

Capital Budgeting for Resilient Cities Financing Public Investment Sustainably

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City Resilience Program

Comprehensive Financial Solutions for City Resilience Conference

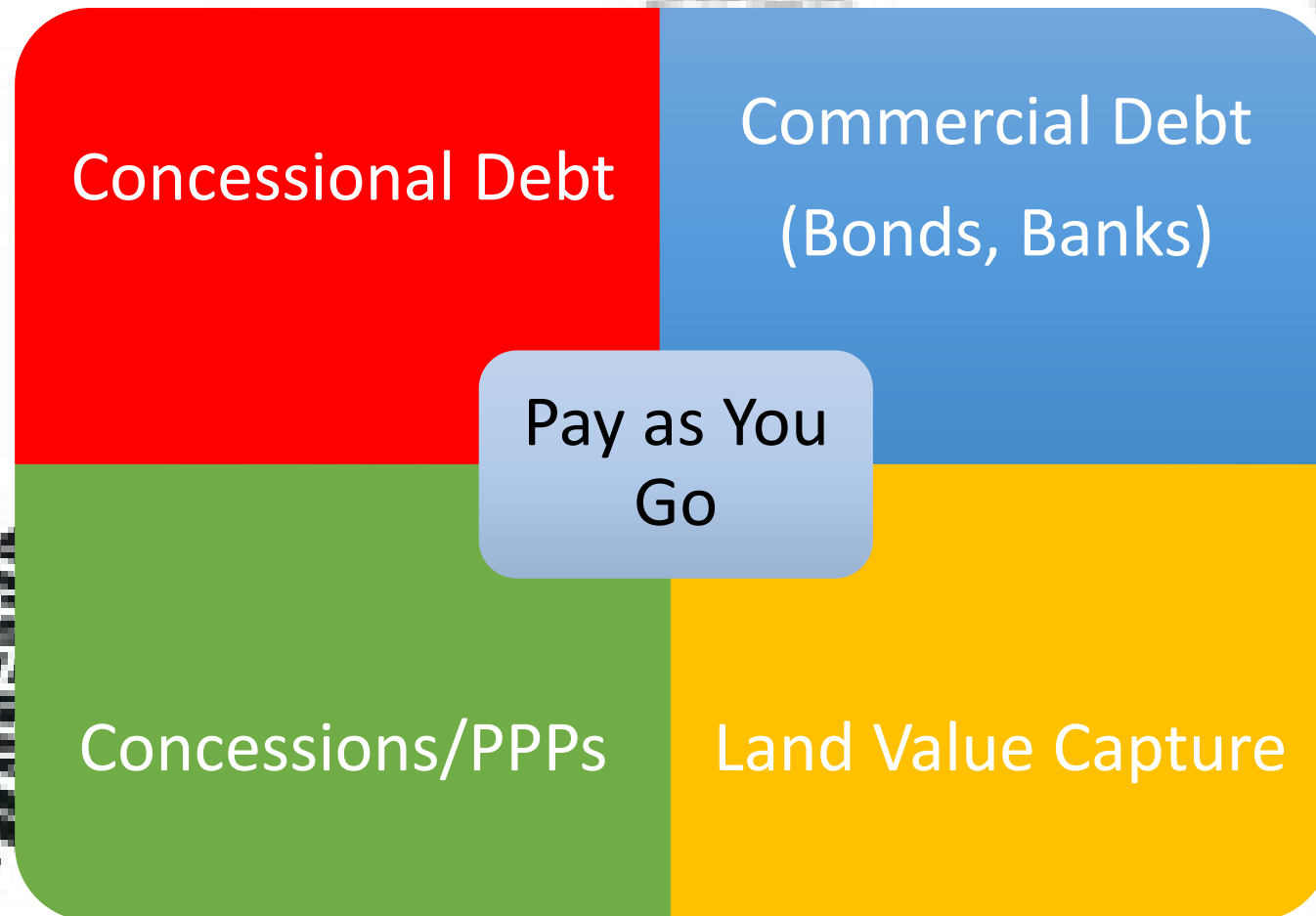
Bangkok, November 7, 2017

An aerial photograph of a city, likely Hong Kong, with a thought bubble in the upper left and a red box in the lower right. Two green arrows connect the two elements. The background shows a dense urban landscape with a harbor and mountains in the distance under a cloudy sky.

Public Investment
Plans

Infrastructure
Budgeting/Financing/
Execution

Leveraging medium term capital budgeting to yield a better infrastructure program?



2

Why & what of capital budgeting

Reconciling Top-down

.... Bottom-up

Benchmarking & Tools

9

Take-aways



Successful capital budgeting is a balance act requiring short, medium and long term perspectives

Capital Budgeting

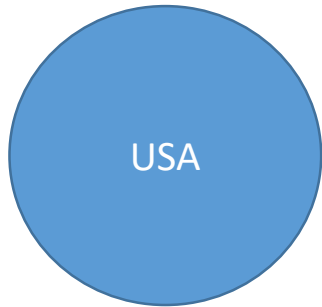
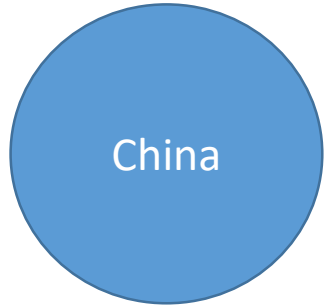
- ✓ Important subset of public investment management (PIM), linking public investment decision with budgeting, financing, procurement
- ✓ Definition also encompasses all projects where government agencies play a role in the realization of capital projects (e.g., through PPPs or SOEs), either as directly sponsoring or in some way sanctioning authorities
- ✓ Communicates city-level financing strategy to politicians, public and financiers

Motivations

- Create and sustain priority public infrastructure assets for growth and resilience in an efficient and fiscally sustainable manner
- Leverage all available financing opportunities available to a city for fulfilling a coherent program of project needs
- Adequately monitor & manage fiscal risks at the city level
- Public scrutiny, discipline, and credibility associated with infrastructure spending

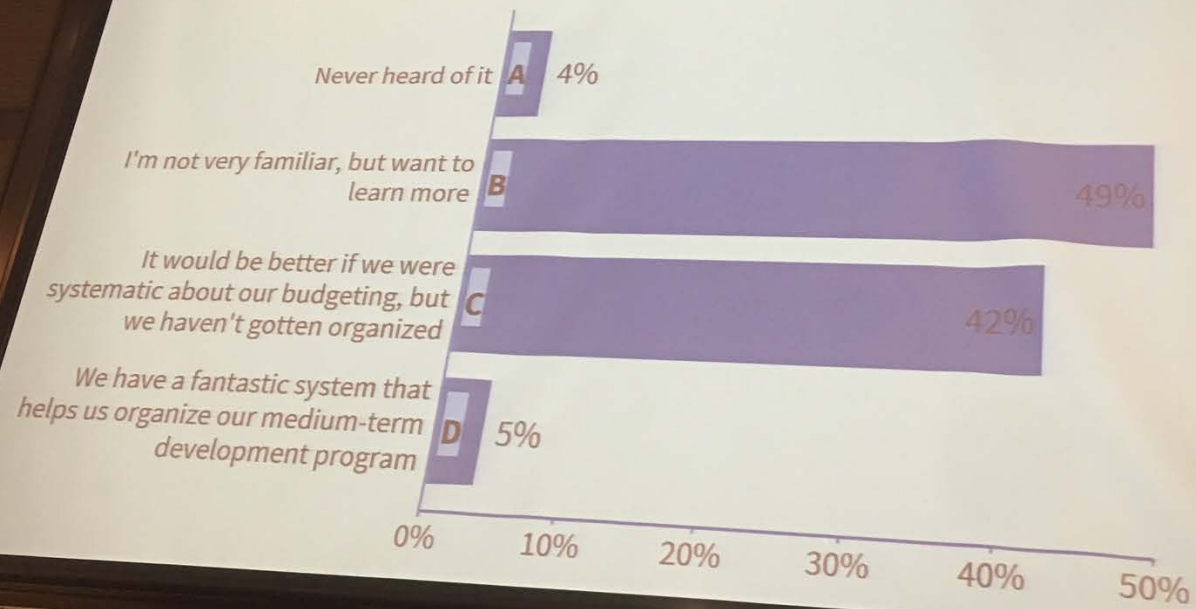


Examples



How familiar are you with capital budgeting?

Respond at [PollEv.com/cities](https://www.poll-ev.com/cities) Text **CITIES** to 22333 once to join, then **A, B, C, or D**



Agenda

09:00-9:45 Overview / Top-Down Framework

09:45-10:30 Top-Down Perspective Group Exercise

10:30-10:45 Feedback

10:45-11:00 **Tea!**

11:00-11:15 Bottom-up Framework

11:15-11:45 Bottom-up Perspective Group Exercise

11:45-12:00 Feedback

12:00-12:30 Tools & Takeaways



1. Setting the envelop

- Fiscally sound
- In line with fiscal rules

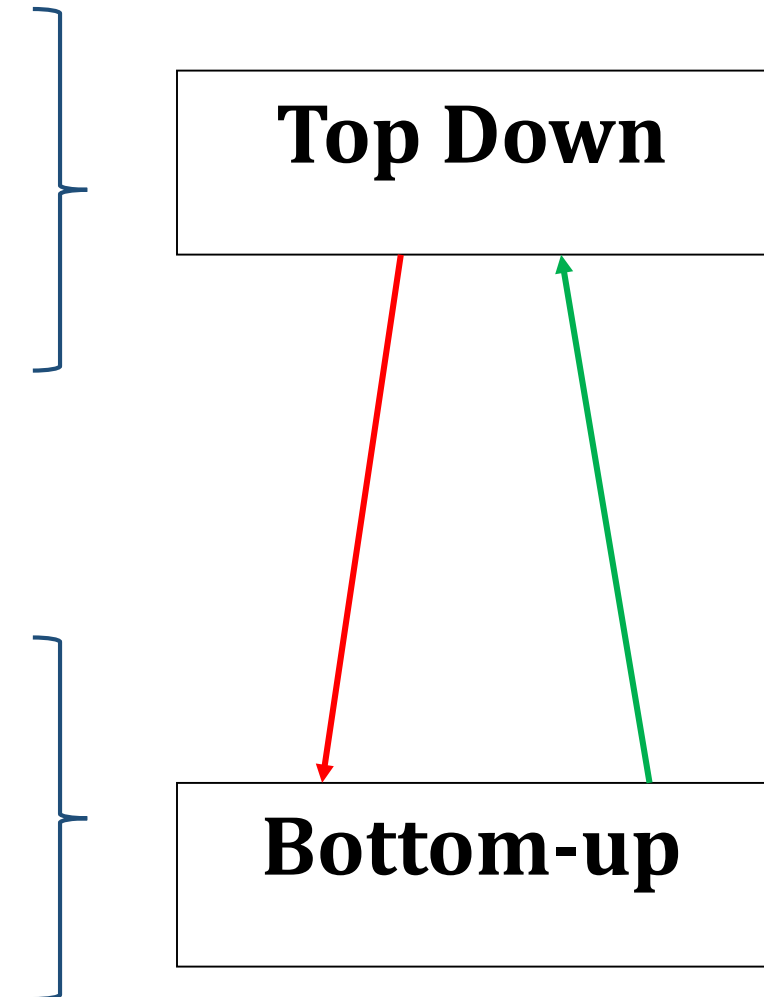
2. Setting the objectives & aligning with development strategy

- prioritization
- allocative efficiency

3. Sectoral composition of capital investment

4. Exploring innovative financing for infrastructure investment

- PPP
- Special Purpose Vehicles/Joint Ventures
- Government Business Enterprises
- Land Value Capture Financing



Top-down
(Financing)

Bottom-up
(Priority Projects)



1. Setting the envelop

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- In line with fiscal rules

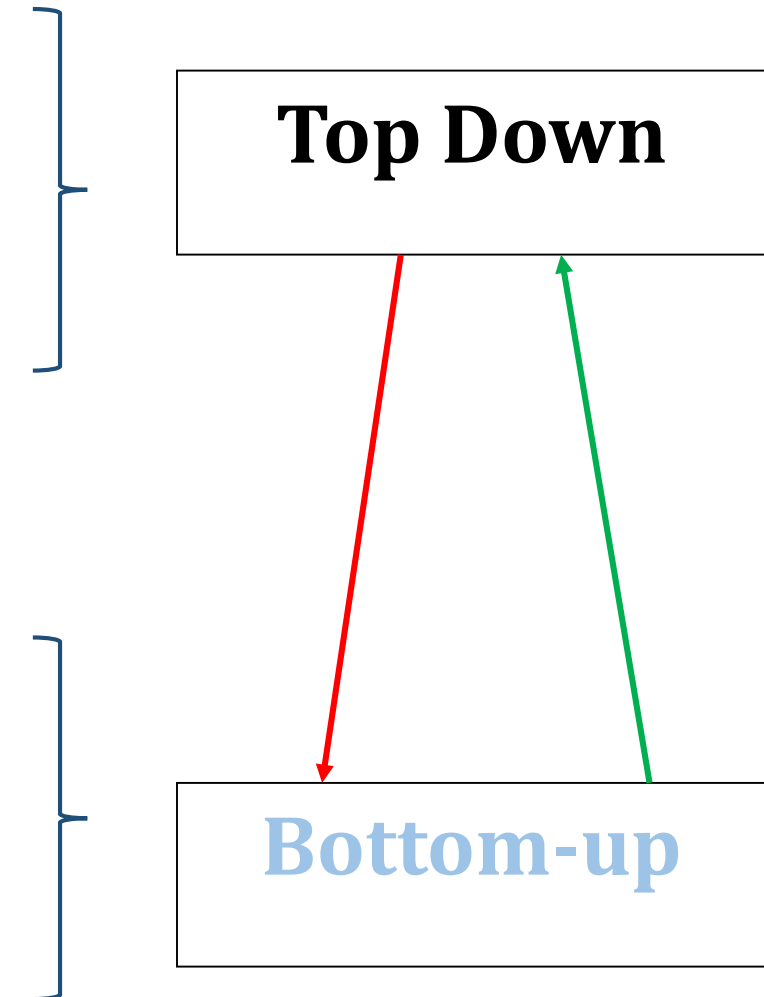
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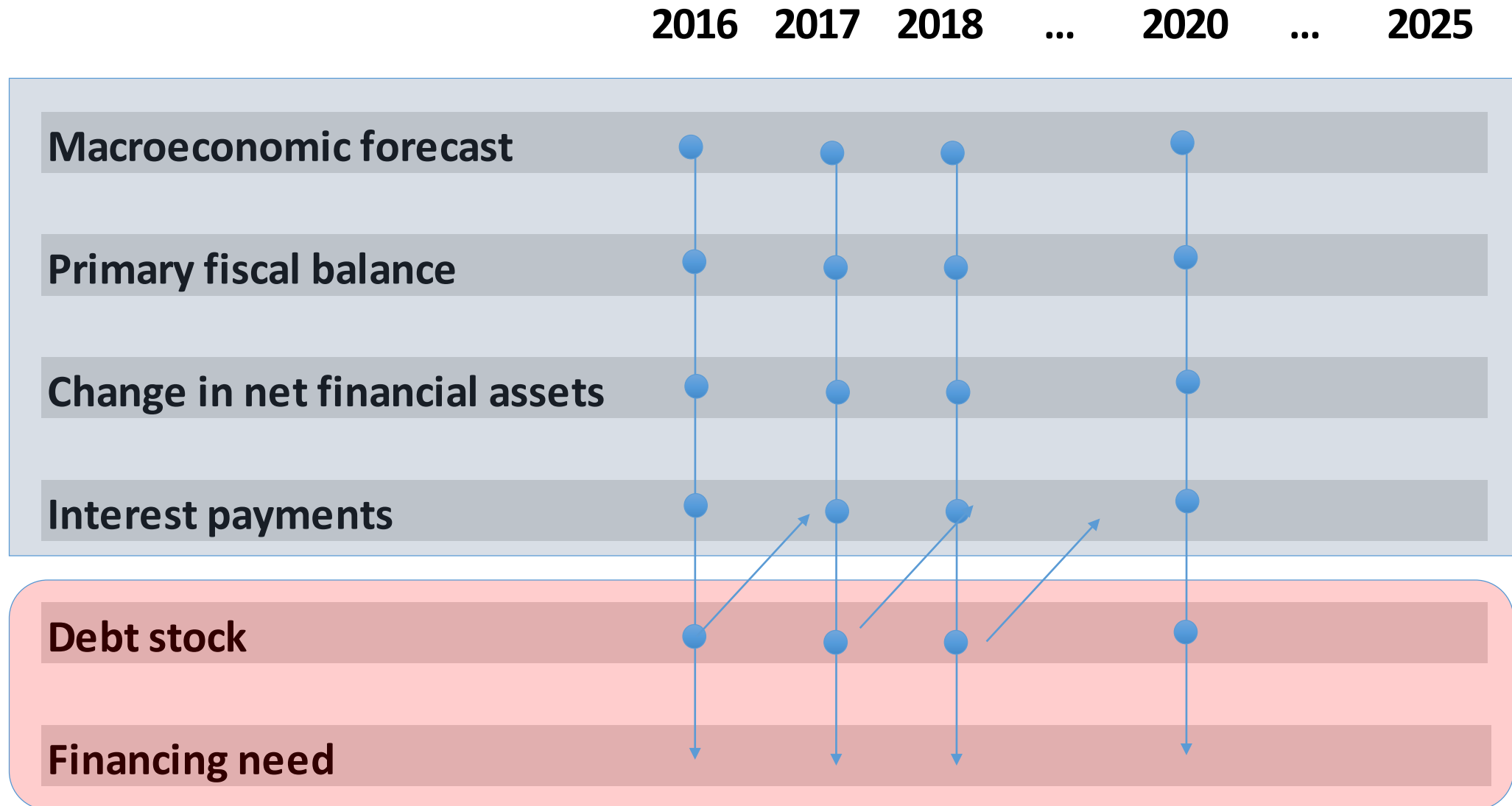
TOP-Down Exercise

MTFF-DSA: An Anchor for Capital Budgeting

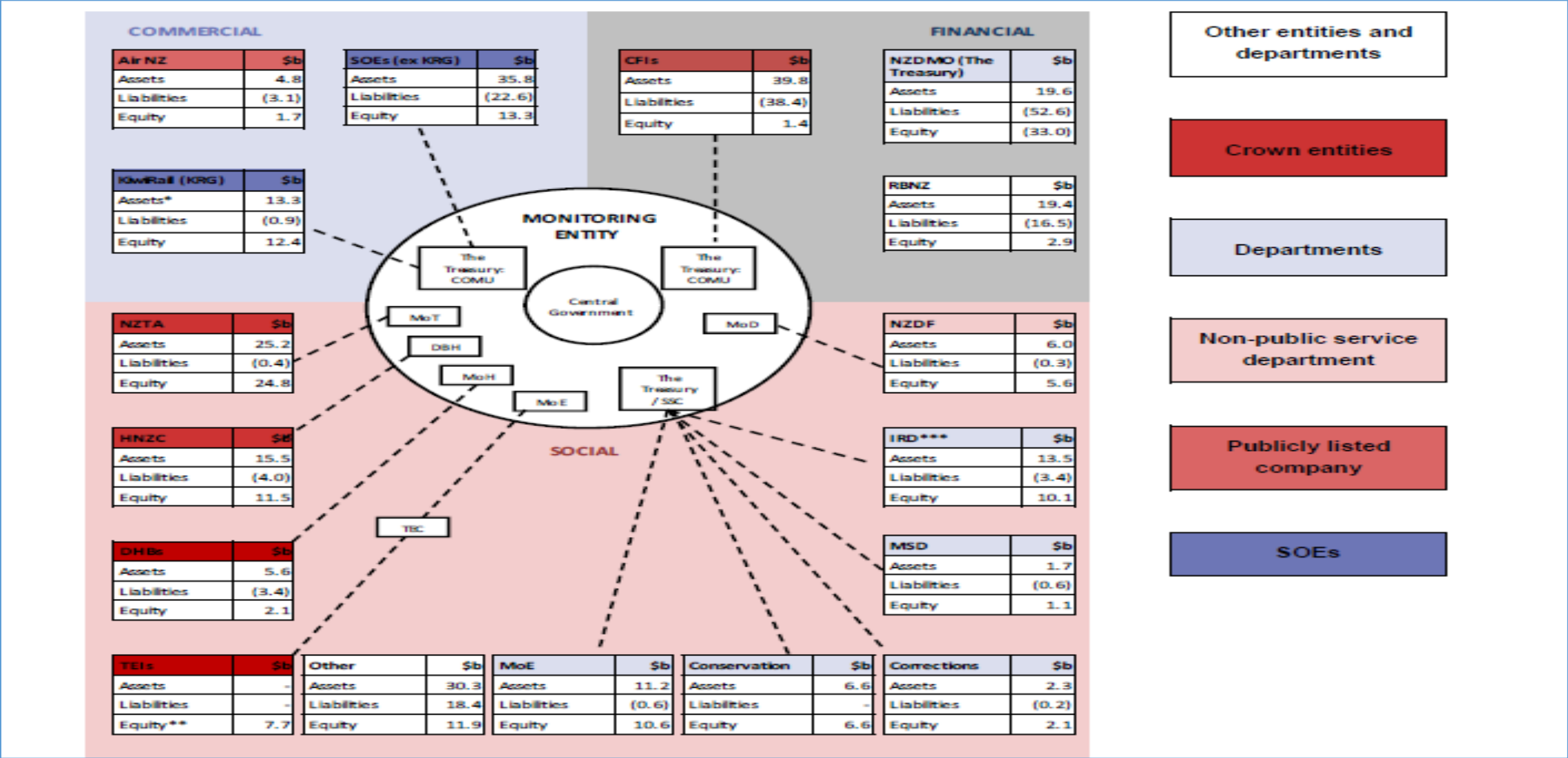
- Responsible capital budgeting requires a forward-looking perspective:
 - Can I afford to finance these capital programs in short and medium-to-long term?
 - Can I repay my debt eventually? Will my debt ratio stabilize at a reasonable level?
 - Will future interest payments crowd out my ability to maintain essential public services?
 - Will I be able to cover my financing needs tomorrow?
 - How sensitive are these conclusions to stronger or weaker than expected macroeconomic or fiscal results?
 - Can these capital projects open up more opportunity for the cities, and improving my fiscal perspective?

MTFF-DSA: what capital budgeting strategy is consistent with the city's development strategy and long-term debt sustainability?

What is the MTFF - DSA?



Information: Public Sector Balance Sheet?





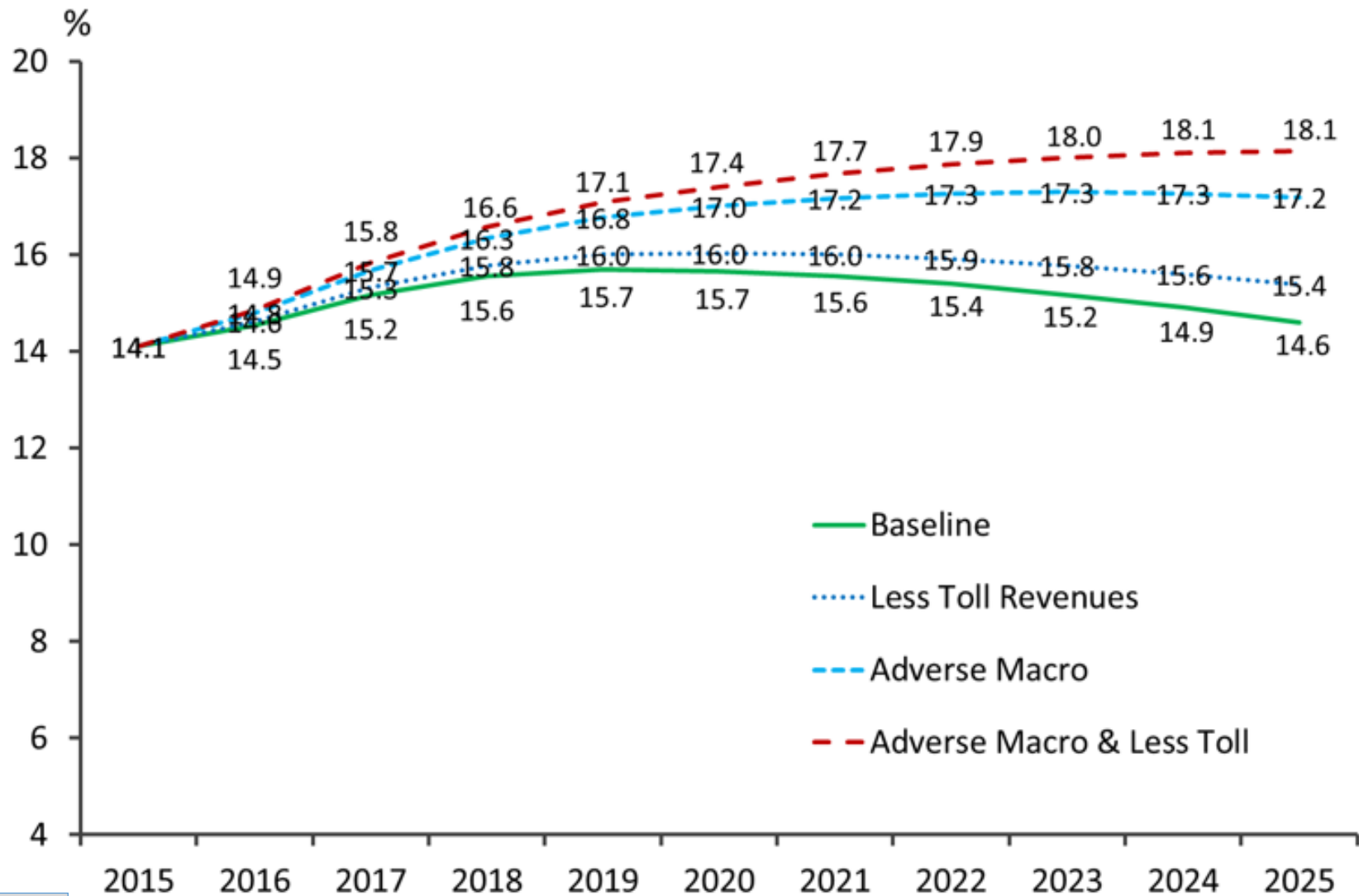
China Sub-National Capital Budgeting

- Very high rates of investment by cities and provinces
- High reliance on "one off" land related revenues, special purpose vehicles and debt financing
- Under State Budget Law, national government has tightened avenues for off-budget financing due to fiscal risk concerns
- World Bank was asked to support Hunan Province and Dadukuo City

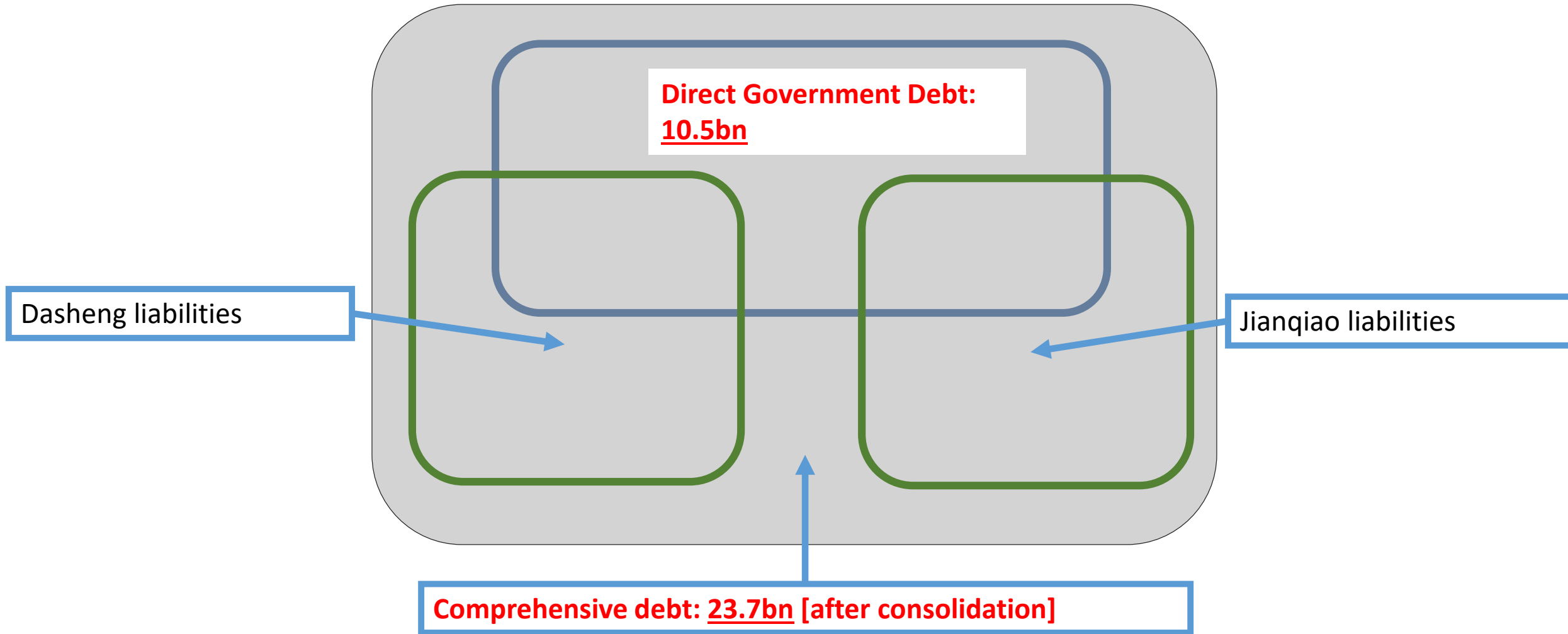
Under a WB Development Policy Operation (DPO) program, Hunan Province constructed a Debt Sustainability (DSA) for only province-level finances that consolidates the finances of budgets, LGFVs, and PPPs, linking this to an integrated capital financing plan and MTF.

- Hunan Province passes almost the entire sum of central transfers down to the local level
- It also has significant public investment programs, particularly in roads and rail.
- Even under optimistic assumptions on future toll revenues, the DSA revealed former plans for public investment to be unsustainable.
- Hunan Province therefore made a decision to freeze province-level public investment at its 2015 level in the MTF.
- Hunan Province significantly cut investment in highway, but increased investment in truck roads and rural roads, with particular focus on improving road networking.
- Capital budgeting is now extended from transport in 2015 to 8 sectors in 2017.

**Figure: Hunan Provincial Debt Sustainability: Baseline and Stress Scenarios
(Public Liabilities as a Percentage of Province GDP)**



Dadukou Debt at end-2015: A starting point for the DSA



Dadukou District also adopted a medium term strategy for public investment that is consistent with fiscal sustainability in the DSA under baseline projections and a stress test scenario.

Public investment (billion RMB)

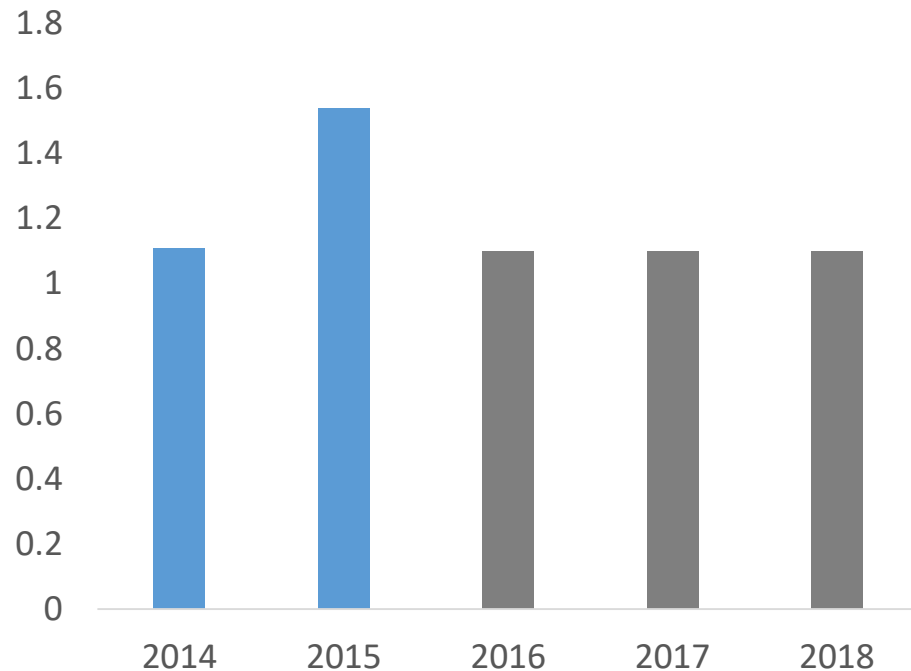
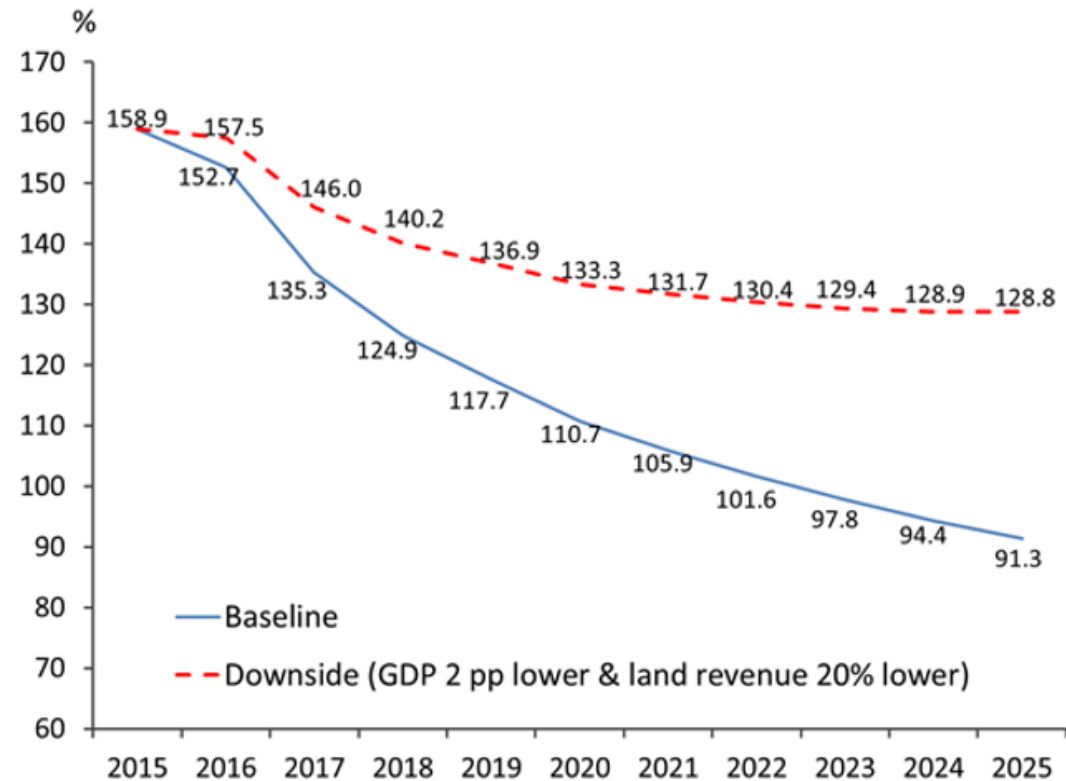
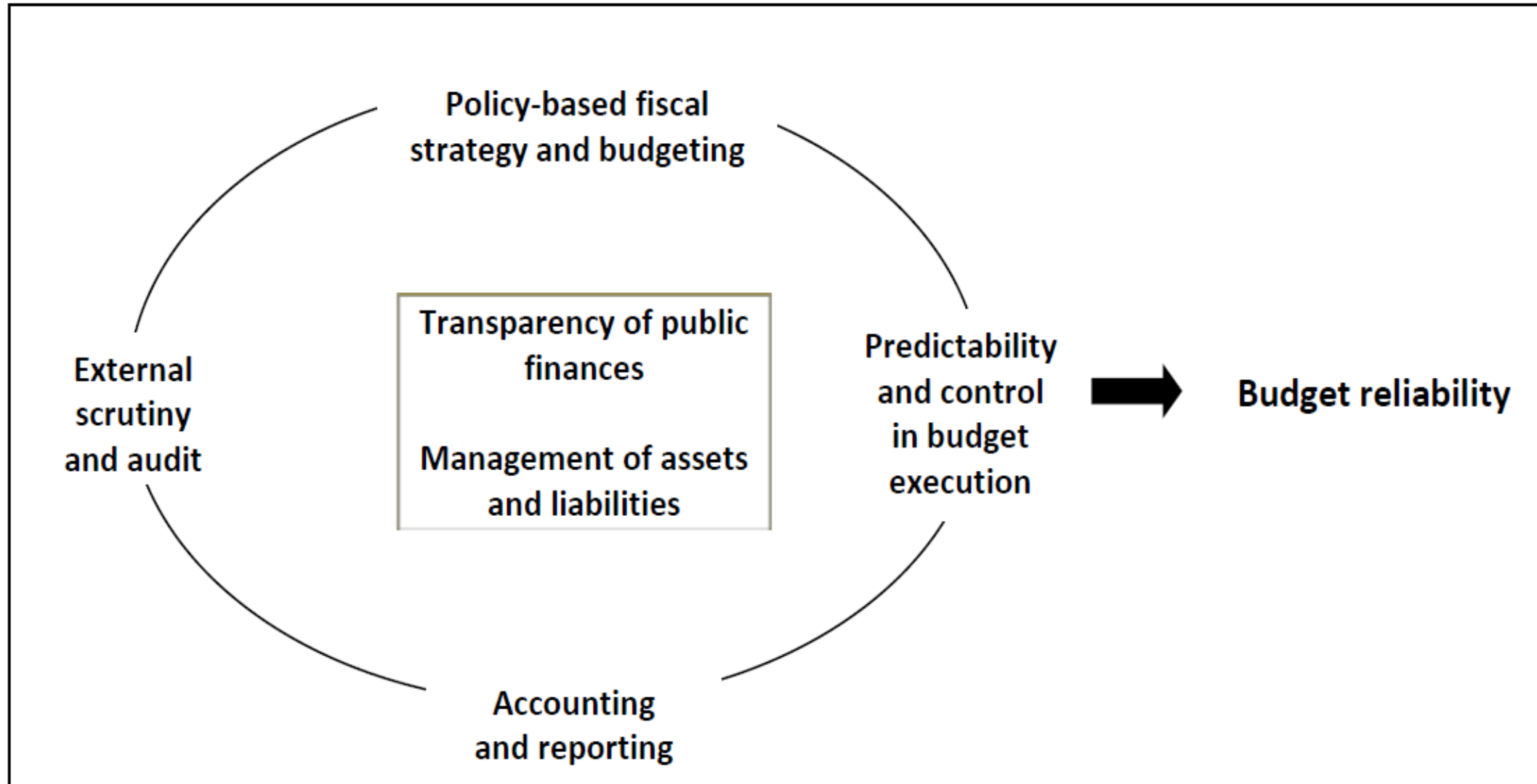


Figure: Dadukou District Debt Sustainability: Baseline and Downside Scenarios (Public Liabilities as a Percentage of District GDP)

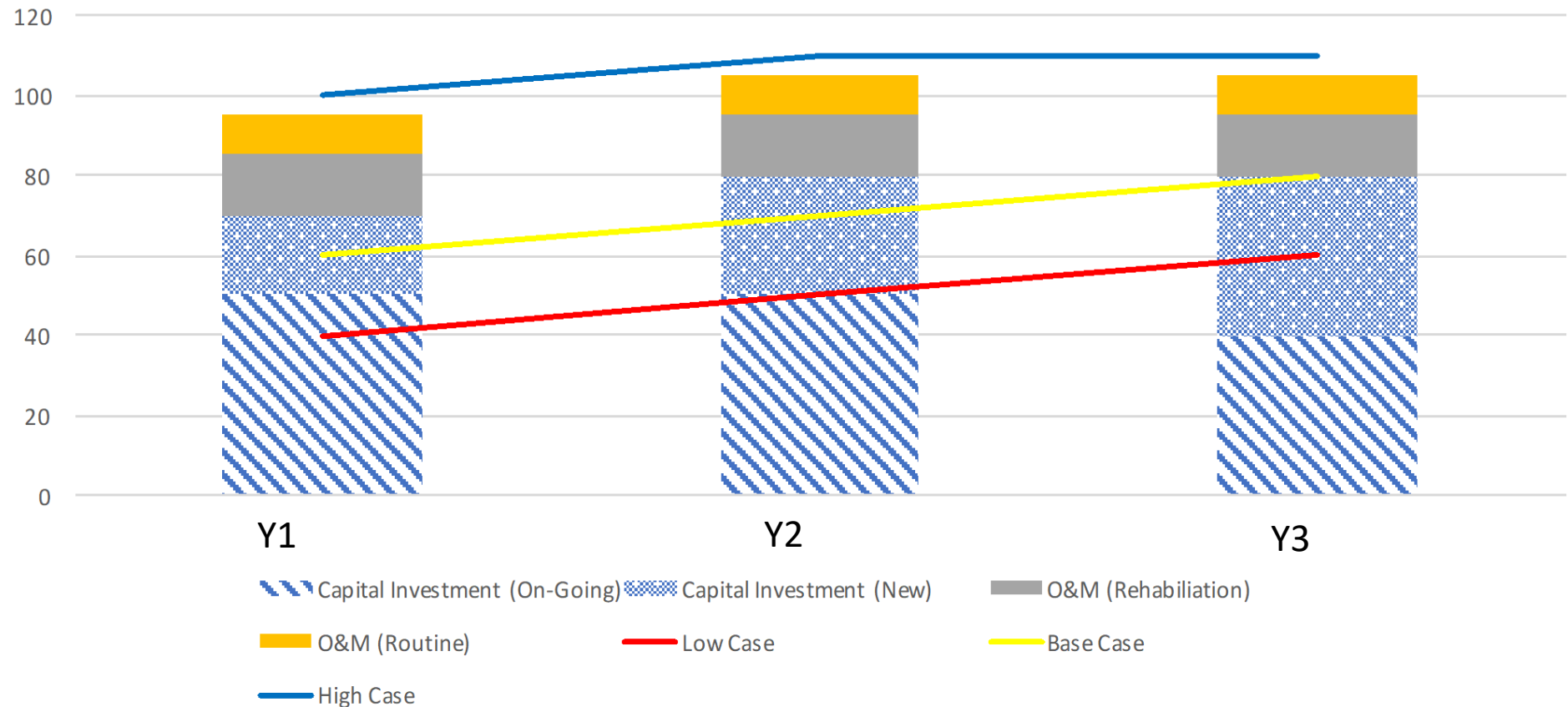


PIM/CB are subsystems; order matters

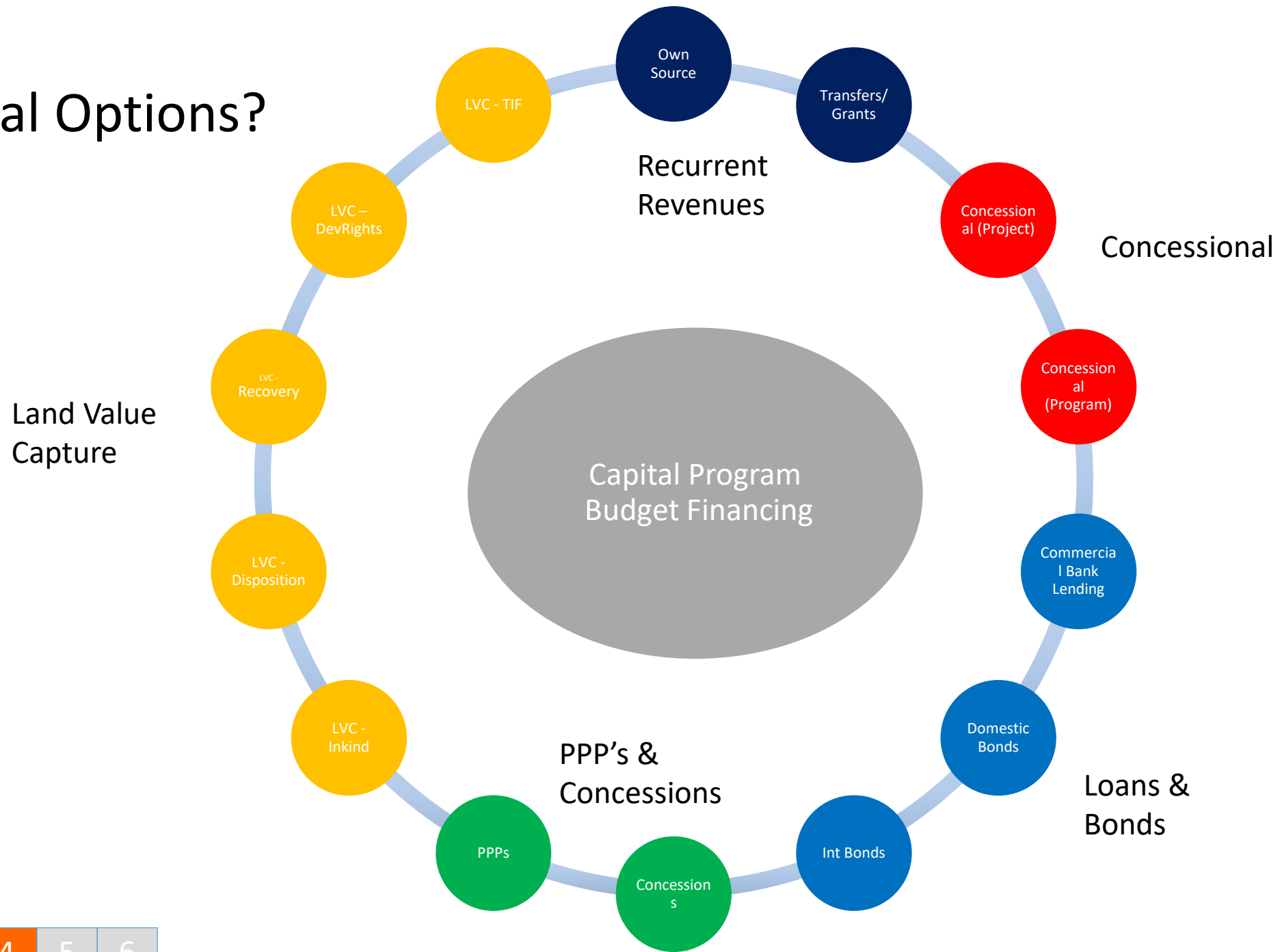




Fiscal Space Subject to Scenarios

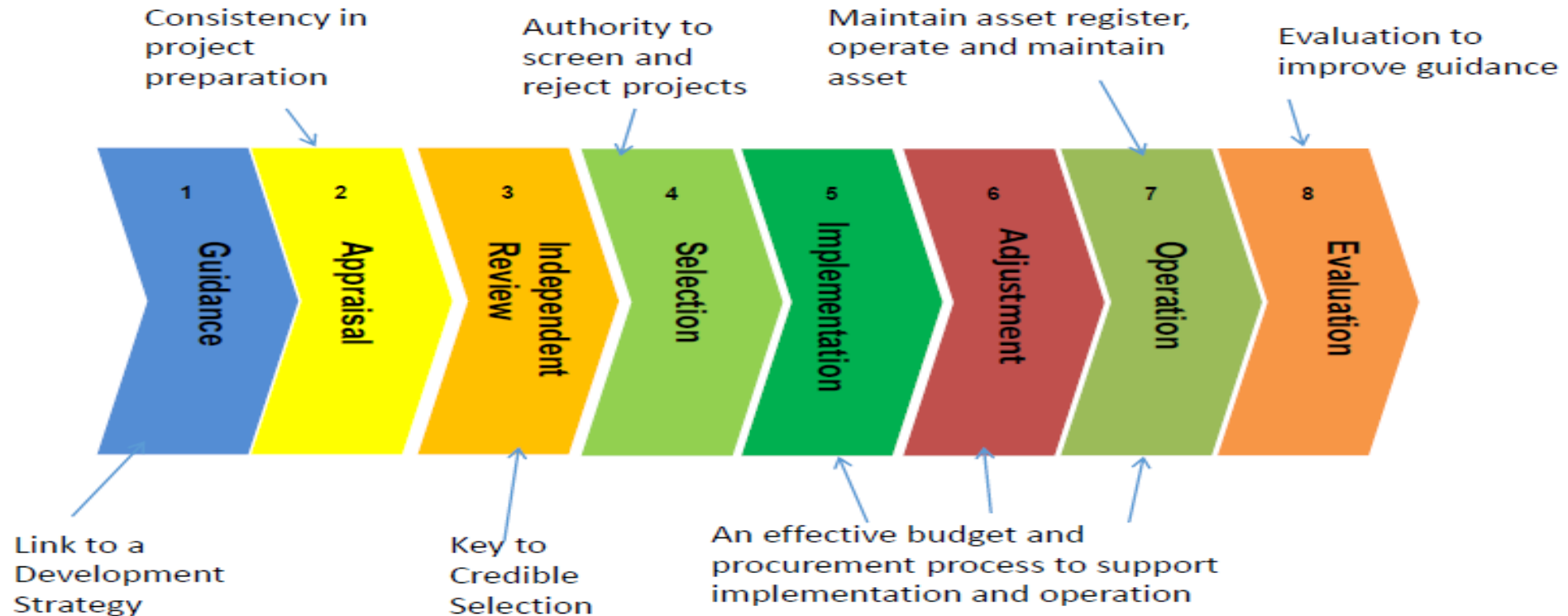


Capital Options?





PIM is a system: all functions matter



Source: *The Power of Public Investment Management: Transforming Resources into Assets for Growth* (World Bank, 2014).

Emphasis is on functionality not form – countries need the eight functions for PIM to be effective with evaluation used to improve functionality over time.

Context Matters: Lack of Effective PIM Has Profound Consequences

Common Problems

- Development plans disconnected from actual budgets/projects
- White elephant projects with little socio-economic value
- Lack of pipeline of high-quality projects
- PPP projects that create risk for govt.
- Projects awarded to unqualified firms
- Opaque resource-for-infrastructure deals without due safeguards for ensuring good value
- Corruption/delays in procurement
- Delays in land/site acquisition
- Cost escalation, time-overruns
- Contract disputes/ abandoned projects
- Poor quality of completed projects
- Poor operation and maintenance of completed assets
- Institutional inertia/ No systemic response to address problems

Consequences

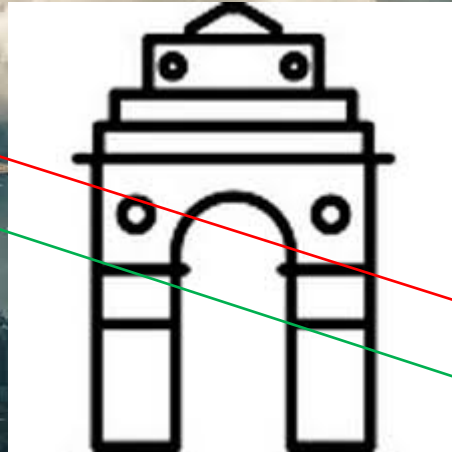
- Few valuable public assets are created
- Citizens lack key public facilities
- Stock of decaying infrastructure
 - Power and water shortages, road and railway accidents, crowded hospitals, deteriorating HDI
- “Investment” fails to spark growth and improved social welfare
- Countercyclical expansion of investments is difficult
- And if investment is financed:
 - by debt – creates a liability
 - by taxes – burdens citizens and private sector
 - by finite natural resource extraction – reduces net wealth
- Macroeconomic instability
- Political instability
- Fiscal pressures and risk

WEAK / INEQUITABLE DEVELOPMENT

Reconciling Top-Down & Bottom-up: Gatekeeping for Project Pipeline

Planning/PIP

Fiscal (Medium Term,
Annual)



Pipeline of
Sponsored/Sanctioned
Proposals

Multi-Year Plans/Proposals
→ Annual Budgeting

Appraisal Function: Five Key Questions

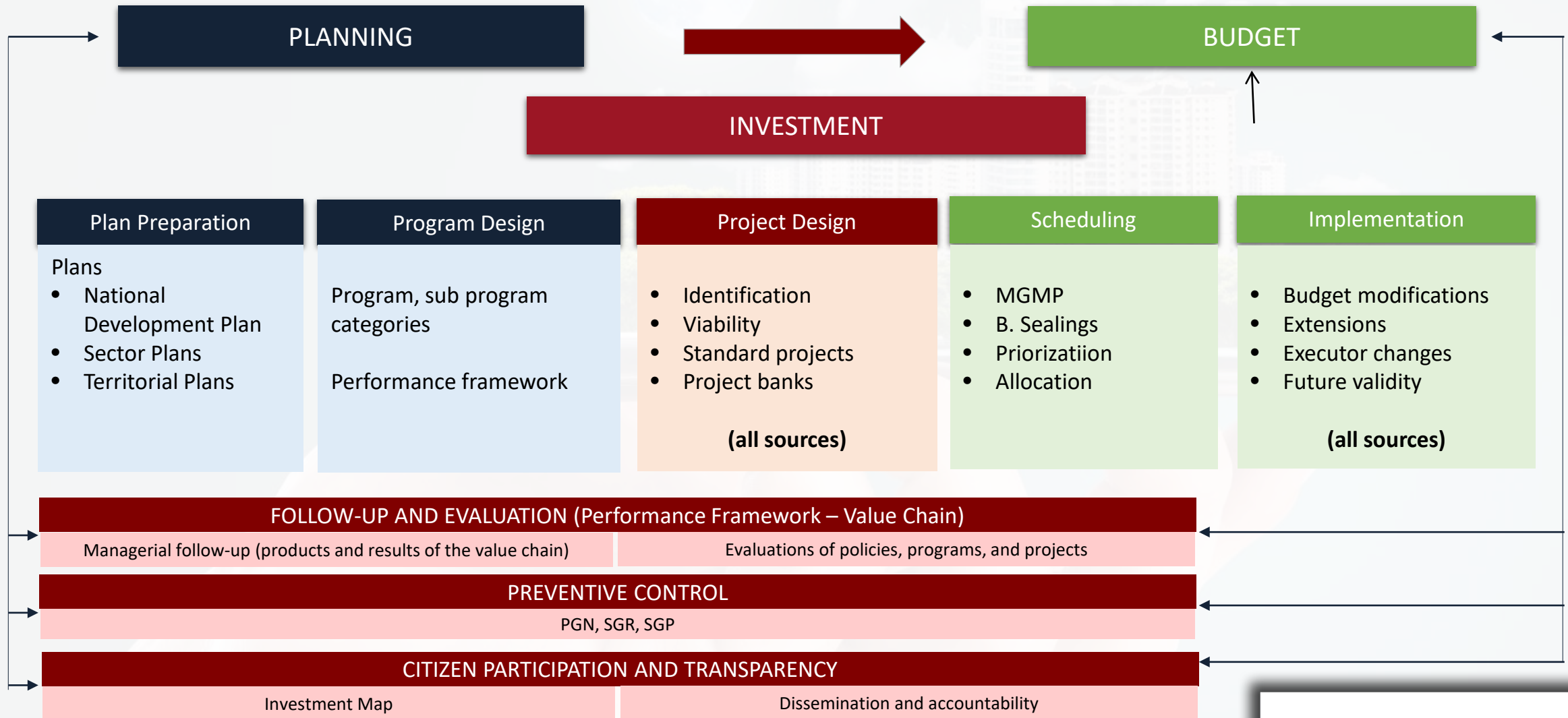
1. Type of evaluation used and under which conditions applied
2. Project proposal, appraisal, and review sub-processes
3. Appraisal methodology
4. Transparency (project data and analysis)
5. Capacity development approaches

Two core enabling factors

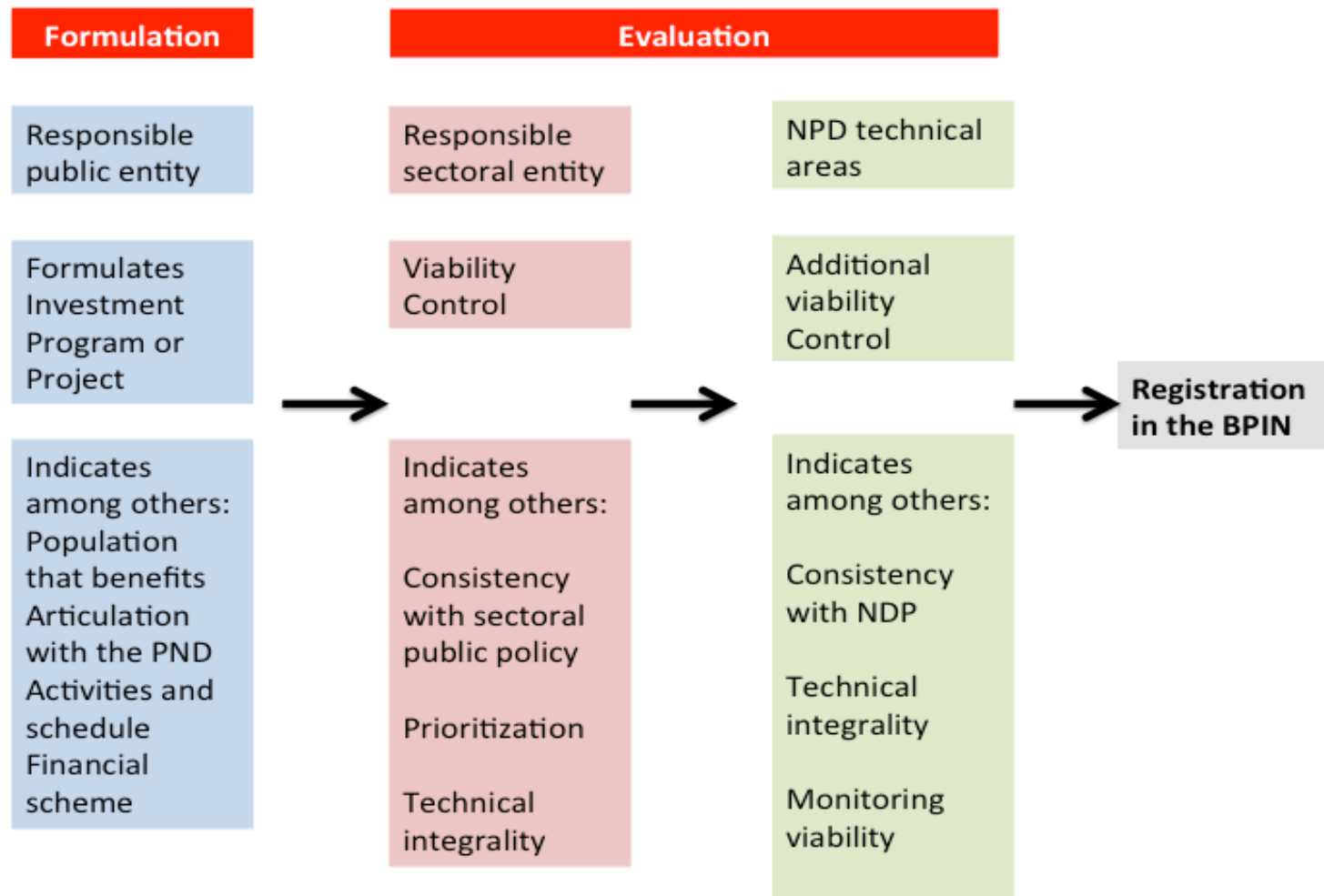
- Legal framework
- Organizational structure and staffing

- Features of each characteristic
- Country examples
- Issues arising

National Public Investment Integrated Platform



Integrated Gatekeeping & Appraisal: Colombia





City of Milwaukee Functional Categories in CIP

Economic Development

- Largest functional category- 37% of general city purpose capital funding in 2017
- Includes TID's, Strong Neighborhood Program, Port of Milwaukee
- Relies primarily on self-supporting debt (TIF)

Surface Transportation

- Includes Street Reconstruction, Bridge Rehabilitation, ancillary infrastructure programs
- Primarily funded through G.O. Borrowing, Grant & Aid

General Government

- Includes DPW Facility projects, IT projects, Major Capital Equipment

Health and Safety

- Includes Police, Fire and Health Department

Environment

- Includes DPW Forestry, Brownfield Remediation

Culture and Recreation

- Includes Library construction and repair, MKE Plays

2017 Capital Improvements Budget by Function General City Purpose Funding

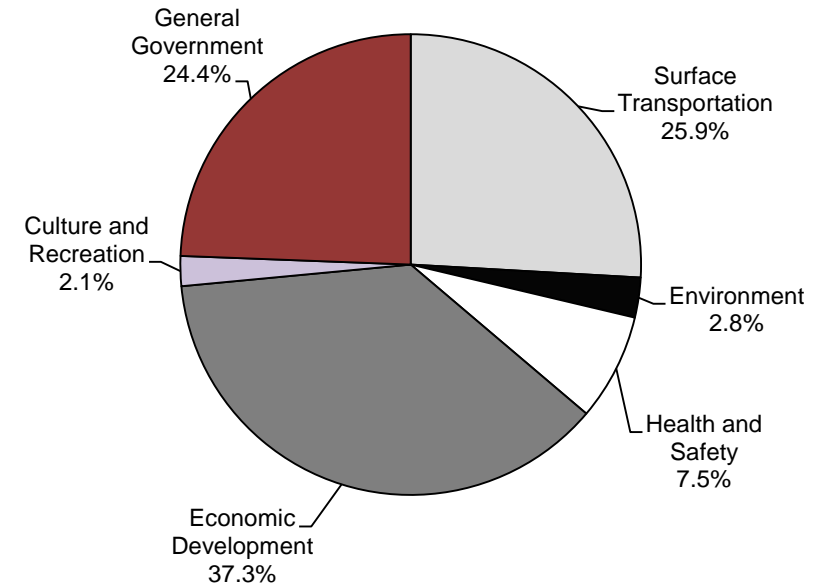
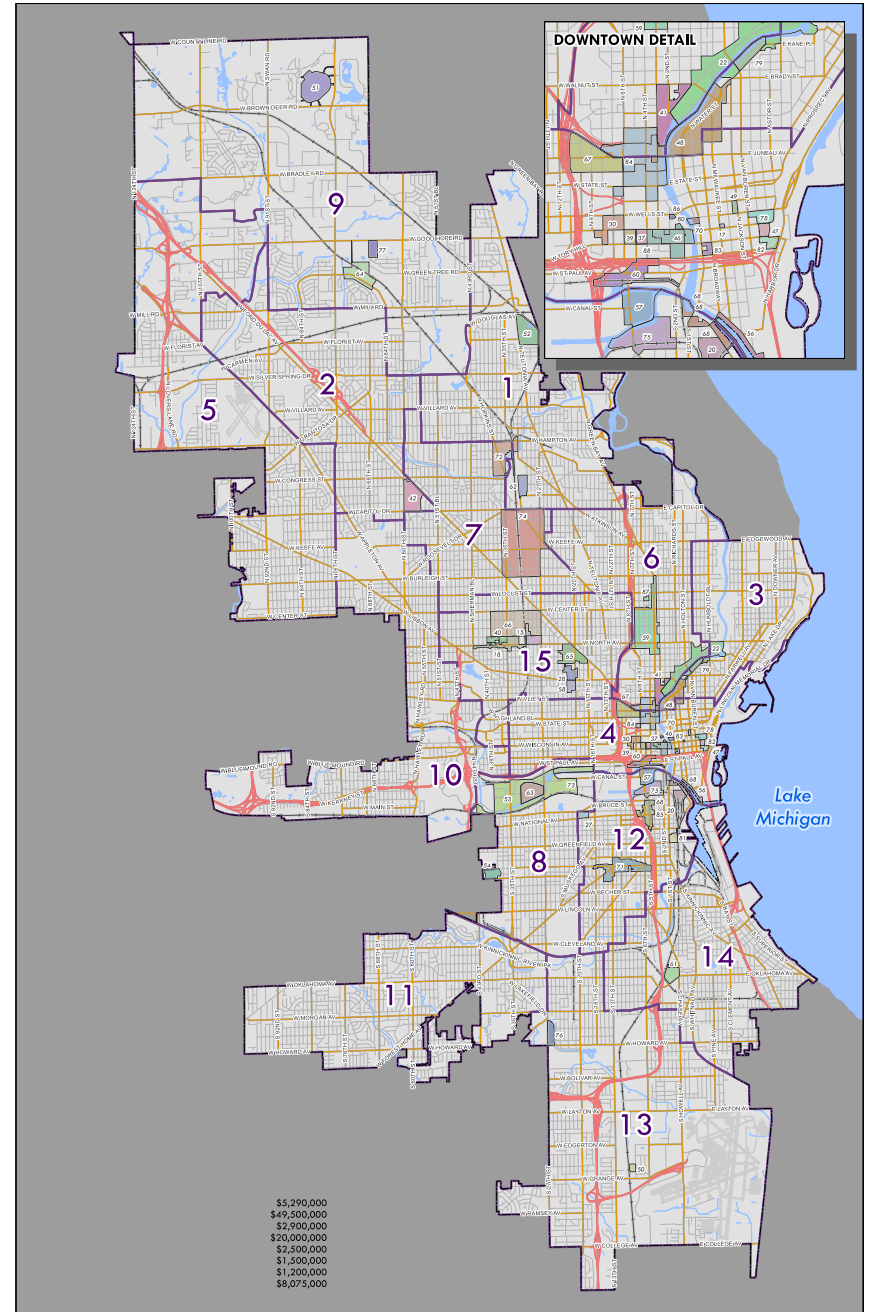
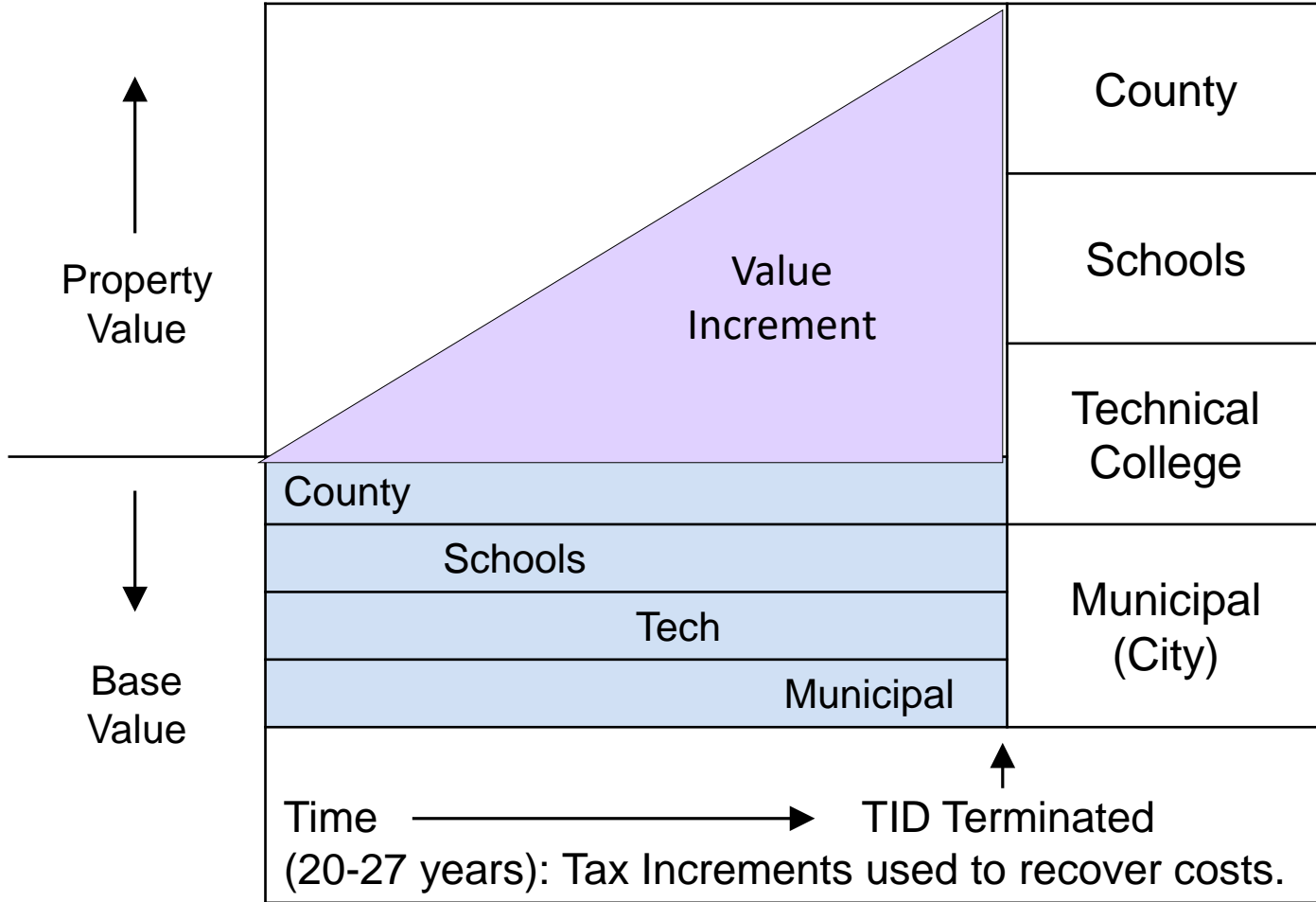


Illustration of TIF Redevelopment Model

Value Growth and Tax Increments in TIF



PPP Fiscal Risk Assessment Model (PFRAM “Heat map”)

Assesses fiscal risks from PPP projects

PROJECT A - Example

PROJECT RISK SHARING ARRANGEMENTS							
IDENTIFICATION OF RISKS			LIKELIHOOD	FISCAL IMPACT	RISK RATING <small>Likelihood*Impact</small>	MITIGATION STRATEGY	PRIORITY ACTIONS <small>Rating*Mitigation</small>
1	Governance risks	Details	High	High	Critical	NO	Critical
2	Construction risks	Details	Medium	Medium	Medium	NO	High priority
3	Demand risks	Details	High	High	Critical	NO	Critical
4	Operational and performance risks	Details	High	High	Critical	NO	Critical
5	Financial risks	Details	Low	Low	Irrelevant	YES	NO action required
6	Force majeure	Details	Low	Low	Irrelevant	NO	NO action required
7	Material adverse government actions	Details	Medium	Medium	Medium	NO	High priority
8	Change in law	Details	High	Medium	High	NO	High priority
9	Rebalancing of financial equilibrium	Details	Low	Low	Irrelevant	NO	NO action required
10	Renegotiation	Details	High	Medium	High	NO	High priority
11	Contract termination	Details	Low	Low	Irrelevant	NO	NO action required

The Case for a Unified Approach

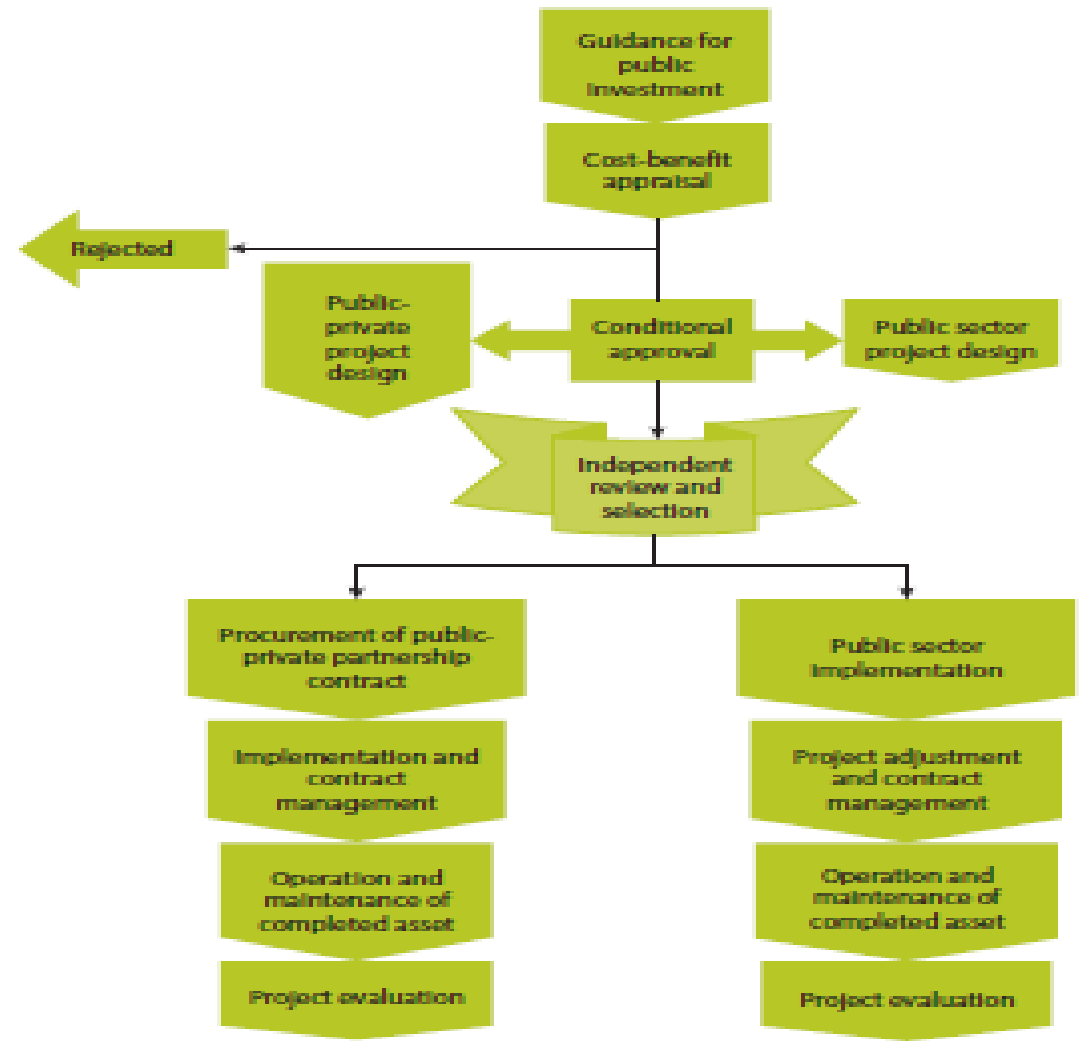
PPPs are a form of implementing a public investment project

And..

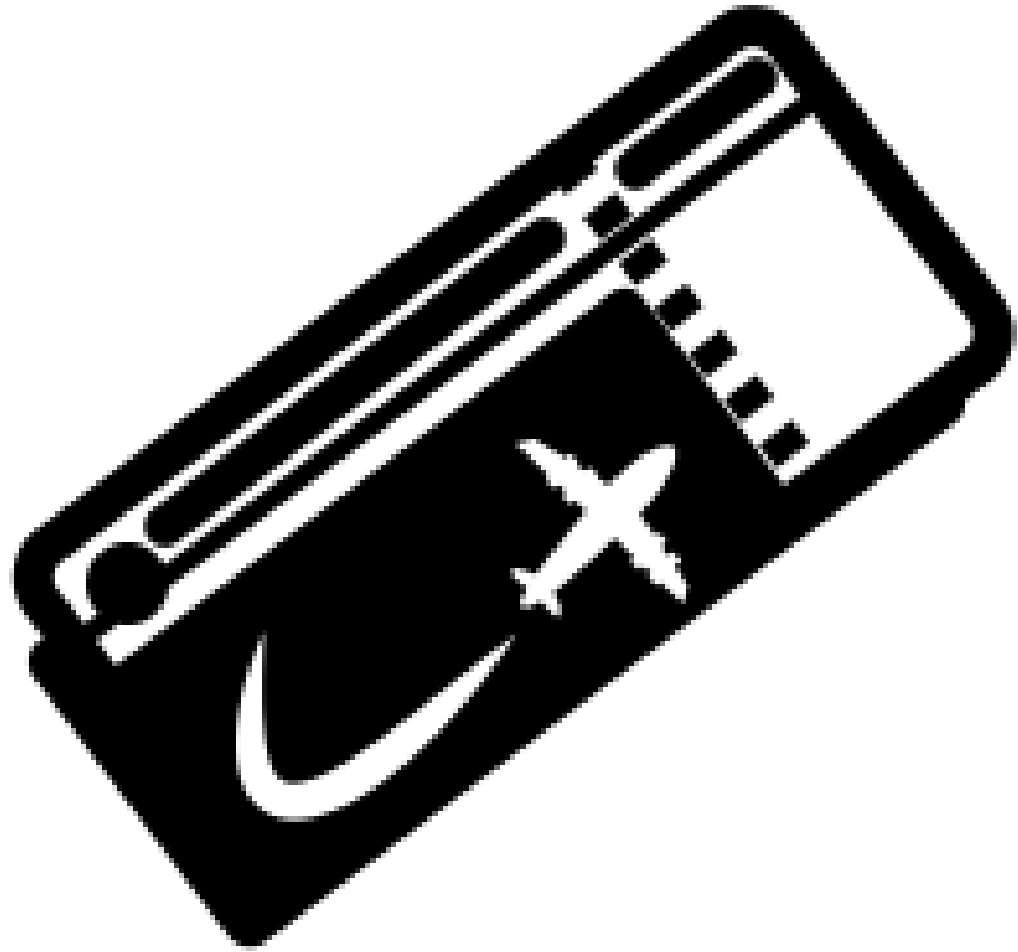
- ✓ All Investment Project proposals should be screened for compatibility and consistency with national/city policies
- ✓ All Investment Projects must have common economic assessment
- ✓ All Investment Projects need to be technically and legally feasible environmentally compliant, socially sustainable, and economically viable
- ✓ All Investment Projects cost must be known and in line with fiscal priorities

Linking fiscal commitments due to PPPs and the budget constraint remains a central challenge for managing PPP fiscal risks

Deciding on Public Investment Modality in a Unified Framework



Source: World Bank, 2014, *The Power of Public Investment Management: Transforming Resources into Assets for Growth*



Investing to Invest

- Prioritize key bottlenecks and risks to delivery of resilience infrastructure
 - Capital budgeting
 - Public Investment Management
- Rank barriers to improving public investment program delivery
 - City-level
 - National
 - Time-horizons (short, medium, long-term) for **Action Plans**

IMF Public Investment Management Assessment (PIMA)

Phase/Institution		Institutional Strength	Effectiveness	Reforms Priorities
A. Planning	1	Fiscal rules	Debt rule: 20% domestic, 20% external, and 40% of GDP. Expenditure 30% of GDP. Capex to recurrent 30/70 ratio.	Low: No debt sustainability concerns. Public debt 15.6 percent of GDP.
	2	National and sectoral planning	Detailed planning process for NDP including 3-year PIP estimates. Limited monitoring of outputs/outcomes.	Low: Planning process broadly comply with good practices.
	3	Central-local coordination	Overdrafts limited to 1/3 of previous revenue excluding grants. All borrowing approved by the MFED and MLG but the MoF does not monitor debt. Detailed estimates per LG in budget book.	Low: Local governments investment accounts for less than 10 percent of total public investment.
	4	Public-private partnerships	PPP strategy complies with good practice but applies to CG and LG only. No monitoring of contingent liabilities.	High: Several PPP projects in the pipeline, with weak MFED oversight and capacity.
	5	Regulation of infrastructure companies	Only telecoms sector is regulated. Energy and water in the future. The Public Enterprises Evaluation and Privatization Agency (PEEPA) report includes some SOEs.	Medium: Growing transfers to SOEs. Many off-track investment projects are managed by SOEs.
B. Allocation	6	Multiyear budgeting	Budget contains the TEC for multiyear projects in aggregate.	High: Large implications from inappropriate project appraisal.
	7	Budget comprehensiveness	Most capital spending is undertaken through the budget including donor financing.	Medium: Budget implications of rising number of PPP projects currently unknown.
	8	Budget unity	Capital and recurrent budgets are prepared separately and the CoA does not make a clear distinction between capital and recurrent budgets.	High: Significant risks of underfunding maintenance. Inability to measure capital stock.
	9	Project appraisal	Planning manual contains appraisal guidelines, includes a methodology, and currently being updated.	High: Cost estimates unreliable. Aggregate cost increases 60 % higher than plan estimates. Large implications for multi-year budgeting.
	10	Project selection	Line ministries prepare a project pipeline as part of the NDP process.	High: Need to ensure that large projects are appraised properly before selected for budget funding.
C. Implementation	11	Protection of investment	No virement between development and recurrent budget, and between projects in development budget.	Medium: Poor costing results in reallocation to priority projects, squeezing funding for other projects.
	12	Availability of funding	Cash is released timely and external funding passes through TSA.	Low: Cash management is effective.
	13	Transparency of execution	PPD Act requires transparent procurement for ministries and LGs. SOEs' own policies aligned to the Act.	Low: Procurement framework complies with good practices.
	14	Project management	PPADB Regulation 95 deals with project adjustments and the agency requires end of activity reports.	High: Accountability very low in practice undermines project implementation. Cost overruns and project delays not quantified.
	15	Assets accounting	Asset register currently being phased in but not complete. Non-financial assets and depreciation not reported	Low: Accounting reform is underway

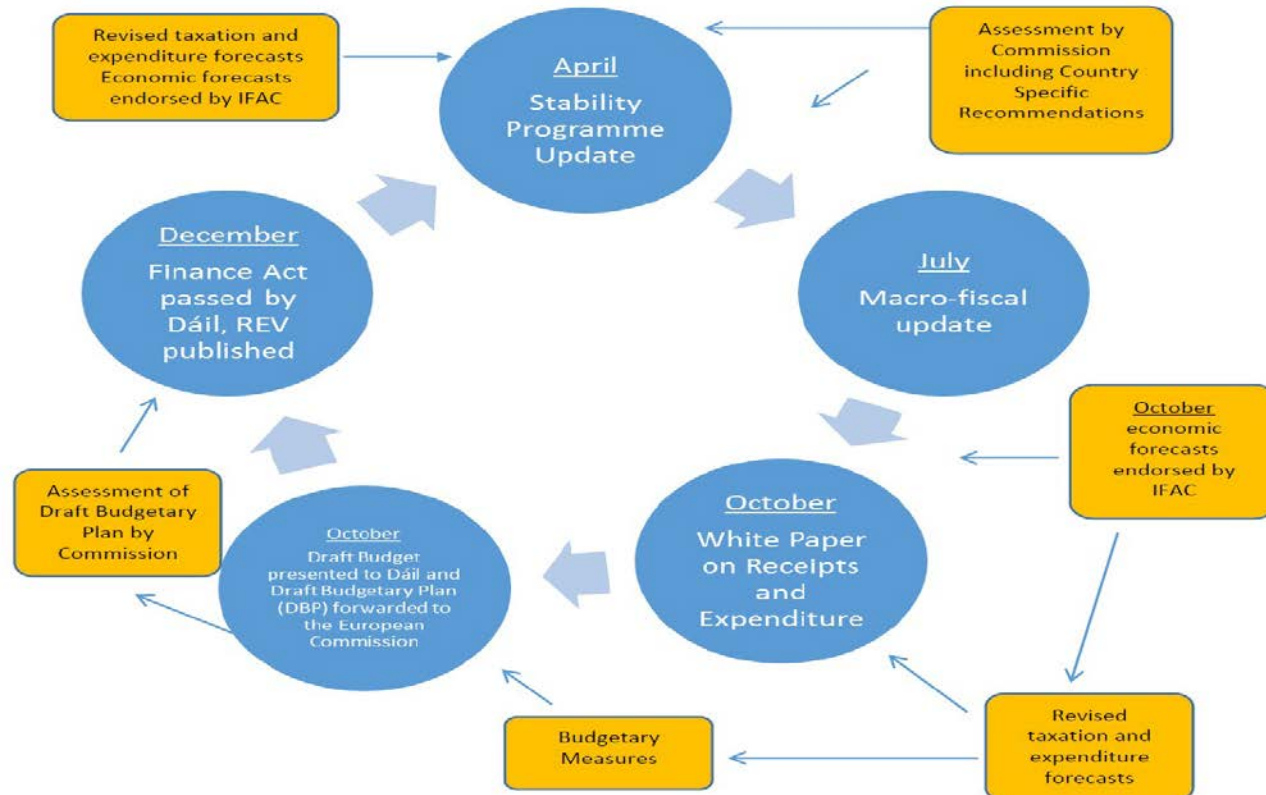


Ireland

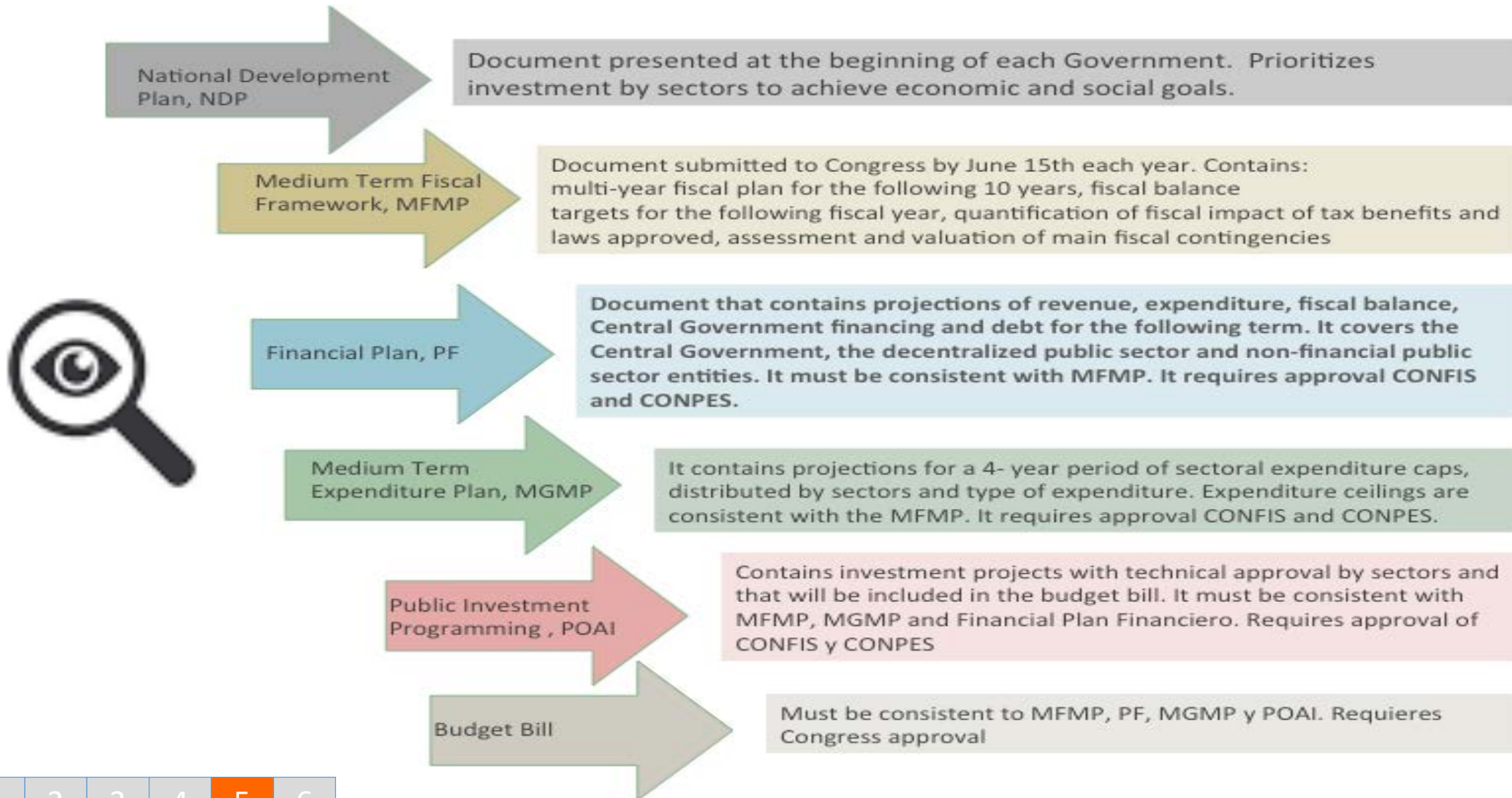
When Ireland was badly hit by the economic crisis, the government took new over-arching strategy for expenditure policy impacting on current and capital expenditure, leading to the PIM reform. Main PIM reforms include:

- **Strategies:** Medium-term Fiscal Statement (Nov. 2011), Infrastructure and Capital Investment 2012-16, Medium-term Exchequer Framework (Nov. 2011) Comprehensive Expenditure Report 2012-14 (Dec. 2011), Revised Estimates for Public Services (Feb. 2012), etc.
- **Fiscal Advisory Council** created to independently assess whether government is meeting targets and objectives (2011).
- **Strengthening of Department of Finance (creation of Department of Public Expenditure and Reform since 2011)** for both project appraisal and monitoring of implementation
- **Issuance of clear guidelines:** *Public Spending Code* contains detailed appraisal guidance
- **Strengthening of Central Expenditure Evaluation Unit to review CBAs and CEAs of spending agencies** and provide analytical and research support
- **Capacity building across government in appraisal**

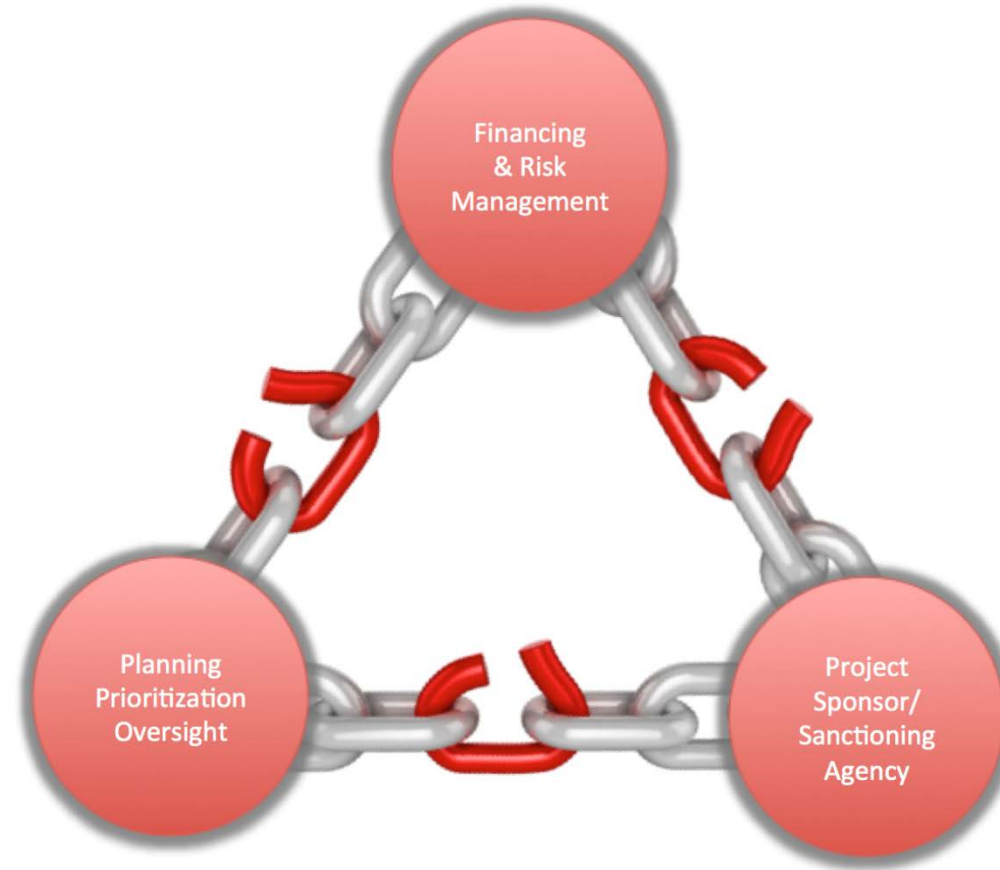
Ireland's Integrated Annual Budget Cycle



Colombia's Integrated Macro-Fiscal Framework

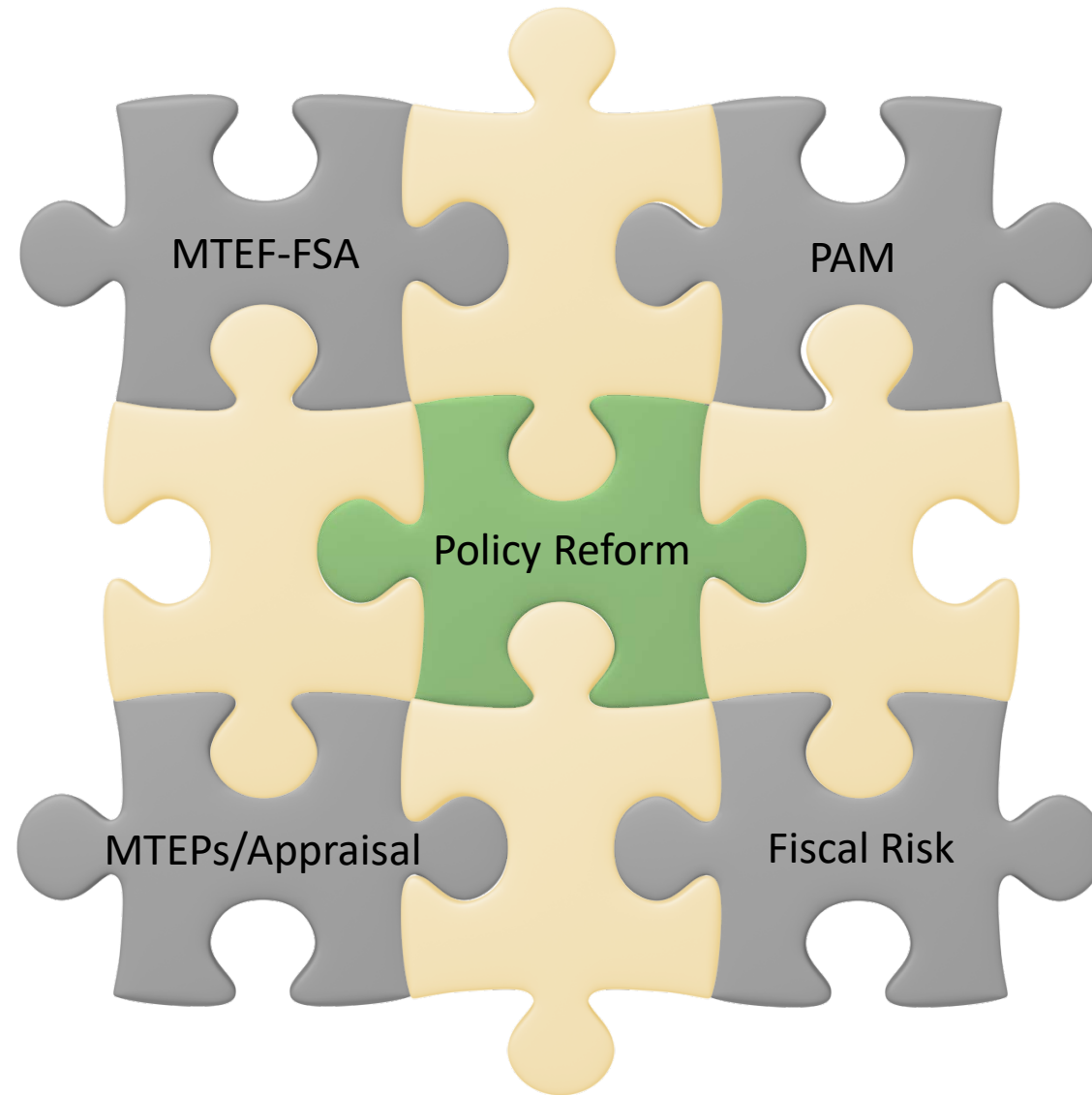


Integrating Institutional Linkages



Strengthening Capital Budgeting Practices

Incentives	<ul style="list-style-type: none">✓ Do key political or bureaucratic leaders have sufficient motivation to strengthen capital budgeting practices✓ All project proponents do not have incentives to put projects “off-budget”✓ Mechanisms are in place to incentivize projects with inter-regional planning/economic benefits✓ Project sponsors/sanctioning authorizes effectively “price” fiscal risks and forward returns versus liabilities in project selection
Integration	<ul style="list-style-type: none">✓ Incorporate all major capital investment projects, including PPPs with any budget linkages, into budgeting process✓ Reflect adequate operations & maintenance expenses✓ Coordinate sectoral and territorial/spatial dimensions of public investment prioritization✓ Ensure gate-keeping is in place for all projects
Information	<ul style="list-style-type: none">✓ Provide adequate decision making basis for project selection✓ Ensure accounting standards are adequate to reflect balance sheet of capital investment sponsors✓ Capital forward commitments of existing are adequately costed✓ The fiscal position of notably sub-national project owners is adequately measures✓ Absence of information likely implies absence of interest, raising some questions about incentives & integration!



Information: Basic On-line Financial & Physical Program Tracking

OpenRoads

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Mapping, tracking, and visualizing road projects in the Philippines for inclusive growth.







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For concerns, please refer to Contact Page to get in touch with the appropriate agency.

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You can either type a location or select from the dropdown list.

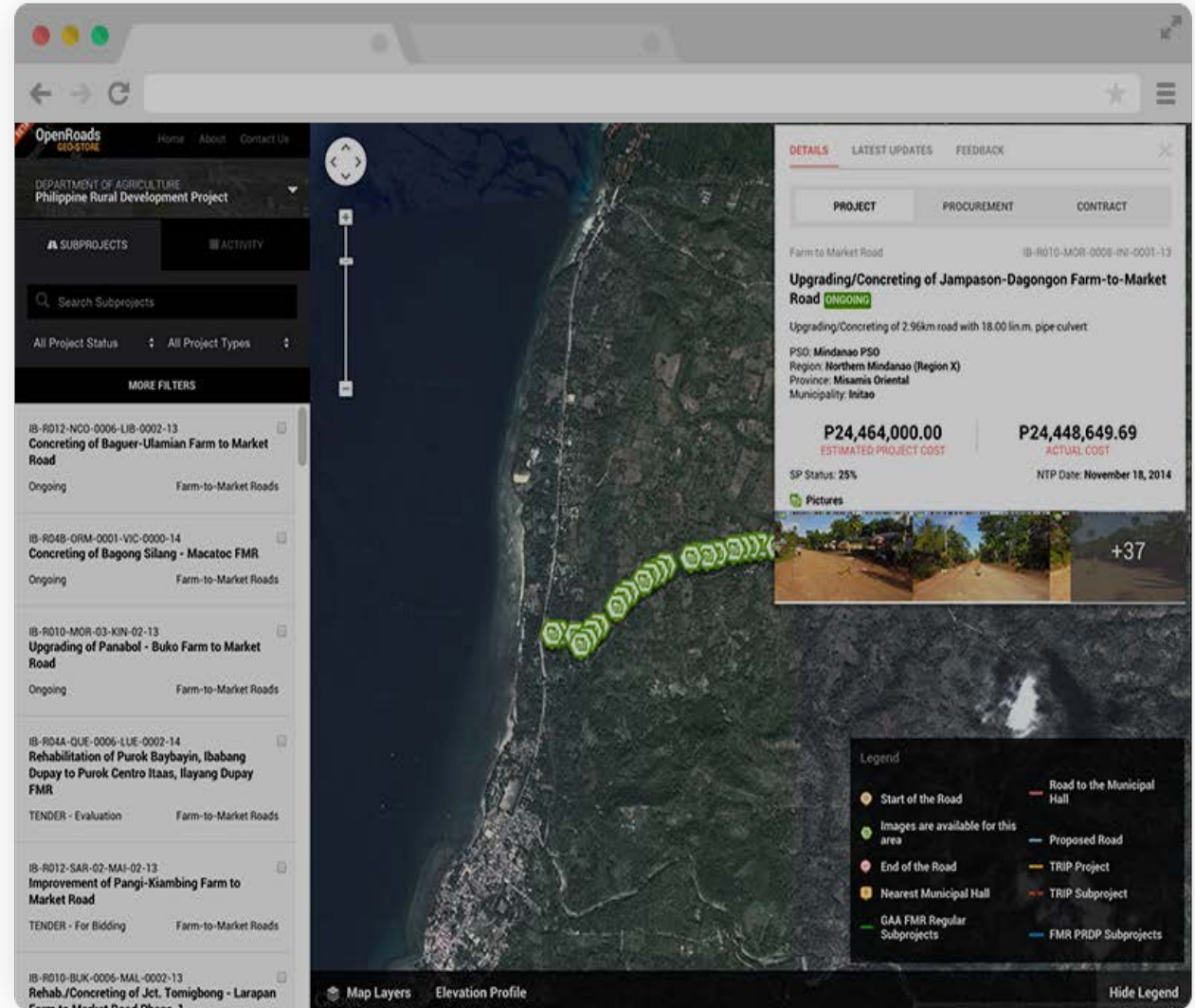
Current Programs

-  Kalsada
-  Tourism Road Infrastructure Program (TRIP)
-  Farm-to-Market Road Regular (GAA FMR Regular)
-  Farm-to-Market Phil. Rural Dev't Project (FMR - PRDP)
-  Bottom-Up Budgeting (BUB)
-  Provincial Road Management Facility (PRMF)

Road Infrastructure Program Statistics

Get a quick insight on how many projects started, sub-projects closed and ongoing, road videos and photos uploaded on our programs.

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SUBPROJECTS ACTIVITY

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- IB-R012-NCO-0006-LIB-0002-13
Concreting of Baguer-Ulamian Farm to Market Road
Ongoing Farm-to-Market Roads
- IB-R048-ORM-0001-VIC-0000-14
Concreting of Bagong Silang - Macatoc FMR
Ongoing Farm-to-Market Roads
- IB-R010-MOR-03-KIN-02-13
Upgrading of Panabol - Buko Farm to Market Road
Ongoing Farm-to-Market Roads
- IB-R04A-GUE-0006-LUE-0002-14
Rehabilitation of Purok Baybayin, Ibabang Dupay to Purok Centro Itaas, Ilayang Dupay FMR
TENDER - Evaluation Farm-to-Market Roads
- IB-R012-SAR-02-MAI-02-13
Improvement of Pangi-Kiambing Farm to Market Road
TENDER - For Bidding Farm-to-Market Roads
- IB-R010-BUK-0005-MAL-0002-13
Rehab./Concreting of Jet. Tomigbong - Larapan Farm to Market Road Phase 1

Map Layers Elevation Profile Hide Legend

DETAILS LATEST UPDATES FEEDBACK

PROJECT PROCUREMENT CONTRACT

Farm to Market Road IB-R010-MOR-0008-INT-0001-13

Upgrading/Concreting of Jampason-Dagongon Farm-to-Market Road ONGOING


Upgrading/Concreting of 2.96km road with 18.00 lin.m. pipe/culvert.

PSO: Mindanao PSO
Region: Northern Mindanao (Region X)
Province: Misamis Oriental
Municipality: Initao











P24,464,000.00
ESTIMATED PROJECT COST

P24,448,649.69
ACTUAL COST

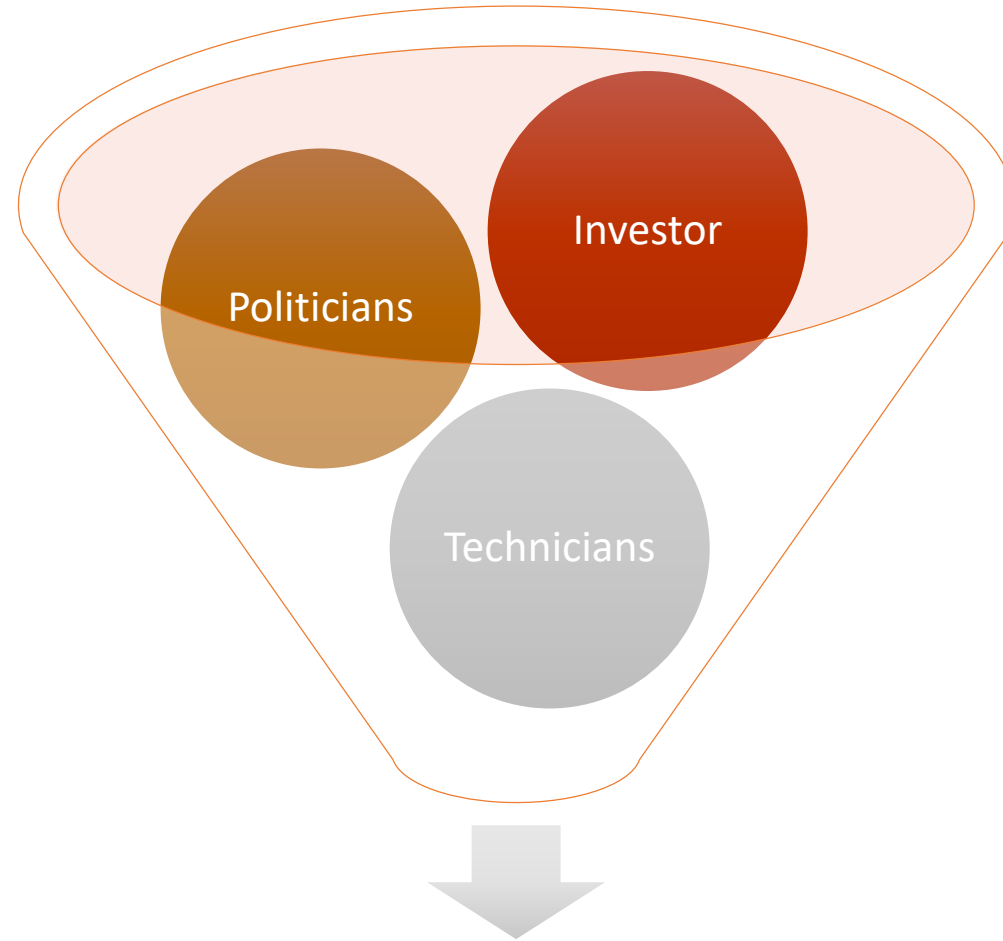
SP Status: 25% NTP Date: November 18, 2014

Pictures  +37

Legend

-  Start of the Road
-  Images are available for this area
-  End of the Road
-  Nearest Municipal Hall
-  GAA FMR Regular Subprojects
-  Road to the Municipal Hall
-  Proposed Road
-  TRIP Project
-  TRIP Subproject
-  FMR PRDP Subprojects





Better & Bankable Projects

Top Down: Gaps?



Bottom-up: Gaps?

Takeaways

- Better & bankable projects require strategic rather than only opportunistic approach
- Capital budgeting is a set of interlocking tools
- Opportunities may be within or beyond the realm of city 's actions

Q & A

Varying Institutional & Incentive Arrangements

1. Strong central oversight function vs. autonomous spending units
 - Who should appraise projects, sponsoring spending ministries (Chile, UK) or a central unit (Korea)?
 - Where spending units prepare the appraisal, how robust should the review function be?
 - Who should prepare sectoral methodologies, central unit (Chile, Korea) or spending units (UK, Ireland)?
2. Methodological choices
 - Which methodology – cost-benefit analysis (Chile, UK, Ireland) or multi-criteria analysis (Korea) – is most appropriate? If CBA, which methodological approach? If MCA, which criteria should be used and how should they be weighted?
 - How far should social (economic) pricing go? How far should sectoral methodologies be adopted, in terms of breadth and depth?
3. Political vs. technical: accommodation vs. purity in system design
 - To what extent should conduits for political influence be built into the appraisal process? Different designs: “protect the core” (Chile) vs. “coopt the politics” (Korea) vs. “guidance on the margin” (UK, Ireland)?

Selected References

The Power of Public Investment Management: Transforming Resources into Assets for Growth (World Bank, 2014).

Kaganova, O. (2011). Guidebook on Capital Investment Planning for Local Governments. Washington, DC, World Bank, Urban Development Series Knowledge Papers, October, No 13,
<http://documents.worldbank.org/curated/en/654101468149684064/Guidebook-on-capital-investment-planning-for-local-governments>, pp. 101.