

Expenditures and Revenue Management

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Objective

The objective of this module is to introduce concepts designed to strengthen the ability of management to control the level of expenditures and improve collections so that services can be provided efficiently and effectively and reduce the need for tariff increases.

Content

1. Importance of Expenditure Management
2. Fixed Asset Maintenance
3. Managing Operating Expenditures
4. Importance of Revenue management

Key Messages

Tariffs should be based on the efficient cost of providing WSS services

Expenditure management is critical to reducing the cost of providing WSS services

Tariff increases should be the last option considered in helping to improve the creditworthiness of a WSP

Importance of Expenditure Management

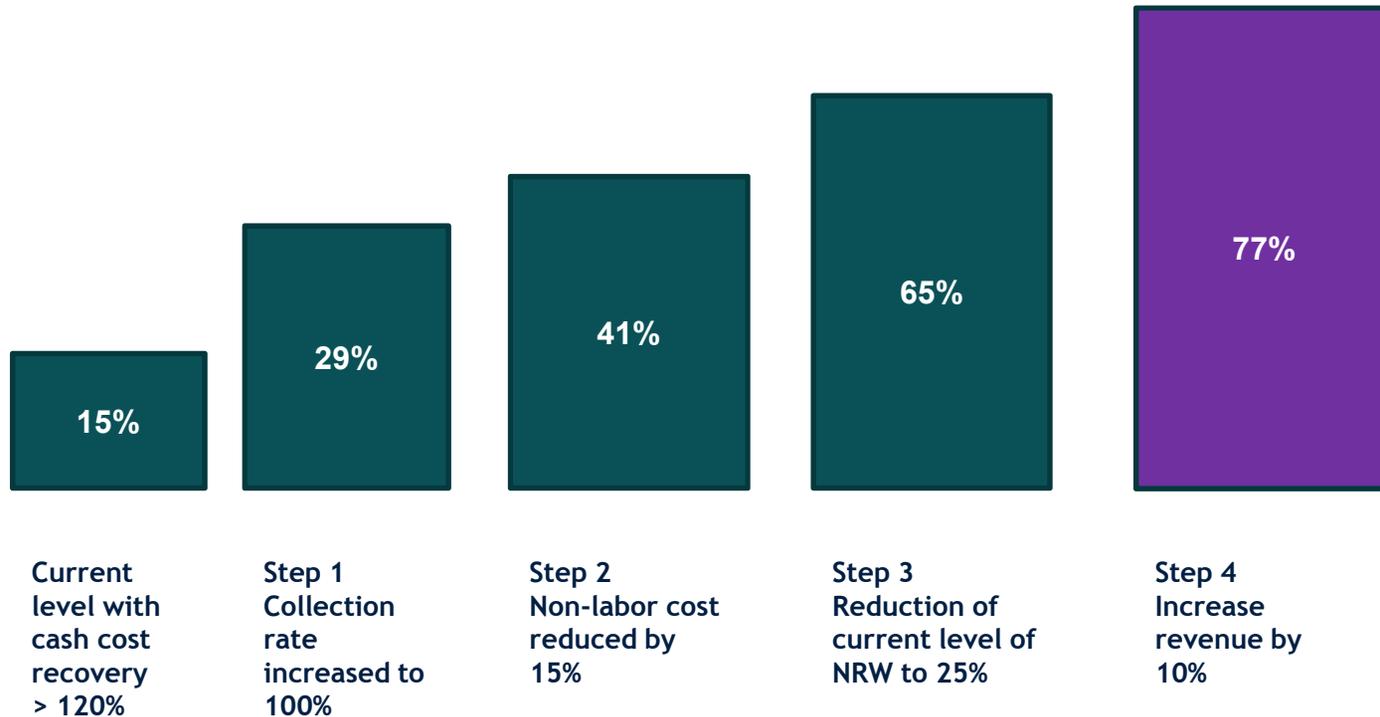
Expenditure Management

- Expenditure management focuses on ensuring that funds are allocated and used to achieve agreed priorities and that information is available to enable management to plan/monitor the performance of their programs and the impact of the expenditures.
- The tools used in expenditure management include the planning of resources and expenditures, allocating resources and transferring funds to functions, **controlling** and executing expenditures and monitoring expenditure performance.

Why is Expenditure Management Important?

- To access the commercial financing needed to close the infrastructure gap, utilities must be creditworthy – a measure of creditworthiness is the ability to generate positive net cash flows from operations (operating cost coverage ratio)
- Tariffs for water supply and sanitation are (should be) based on an efficient level of costs
- Expenditure management is critical to reducing operating expenses to levels which are efficient

Impact of Addressing Key Inefficiencies



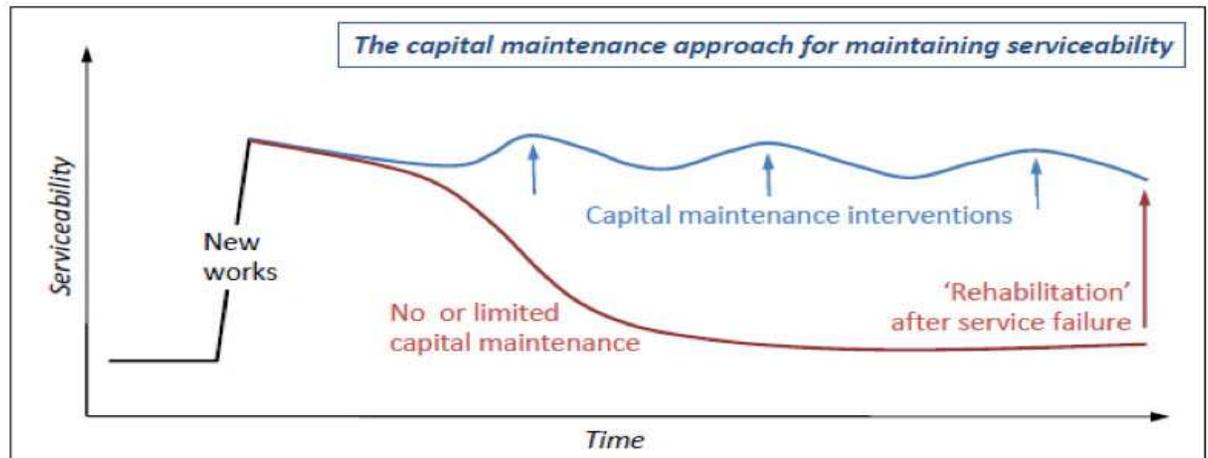
Fixed Asset Maintenance

Asset Management Plans

Effective maintenance capital assets is a key element in an entity's asset management plan – this topic is discussed in detail in Module 4 Operational Considerations in Running a Utility

Maintenance Expenditures

- Renewing, replacing, refurbishing or restoring assets (3Rs) to ensure that services continue at the same level of performance that was first delivered.
- In the absence of (recurrent) capital maintenance, infrastructure and service delivery degrades over time. Eventually there is a need for renewed capital expenditure to replace the asset.



Capital Expenditure vs Operational Expenditure

Capital Expenditure (CAPEX)	Operational Expenditure (OPEX)
One time, Lump-sum amount, may take several years to recover	Recurrent, regular and ongoing to provide services to customers, must be recovered in real-time
Used for creation of new assets, new projects	Used for: Labor, Fuel/power/electricity, Chemicals, Materials, Purchases of bulk water, Governmental charges/Licensing fee, Write-offs, Establishment charges, Rentals, etc.
Benefits are realised in future, beyond the current year	Benefits are realised in the current year

Impact of OPEX on CAPEX (Including CapManEx)

Well-spent OPEX and good asset management can lead to...

1. Deferring CAPEX – Well maintained assets last longer, and capital expenditures to replace them may be delayed by a significantly long period.
2. Reduction of CAPEX – Well maintained assets cost less to refurbish (CapManEx) and reduce the need for renewal of assets.

Low levels of OPEX can lead the assets to collapse, requiring much costlier replacement and need for rehabilitation investments.

Impact of CAPEX (Including CapManEx) on OPEX

Well-spent CAPEX (including CapManEx) can lead to...

1. Increasing OPEX – “Additional” plant and equipment may require additional labor, fuel/power, maintenance, etc.
2. Decreasing OPEX – New “replacement” plant and equipment may be more efficient and thereby reduce the cost of fuel/power, labor, chemicals, etc.

Discussion Point

Do the WSPs in your client countries emphasize maintenance and has the Bank provided support to the management to improve its maintenance management procedures?

1. Yes
2. No
3. Don't know

Infrastructure Renewal Accounting

- Infrastructure Renewal Accounting was designed for water regulators to overcome the limitations of historic cost accounting for long-life infrastructure assets such as the underground network for water utilities.
- This long-life underground network is considered as a single asset which is treated differently than above ground assets by replacing depreciation with an Infrastructure Renewal Charge (IRC).
- The Infrastructure Renewal Charge is an expense equal to the estimated cost to maintain that asset at its current level of operation.

Infrastructure Renewal Charge

- The Infrastructure Renewal Charge increases the utility's operating expenses since the proper level of maintenance is normally greater than depreciation charges on old assets at historic cost
- The impact of the IRC is that the higher level of operating expenses will allow the utility and the regulator to authorize higher tariff levels – and – the utility has greater incentives to implement the level of maintenance spending supported by the Operations Maintenance Management Plan

Discussion Point

Do you think that the concepts developed regarding IRC and efforts to improve service efficiency would enable you (the Bank) to convince your client WSPs to improve the emphasis given to maintenance?

1. Yes
2. No
3. Don't know

Challenges & Action Planning

Too Much
Expenditure

8. PERSONNEL EXPENDITURES too high
- A. HR management poor
 - B. Staff productivity low

Potential Actions

Action 8.1 Establish a Human Resources unit with the management and staff structure needed to perform human resources management functions. [A]

Action 8.2 Research optimal human resources procedures and produce report outlining best options for the local authority. [A]

Action 8.3 Implement the adoption or revision of written HR policies and procedures. [A]

Action 8.4 Review personnel expenditures on a regular basis to identify reasons for any increases or opportunities for savings. [GEN]

Action 8.5 Establish the consistent use of merit-based hiring and promotion. [B]

Action 8.6 Introduce or improve annual professional performance reviews for all staff. [B]

Action 8.7 Improve incentives for good staff performance. [B]

Managing Operating Expenditures

Managing Operating Expenditures

Operating Expenditure

Bring efficiency into operations

Reduce establishment costs

Adopt norms for operational efficiency from similarly positioned utilities

Manage assets for least life-cycle cost

Pursue energy efficiency, and consider supplementing energy from own/less expensive sources where possible (Bio-gas, Solar)

Make tariff design, billing, collection etc, simple, transparent, participatory, and efficient

Use IT for cost reduction and building greater stakeholder confidence

Linking Expenditure Management with Creditworthiness...

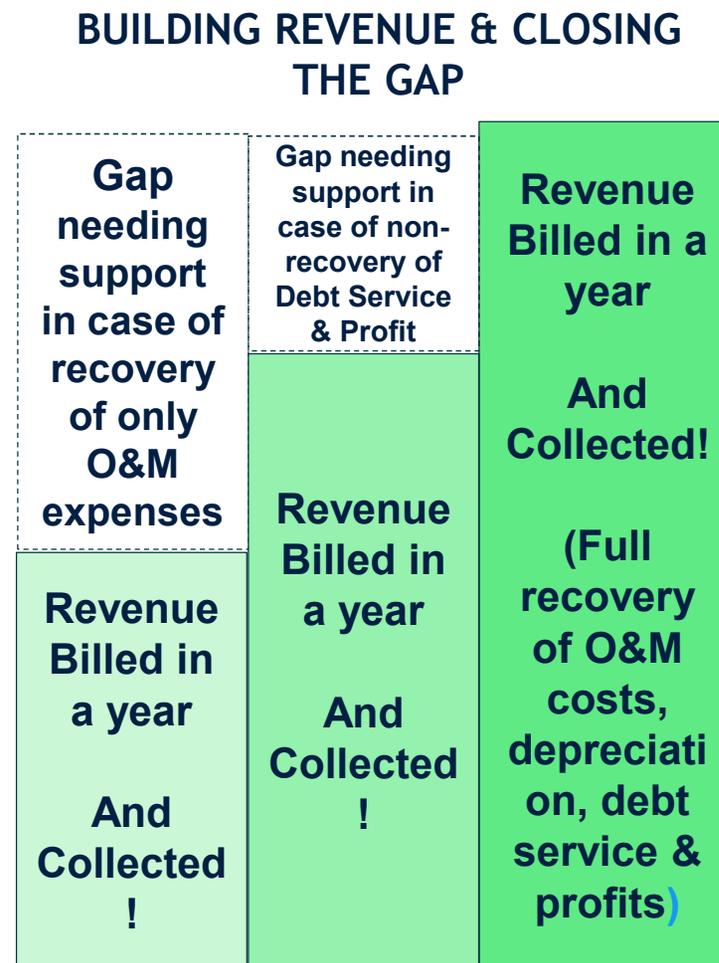
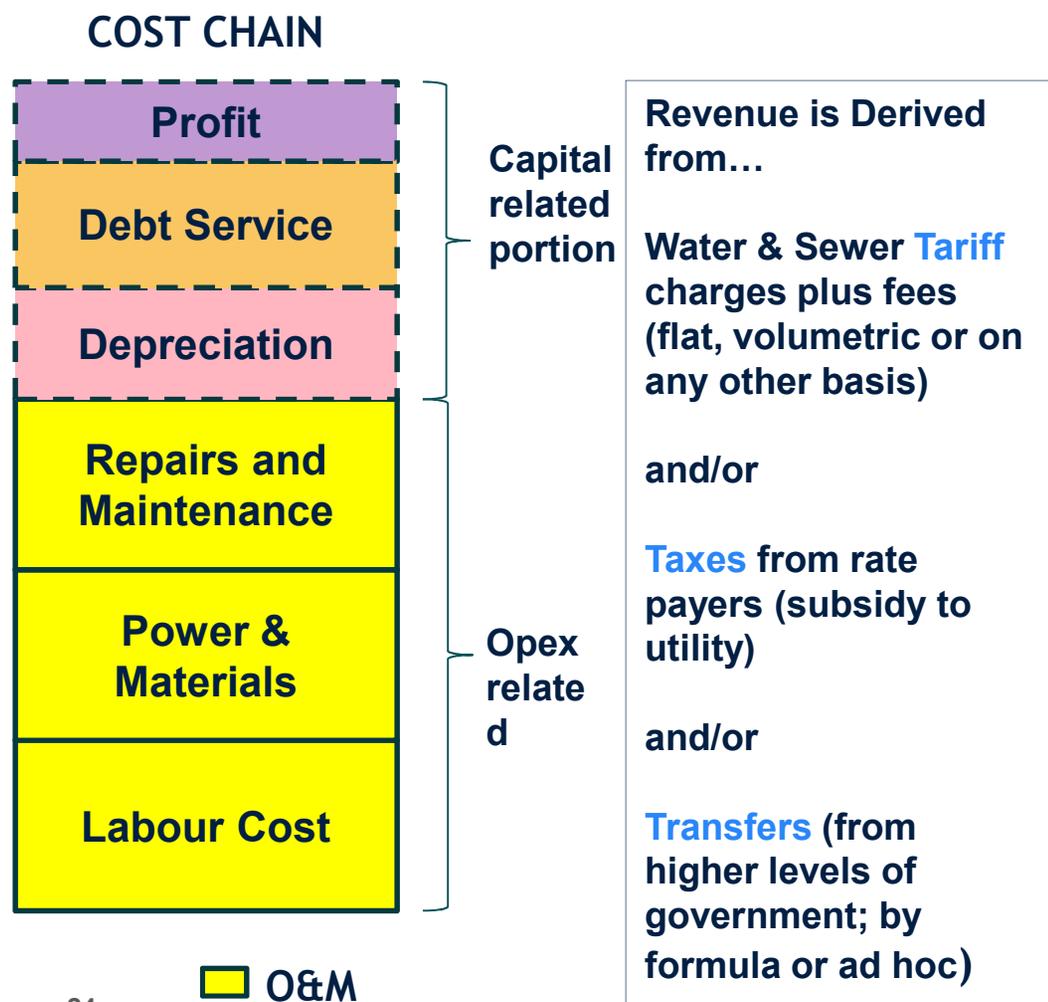
- Efficient and effective expenditure management is needed for full cost recover - an important criterion for creditworthiness.
- An appropriate level of expenditures for maintenance of assets and sustaining adequate service levels is critical. Sustainable revenue forecasts can only be made if there is a sustainable service level.
- Expenditure management must focus on performance and be linked to management policies.
- The level of expenditure should be budgeted so as to be kept below the level of revenues in order to achieve a margin sufficient to repay debt.

Linking Expenditure Management with Creditworthiness

- The timing of expenditures must be managed to maintain adequate liquidity to avoid cash flow crises.
- Expenditures need to be budgeted (preferably multi-year) and budget discipline must be maintained on both OPEX budgets and CAPEX budgets.
- For accessing private financing, a multi-year capital investment plan, as well as its linkages with improved service levels and future revenues/expenditures is necessary.
- Procurement and contract management systems are essential in making expenditure management more performance oriented.

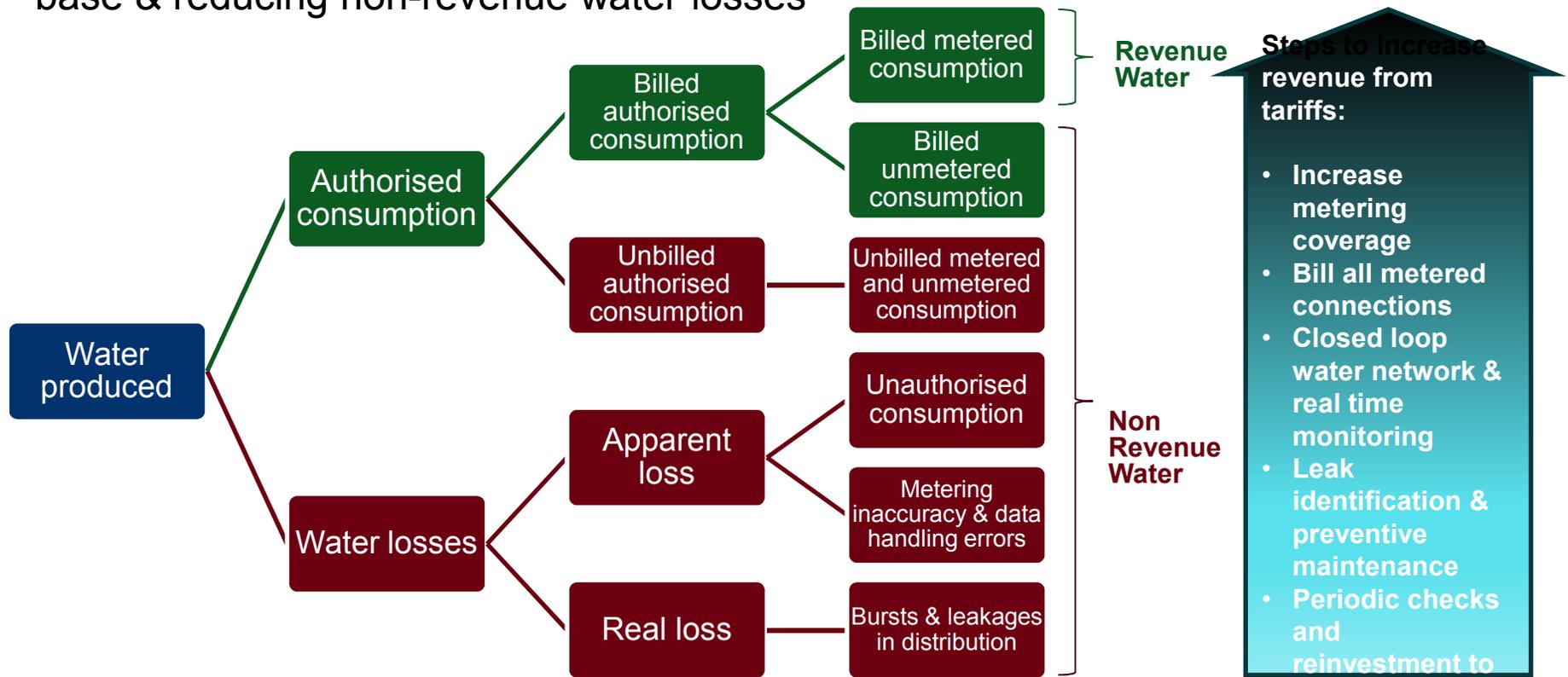
Importance of Revenue Management

Revenue and the Cost Chain



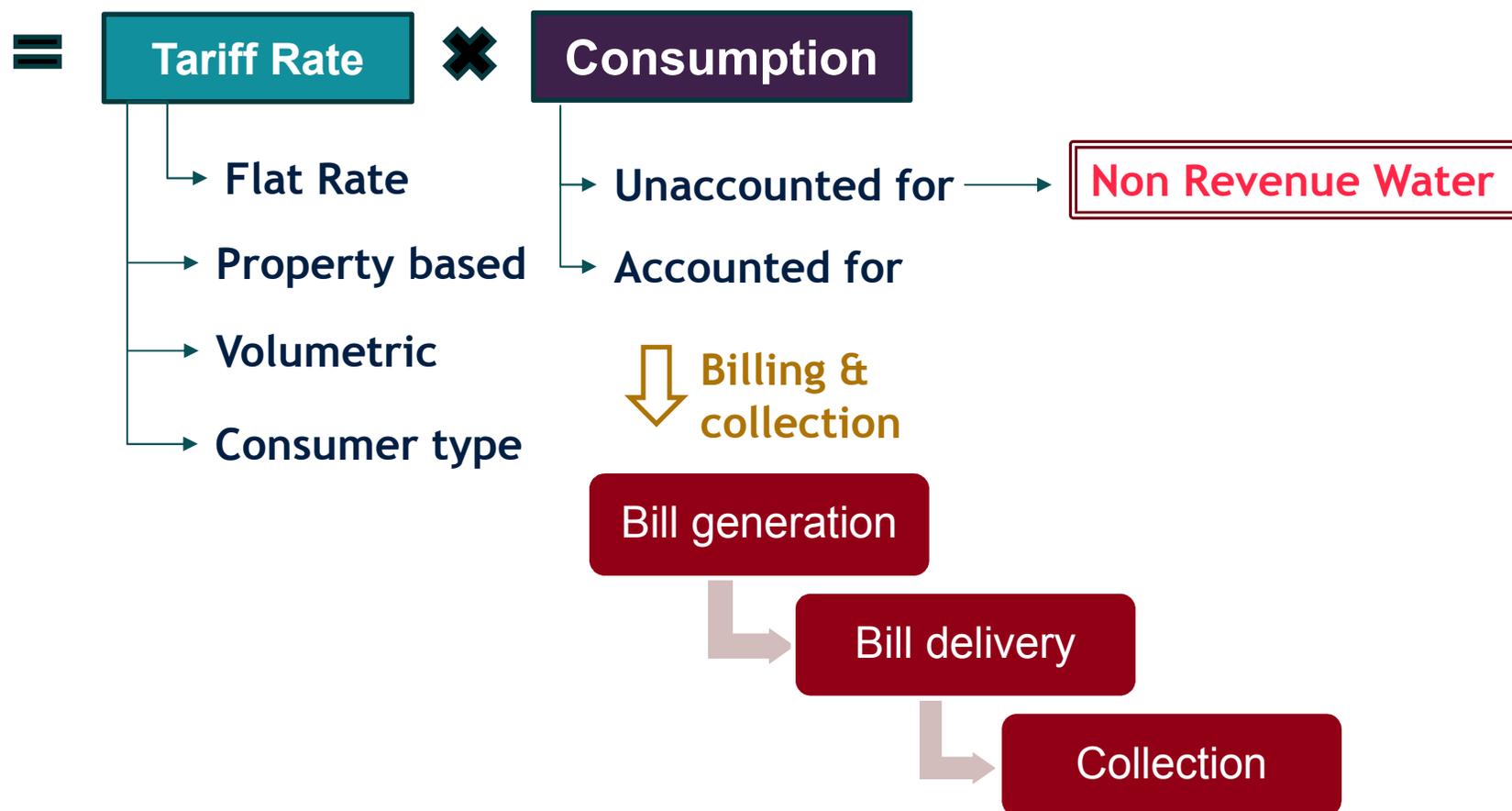
Tariffs: Efficient Water Accounting, Metering and Reducing Non-Revenue Water

The amount of water produced and supplied should be measured at all stages of water supply system – from treatment plants to transmission mains and at last mile user pipelines. Revenue from tariffs can be improved by increasing the consumer base & reducing non-revenue water losses



Tariffs: Understanding Revenue from Water Tariffs

Revenue collected from water users for the water supplied



Tariffs: Revenue Realization

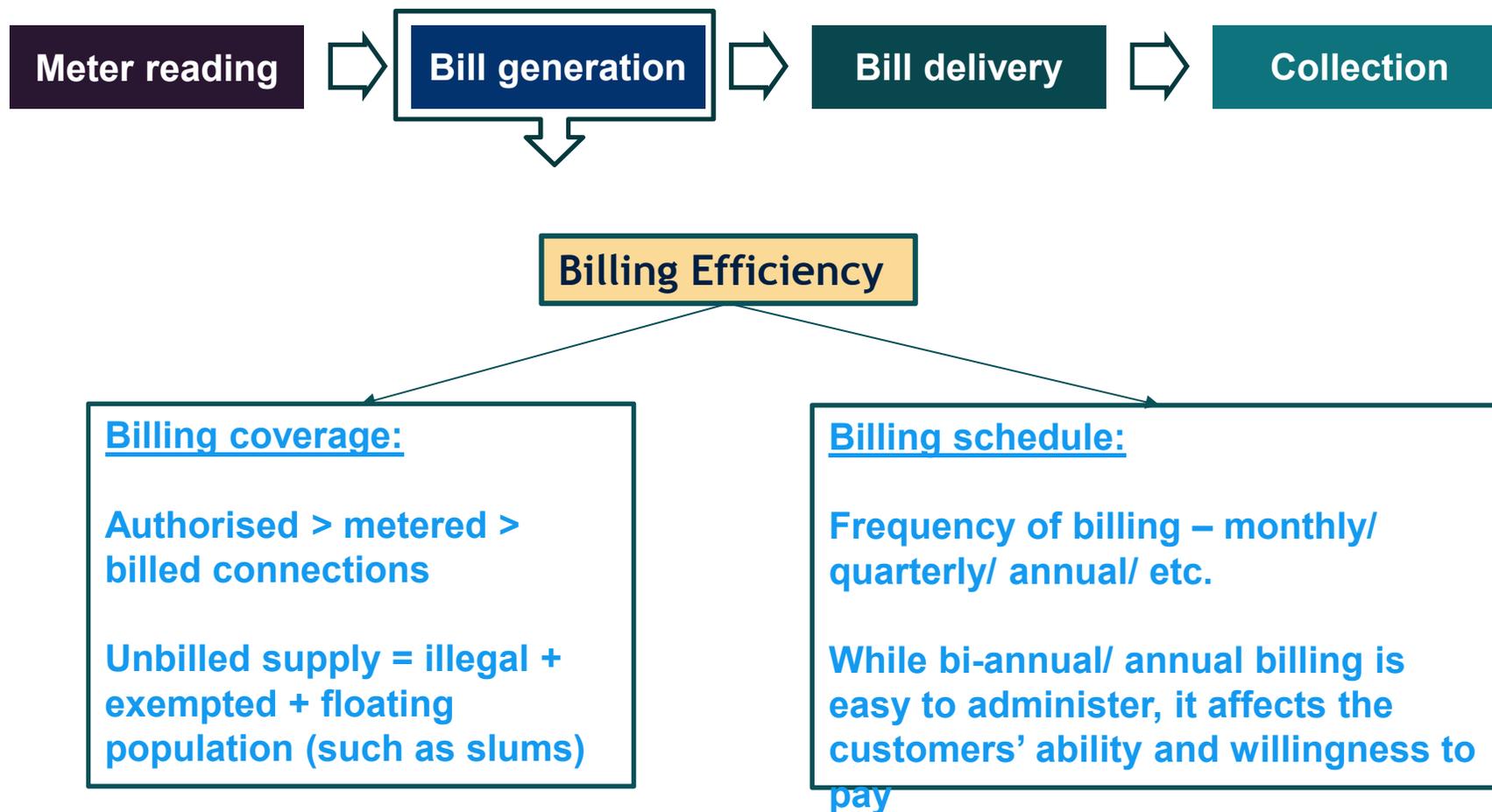


- **Crucial as the basis of consumer billing**
- **Labour intensive process**
- **Prone to human errors**
- **Is often the subject of consumer disagreement in the billing process**

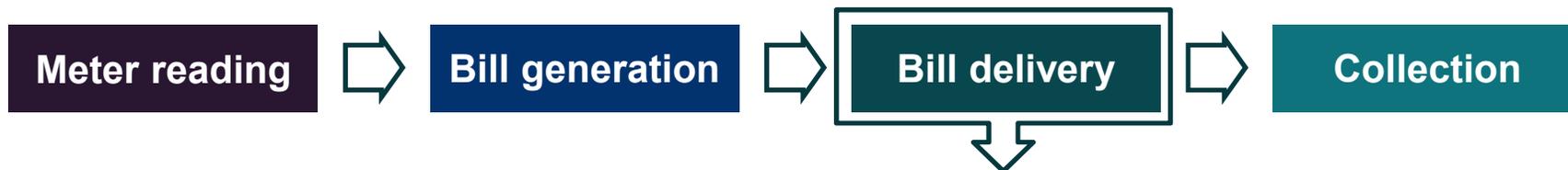
- **Up to date database of consumers is a prerequisite**
- **Operations Research approach to improve meter reading process efficiency**
- **Remote meter reading is helpful**

Clear identification of the addressable set of customers is the first step towards improving revenue realisation.

Tariffs: Revenue Realization



Tariffs: Revenue Realization



Transitioning from paper based bills that are hand delivered to online billing using web portals helps achieve timely delivery and reduces billing costs. However outreach will depend on internet and mobile penetration



Tariffs: Revenue Realization



Payment options



Cash/ cheque payments at designated counters and offices



Kiosks/ ATMs – to view bill amount and make payments

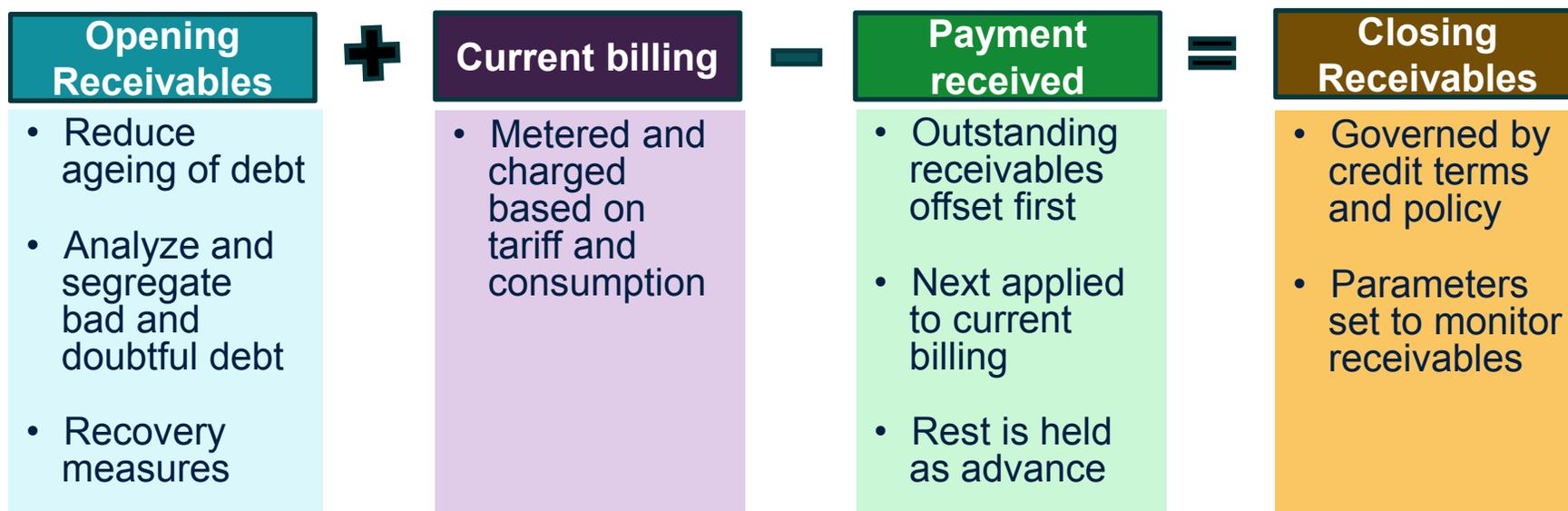


Online transfers through exclusive portals or other aggregators and financial service providers

- Percentage of billed versus amount owed
- Need for “Know Your Customer” documentation
- Security deposits to offset risk of non-payment
- Penalties for delay plus service cut offs and reconnection charges to discourage default

Tariffs: Receivables Management and Credit Policy

Receivables management (overdue receivables = debt owed to utility) policy should aim to minimize cost of offering credit while improving collections by defining credit terms and controls, monitoring cost of credit, and addressing defaults.



Key strategies in managing receivables are: to define a clear credit policy and terms; to monitor receivables, to identify defaults and bad debt, and address the same

Tariffs: Receivables Management and Credit Policy

- Credit policy of a water service provider covers the credit period extended to the consumer for payment of **their water bill**, and the credit terms that set penalties for payment default, and other credit control measures



- The service provider's credit policy ensures that the financial cost for water supply in a city/region is clearly identified, to ensure viability of operations.
- Any delay in payment adversely affects financial cost and therefore must be penalized appropriately within the applicable policy framework. (In some places, disconnection may not be an option!)
- Likewise, advance payments can be incentivized from the financial benefits realized from such payments

A Revenue Enhancement Checklist

1. Expanding chargeable customer base – metering of all connections, addressing illegal connections, revoking unreasonable exemptions
2. Balancing of tariff – ensuring full life cycle cost recovery, eliminating skewed incentives that accentuate loss, affordability based rational tariff slabs, behavioural nudging to improve willingness to pay and compliance
3. Demand side management
4. Identifying and segregating incremental cost of wastewater services and levying charges to recover the same

A Revenue Enhancement Checklist...continued

5. Minimising external dependency in revenue realisation process (operating subsidies)
6. Addressing real water losses by investing in new and innovative technology
7. Minimising financial loss through improved receivables management, credit control, and improving billing and collection efficiency
8. Investing in environmental resilience interventions to ensure service continuity and improve long term quality of service

Conclusions

Reducing operating inefficiencies improves service delivery without increasing tariffs

Reducing billing and collection inefficiencies increase collections with little cost

Tariff increases should be the last option in helping WSPs become creditworthy

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