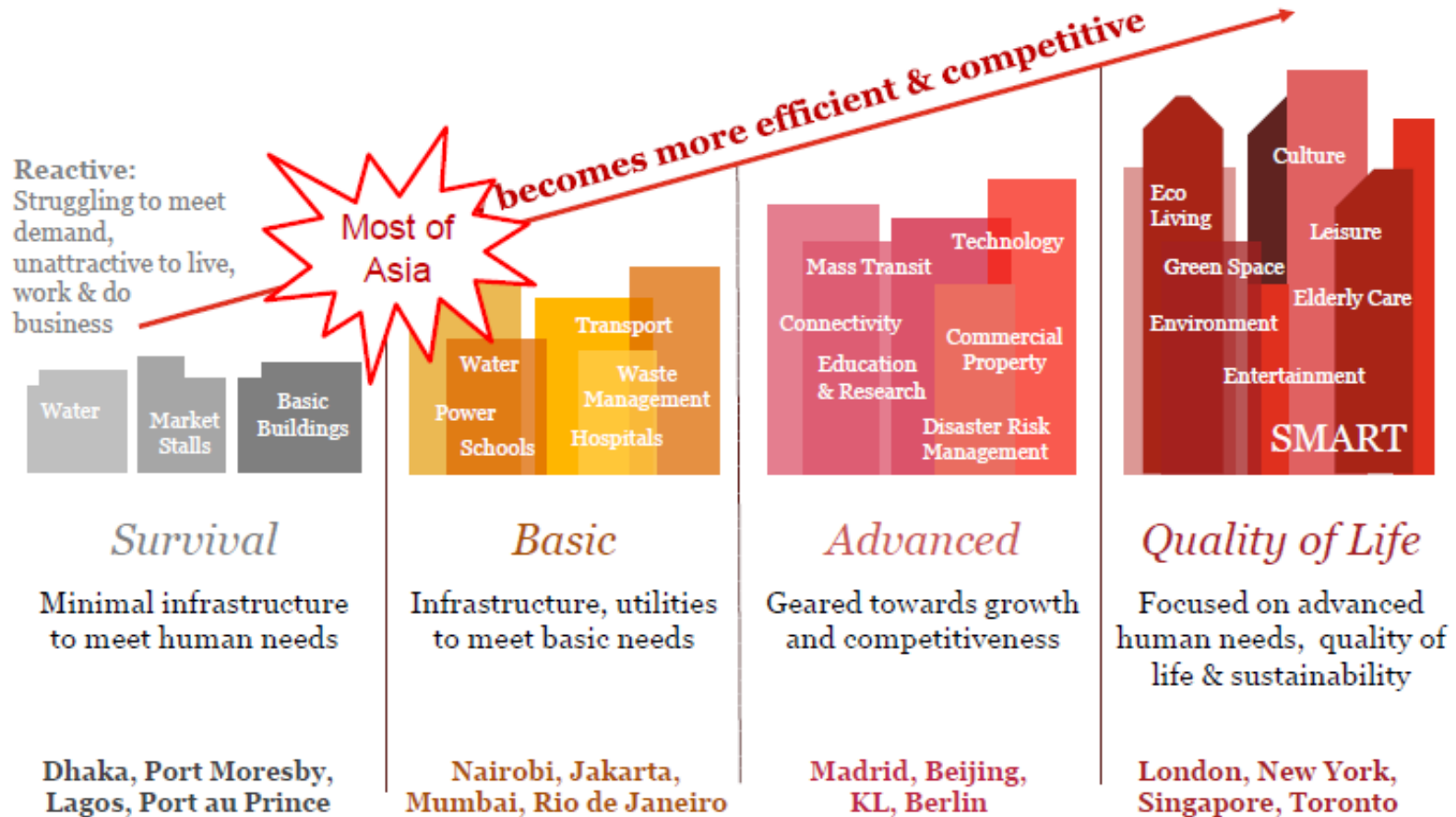
The future of our civilization will be decided in the cities. WGBU, The Urban Planet.

But, not all cities are created equal

The Urban Maturity Curve: Where are you?

Knowing where you are now...
provides a better understanding of the pathway for
tomorrow's growth

Proactive:
Advance planning, a
more attractive city
to live, work and do
business



These are the attributes of cities that matter... which ones matter to you?



Accessibility & mobility

- Urban planning
- Accessibility
- Transportation



Economic

- Economic development
- Innovation
- Investment climate
- Ease of doing business



Infrastructure

- Power/Energy Usage
- Water Management
- Waste Management
- Smart Buildings
- Critical Infrastructure Resilience



Institutional

- E-government Services
- City Service Center



Cultural & leisure

- Tourism
- Leisure venues management
- Cultural venues management



Environmental

- Environmental resource management
- Green areas and ecological preservation



Social

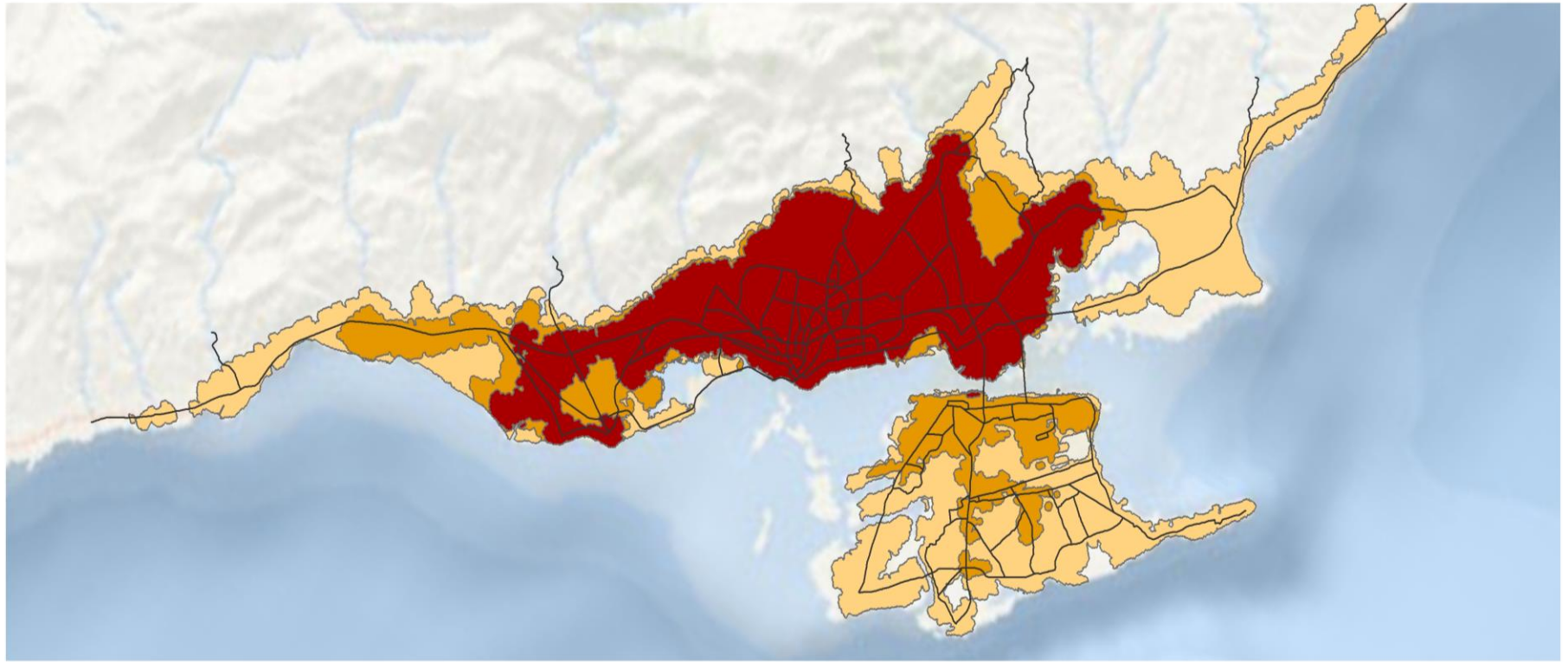
- Health & wellbeing
- Safety & security
- Social integration & cohesion



Knowledge & intellectual

- Education
- Intellectual and human development





Cebu City, Philippines 1993-2014

0 3 6 9 12 km



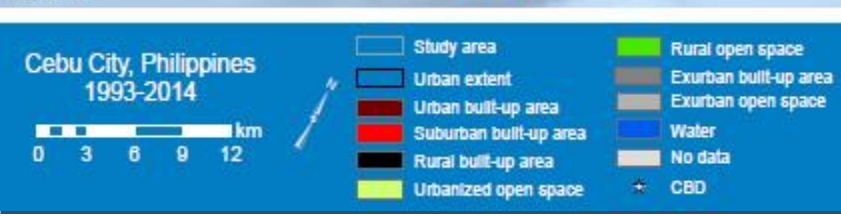
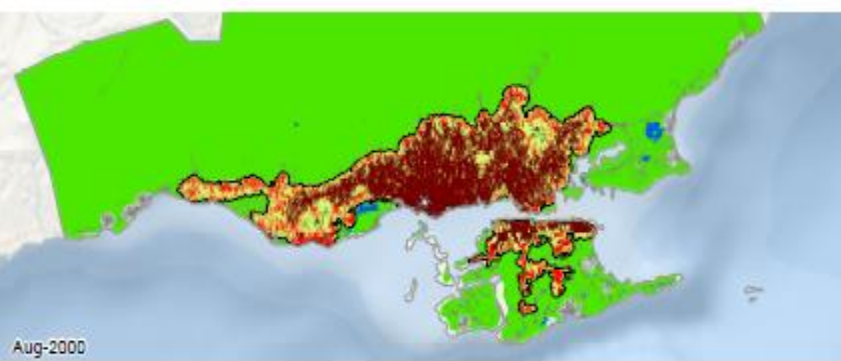
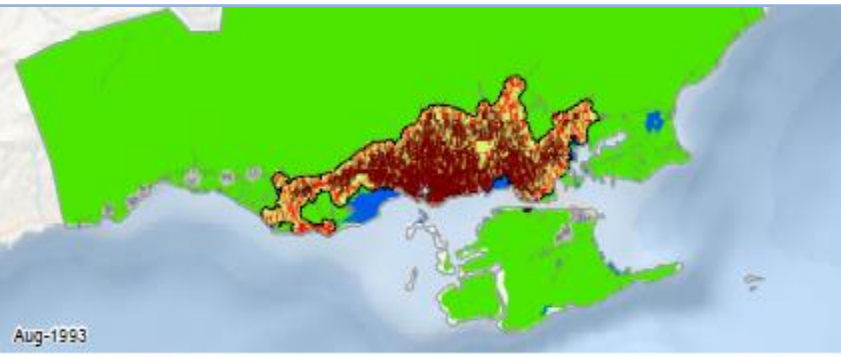
Urban Extent in 1993

Expansion, 1993 - 2000

Expansion, 2000 - 2014

Arterial Roads

Atlas of Urban Expansion (Angel, S. 2016; UN Habitat)



Cebu City, Philippines (Southeast Asia)



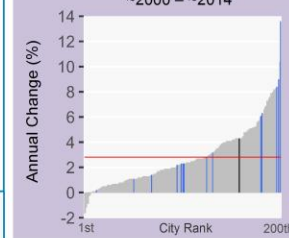
Legend for Charts

Cebu City | Other cities in region | All other cities | Global average

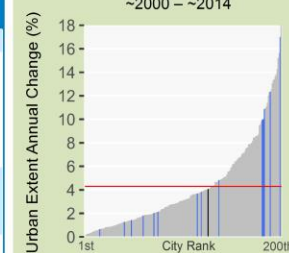
Metrics	Aug 1993	Aug 2000	Feb 2014	% Annual Change ('00-'14)
Population	942,998	1,338,322	2,391,838	4.3
Built-up Area (Hectares)				
Total	4,648	6,685	12,462	4.6
Urban	3,525	4,834	9,488	5.0
Suburban	1,042	1,698	2,828	3.8
Rural	81	153	145	-0.4
Open space (Hectares)				
Urbanized Open Space	2,679	4,200	6,395	3.1
Urban Extent	7,328	10,886	18,858	4.1
Density (Persons / Hectare)				
Built-up Area Density	202.8	200.2	191.9	-0.3
Urban Extent Density	128.7	122.9	126.8	0.2
Fragmentation				
Saturation (Blt-up Area / Urb. Ext.)	0.63	0.61	0.66	0.5
Openness Index	0.33	0.34	0.30	-0.9
Compactness (Roundness)				
Proximity	0.68	0.65	0.66	0.0
Cohesion	0.67	0.65	0.64	-0.1
Added Area (Hectares)	'93-'00	Share	'00-'14	Share
Infill	561	27%	2,002	35%
Extension	338	16%	1,376	24%
Leapfrog	623	30%	981	17%
Inclusion	513	25%	1,316	23%



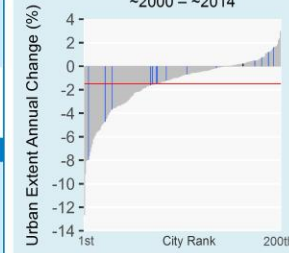
Population Growth ~2000 - ~2014



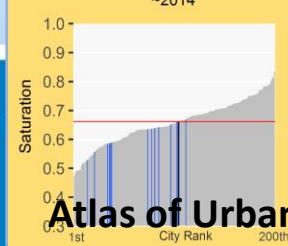
Urban Expansion ~2000 - ~2014



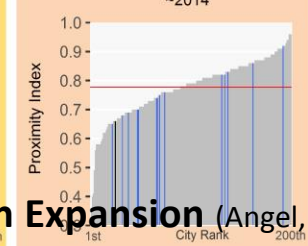
Density Change ~2000 - ~2014



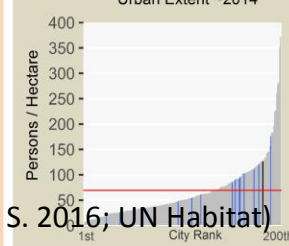
Fragmentation ~2014



Compactness ~2014



Average Density Urban Extent ~2014



Atlas of Urban Expansion (Angel, S. 2016; UN Habitat)

The cities grew and continued to multiply, developing into the most successful form of living in the world. By **1950** almost **one-third of all humans lived in cities**; **today** the figure is **over one-half**. This phenomenon has resulted in the formation of three different urban settlement patterns:

Mature



Historically grown city-district pattern with a solid building stock and established infrastructure.
Driving force: time

Newly planned



Publicly or privately planned settlement, usually characterized by rapid expansion.
Driving force: power

Informal



Settlement pattern characterized by poverty, usually having poor housing standards and inhumane living conditions. Driving force: hardship

A mix of all three can be found in most cities.



The Urban Planet, 2016 (WBGU: German Advisory Council of Global Change)

We'll soon have a huge problem! Cities need so many resources and emit so much greenhouse gas that the natural life-support systems are in jeopardy. This means that we'll soon overrun our planetary guard rails!*

Berlin, 2016

The notion of a city in which living and working are kept separate, which is chiefly characterized by suburbs with single-family homes and an inner city dominated by individually driven motor vehicles, is an outdated model. Even the bundling of a country's economic clout in only one centre is no longer a functioning concept.

Ha! Between 2008 and 2010
- in only three years! -
China alone built with more
cement than did the US in the
entire 20th century!

I wouldn't be quite so smug, considering we'll
have to double our urban infrastructure again
within the next 30 years!

Global urban population

2050: 2/3
2015: 1/2

By 2050 between 6.5 and 7 billion
people will be living just in the cities,
which is at least 2 billion more than
today!!!

And most of the growth will
occur in Asia and Africa.

The Urban Planet, 2016 (WBGU: German Advisory Council of Global Change)



IMPORTANT ISSUES



Increasing Volume of
WASTE & POLLUTION



Increasing intensity and frequency of
FLOODING



Increasing **TRAFFIC CONGESTION**



Increasing **WATER DEMAND** but limited **SUPPLY**



Weak & Limited
COLLABORATION

City	Culture & Social Health	Connectivity	Health & Welfare	Environmental Sustainability	Economics
1 Toronto	28	21	26	27	21
2 Vancouver	25	20	25	28	20
3 Singapore	20	28	24	20	27
4 Tokyo	24	26	28	17	26
5 Seattle	23	17	21	26	23
6 Auckland	26	14	22	25	18
7 Seoul	22	23	19	24	12
8 Melbourne	27	16	23	23	15
9 Los Angeles	22	13	20	22	24
10 Osaka	20	25	27	10	20
11 Hong Kong	17	27	18	11	28
12 Taipei	11	15	17	21	23
13 Shanghai	14	24	16	19	18
14 Beijing	10	22	15	15	16
15 Kuala Lumpur	13	19	11	12	25
16 Bangkok	18	18	8	8	13
17 Santiago	16	11	12	4	14
18 Mexico City	6	11	10	16	10
19 Novosibirsk	7	12	13	18	2
20 Chiang Mai	10	5	9	14	4
21 Bandar Seri Begawan	2	7	14	13	3
22 Manila	15	9	2	3	7
23 Lima	10	6	6	1	11
24 Ho Chi Minh City	5	8	7	2	9
25 Jakarta	4	4	5	7	8
26 Cebu	12	2	3	6	6
27 Surabaya	3	1	5	5	5
28 Port Moresby	1	3	1	9	1

■ High
■ Medium
■ Low
■ Highest rank in each variable

Cebu: 26th of 28

Culture and Social Health:
17th of 28

Connectivity:
27th of 28

Health and Welfare:
26th of 28

Environmental Sustainability:
23rd of 28

Economics:
23rd of 28



6 Cs of Smart Cities & City Regions



MCDCB
Metro Cebu Development
and Coordinating Board

CONNECTED

COMPACT

COMPLETE

CONVIVIAL

COMPLEX

CONSERVING



SMART CITIES & CITY-REGIONS

compact, pedestrian-friendly, mixed-use communities

PRIMUS INTER PARES (FIRST AMONG EQUALS)

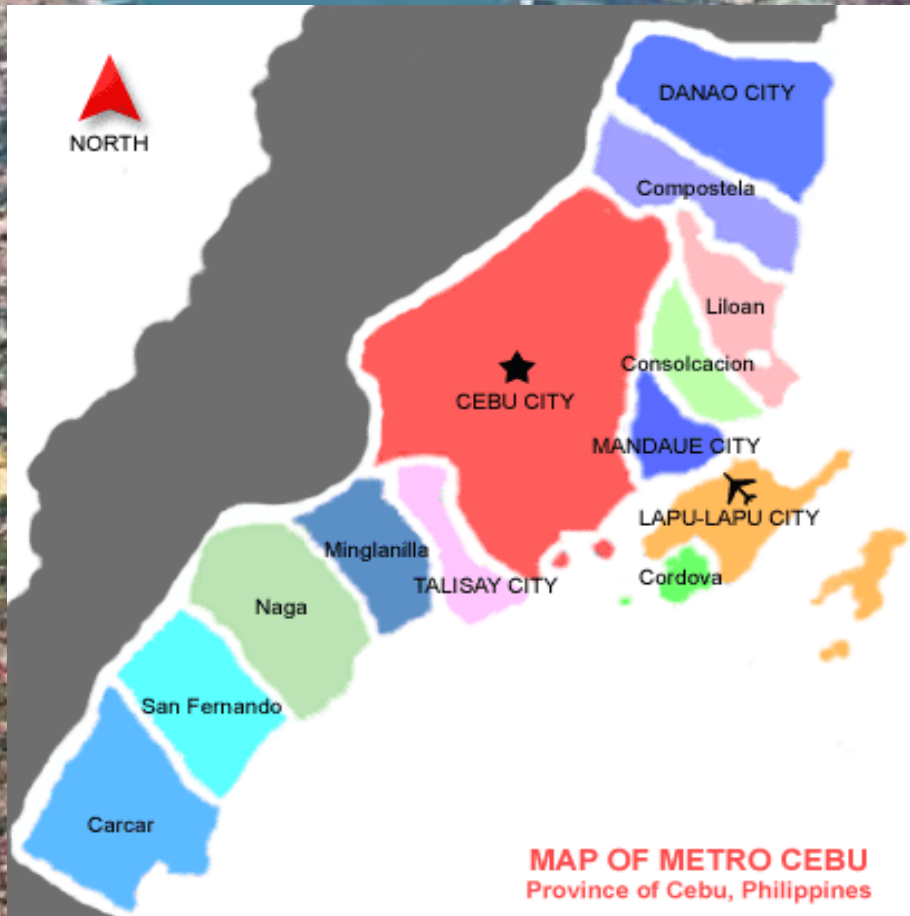
MEGA CEBU

Our shared **IDENTITY**
Our common **GROUND**
Our collective **FUTURE**



MCDCB

Metro Cebu Development and Coordinating Board



20% of Total Area
67 % of
Population

*What gets
planned,
gets done.*

Peter Drucker

10 Areas of Cooperation

Development Strategies

- 1) Integrated development, **urban** and **land use** planning and zoning
- 2) **Transport** and **traffic** management
- 3) **Pollution** control and **solid waste** disposal & management
- 4) **Flood** control, drainage and **sewerage** system
- 5) **Public safety** and security
- 6) **Road** improvement and **infrastructure** development
- 7) **Urban renewal** and shelter
- 8) **Coastal resources** and **watershed** management
- 9) **Climate change** adaptation and **disaster risk** reduction
- 10) **Health & sanitation** and **environmental** management



COMPETITIVENESS



LIVABILITY



MOBILITY



METROPOLITAN
MANAGEMENT



Our Future: Mega Cebu



A *vibrant, equitable, sustainable and competitive* environment that embraces Cebu's creativity and its cultural, historical and natural resources, with strong citizen participation and responsive governance.

*Success is no
accident. It is a
planned journey
to a destination
of choice.*

Roberto E. Aboitiz



Roadmap Study for Sustainable Urban Development of Metro Cebu



MCDCCB
Metro Cebu Development
and Coordinating Board

4 STRATEGIES

Competitiveness

Mobility

Livability

Metropolitan
Management

7 SUB-ROADMAPS

1 Metropolitan Competitiveness Enhancement

2 Urban Structure and Land Use

3 Urban Transport and Highway Network

4 Water Supply and Disposal Management

5 Solid Waste Management

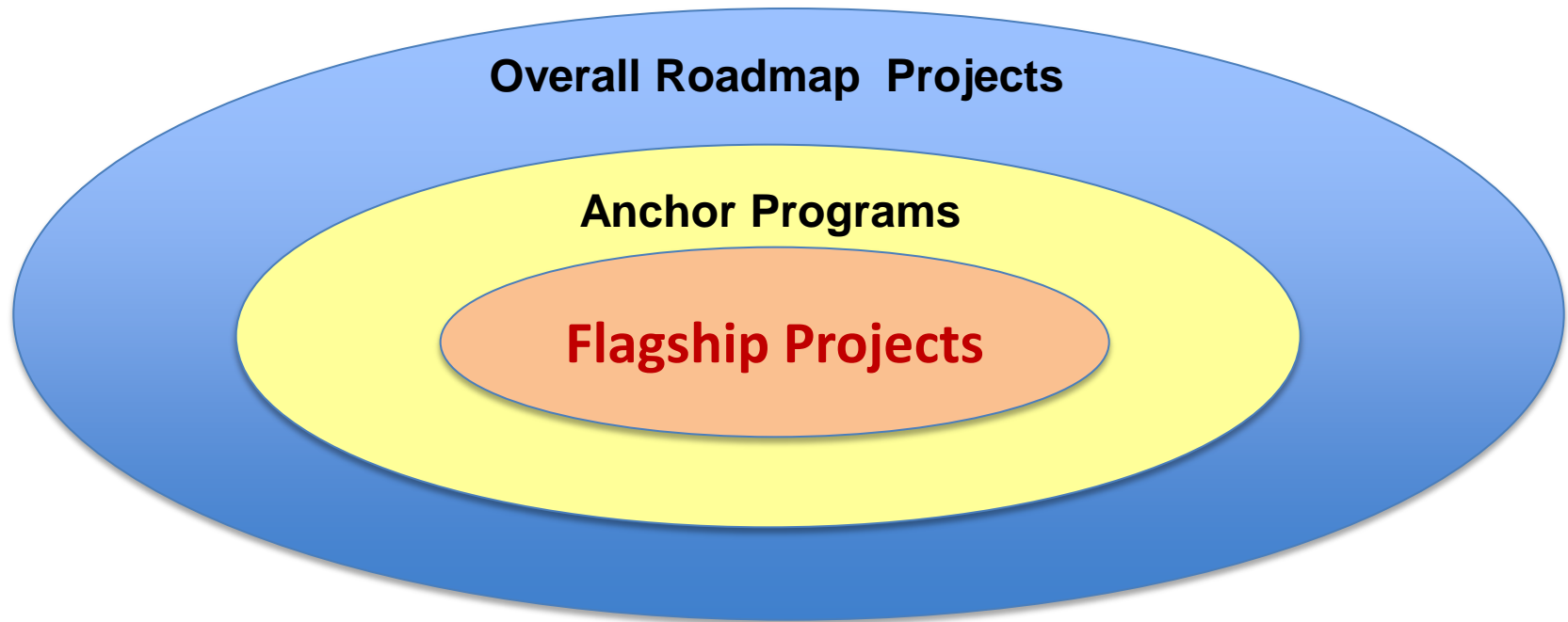
6 Smart SRP Development

7 Metropolitan Administration

An Overall Roadmap
integrating 7
sub-roadmaps



Metro Cebu Roadmap Projects



- ❖ **Anchor Programs:** key programs to be implemented by MCDCCB, LGUs, and respective National Government Agencies during the roadmap period until 2050.
- ❖ **Flagship Projects:** projects recommended for immediate action for further substantiation in 2015~2017, and targeted for completion by 2020.

PROPOSED ANCHOR PROGRAMS (14 Programs)

NAME	STATUS (As of October 2016)
1 Investment Promotion by MCIB through Mega Cebu Branding	<i>Tourism branding: "Where the heart sings" launched (2015); brand video contest (2016) (Mega Cebu & CCCI); Partnership with Cebu province in brand cascade discussed.</i>
; 2 Urban Greening	<i>Green loop (NEDA/RLUC & USC SAFAD)</i>
3 Operationalization of the Mega Cebu Spatial Plan	<i>Resolutions being obtained from LGUs; Focus area under the OECD policy study; Suitability mapping completed with GIZ support. Next steps re suitability mapping discussed with GIZ.</i>
4 Mass Transit Network Development (BRT/LRT/MRT)	<i>JICA and MCDCB / JICA and DoTr signed the MoM and Rd re this Project. Scope to include MPS, pre FS, and pilot projects. Separate discussion and facility for FS.</i>
5 Mactan Link Development	<i>To be included in Project Item 4</i>
6 Urban Fringe Highway Network Development	<i>To be Included in Item 4. Also FS for Circumferential Road by DPWH completed.</i>
7 Integrated Road Traffic Management	<i>To be included in Project Item 4</i>
8 Gateway Development (Airport and Seaport)	<i>Seaport FS (Facilitated by DoTr / CPA)</i>
9 Surface Water Resource Development	<i>MCWD resolution (lead role); TOR to be formulated. Initial discussions with WB</i>
10 Urban Septage/Sewerage Service	<i>For GOJ funding (est. 1B Php); Endorsed to EOJ by NEDA PIS; MoM signed between JICA and MCWD; Preparatory Survey first half of 2017</i>
11 Comprehensive Flood Control	<i>Study in finalization stage and to be completed first quarter 2017. Funding for priority rivers (731M Php) included in GAA 2016</i>
12 Metropolitan Solid Waste Management	<i>TOR to be formulated. Initial discussions with DENR and also with WB for assistance.</i>
13 Advance Energy Management System	<i>To be referred to the Cebu City Government</i>
14 Institutional Building of Metropolitan Governance	<i>Bill authored by Cong Del Mar re MCDA filed November 2015; Bill refiled last July 2016. Possible partnership with WB explored.</i>

TEN (10) FLAGSHIP PROJECTS (Actions in 2015-2017)

Project Titles	Type	Status (As of February 2017)
1 Master Plan Study and FS on Mass Transit Network Development (BRT/LRT/MRT) for Metro Cebu	Study	<i>JICA and MCDCCB / JICA and DoTr signed the MoM and Rd re this Project. Scope to include MPS, pre FS, and pilot projects. Separate discussion and facility for FS.</i>
2 Update of the Integrated Development Master Plan of Cebu Province	Study	<i>Revised proposal to be submitted and to be discussed with Province, LGUs, and JICA (NEDA / Cebu Province).</i>
3 Construction of the Mactan North Dual-Mode Bridge	Project	<i>To be included in Project Item 1</i>
4 Construction of Mananga II Dam	Project	<i>For TOR development (MCWD/NEDA/MCDCCB). Initial discussion with WB.</i>
5 Construction and Networking of Septage Treatment Plants	Project	<i>For GOJ funding (est. 1B Php); Endorsed to EOJ by NEDA PIS; MoM signed between JICA and MCWD; Preparatory Survey first half of 2017</i>
6 A Comprehensive Study for a Cebu Integrated Flood and Drainage System Master Plan	Study	<i>Study in finalization stage and to be completed first quarter 2017. Funding for priority rivers (731M Php) included in GAA 2016.</i>
7 FS on Sea Gateway Port Construction	Study	<i>Facilitated by DoTr / CPA</i>
8 A Comprehensive Solid Waste Management Master Plan for Metro Cebu	Study	<i>For TOR development; private sector initiated project expansion (Mansei); initial discussion with DENR and also with WB</i>
9 FS on Area Traffic Control in Metro Cebu	Study	<i>To be Included in Project Item 1</i>
10 Establishment of a Technical Research and Planning Unit of MCDCCB & Its Capacity Development	IB	<i>Bill authored by Cong Del Mar re MCDA filed November 2015; Bill refiled last July 2016. Possible partnership with WB explored.</i>

As of September 2016 Status	RESOURCES FOR MEGA CEBU Summary (1) (Committed Actual / Estimated: Php or USD or JPY)	
2011	IBM: Corporate Service Corps	948,150 Php
	IBM: ASEAN	275,200 Php
	IBM: Executive Service Corps	4,437,000 Php
2012	DPZ: Smart Growth Framework for City Region Development	340,000 Php
2013	Phase I: JICA (Vision and Strategy Development)	19,701,800 Php (46,000,000 Yen)
2013 2015	Phase II: JICA (Roadmap Study for Sustainable Urban Development)	107,500,000 Php (2,500,000 US\$)
	JICA: Pilot Projects (Cebu City and City of Yokohama)	86,000,000 Php (2,000,000 US\$)
	JICA: SCADA (MCWD)	500,000,000 Php
2016	DPWH: Master Plan Study for Flood Control, Drainage & Stormwater Management	60,000, 000 Php
	DPWH: Flood Control Projects (GAA 2016)	731,000,000 Php
	OECD: Urban Green Growth in Dynamic Asia Project (OECD, Cebu Province, RAFI and other key organizations)	10,000,000 Php
	APEC Low Carbon Model Town Study: Mandaue City	Info to be obtained
Sub Total (Excluding RAFI and other organizations / projects and still to be determined / monetized amounts)		1,520,202,150 Php

As of September 2016 Status	RESOURCES FOR MEGA CEBU Summary (2) (Committed Actual: Monetized or Estimated Php or USD or JPY)	
Open	Professional / Technical / Management Experts (Local; Various Projects / Studies)	To be determined / monetized
Open	Professional / Technical / Management Experts (National / International; Various Engagements)	To be determined / monetized
Open	Students / Faculty / Examiners (Research/ Studies)	To be determined / monetized
Open	Volunteers: Youth	To be determined / monetized
Open	Volunteers: Adults	To be determined / monetized
Open	Projects and Teams (YMA; Club Mega; others)	To be determined / monetized
Open	Projects and Teams (LGU; NGA; GOCC, etc.)	To be determined / monetized
Open	Projects and Teams (Private Sector, Civil Society, Community)	To be determined / monetized
Open	Support for Mega Cebu Month and Other Activities (Various)	To be determined / monetized
Sub Total		To be determined / monetized

As of September 2016 Status	RESOURCES FOR MEGA CEBU Summary (3) (Pledged or In the Pipeline: Monetized or Estimated Php or USD or JPY)	
2016 2019	Government of Japan / JICA / Yokohama: Septage Treatment Project (Various Sites in Metro Cebu)	1,000,000,000 Php
2016	Japan Ministry of Environment / Mansei: Waste Plastics Recycling – Commercial Scale Project	Info to be obtained
2016	UNESCO and Local Support (Workshop on Water Tariffs, Water Governance and IWRM; excluding costs for international speakers travel, professional fees, and honoraria)	705,000 Php (15,000 USD) 500, 000 Php (monetized)
2016 2017	GIZ GIDRM (Suitability Mapping, Lab of Tomorrow, Early Warning System)	Info to be obtained
2016 2021	TESDA and Experts Support (Mega Cebu Traffic Enforcers Academy standards and curriculum development; Integrated Traffic Management)	To be monetized
Sub Total		1,001,205,000.00 Php
2011-2016	RAFI Contribution (Personnel, Operating, Projects: Estimated)	25,000,000.00
Total (Excluding other organizations / projects / individuals and still to be determined / monetized amounts)		2,546,407,150 Php