

2019 8th REGIONAL african water LEAKAGE SUMMIT
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Non Revenue Water: A National Municipal Strategic Self Assessment (MuSSA) Perspective

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Participating and supporting organisations:

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MuSSA/B2B Business Attributes

MUSSA
Municipal Strategic Self Assessment

- Putting People First
- Service Delivery
- Good Governance
- Sound Financial Management
- Building Capable Local Government Institutions

Effective Water Services Management

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Challenges to Delivering Reliable & Safe Water Services: what we know

- Competing political priorities
- Poor water services planning & prioritization
- Aging water infrastructure; increasing investment needs
- Changing workforce with rising lack of technical skills
- Poor economic conditions, with water services provision often a "bankrupt business"
- Adequacy of water resources; climate change impact
- Shifting patterns in water demand; rising energy costs

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The purpose of MuSSA

- Assist the Municipality to address its Vulnerabilities
- Improve the delivery of reliable Municipal water services
- Monitor the issues confronting municipalities and direct support

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How has MuSSA Evolved

- In terms of Outcome 9 of the MTSF, DWS is constitutionally obliged to report to Presidency on Municipal Vulnerability per WSA via MuSSA
- 2 new business attributes added; Basic Sanitation & Financial Asset Management.
- Total number of MuSSA business attributes =18
- Questions further aligned with sector developments, e.g. National Treasury requirements
- MuSSA was incorporated into the DWS WSDP and Master planning process
- Information is being utilised by NT, DPME, AG, CoGTA, the Planning Commission/Office of the Presidency and SALGA
- Sector Refinements resulted in increase to 16 Business Attributes
- Trending analysis was initiated based on annual updates
- Addition of the Context Questions to assist understanding the WSAs
- 2006 GAP analysis was launched by DWS to establish Business Health of WSAs from a snapshot view

2006-2019

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Vulnerability vs. Risk

- Vulnerability: an identification of a weakness or gap (e.g. “I’m feeling dizzy”)
- Risk: the actual quantified potential for loss as a result of the identified vulnerability (Doctor: your blood pressure is 200/120 and you will have a stroke or heart failure if you do nothing about it)

So: being vulnerable does not imply immediate dysfunctionality, but, the potential risk remains high if nothing is done about it.

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- MuSSA output indicates “**business health / vulnerability**” for each **business attribute** for a WSA
- Also provides a “rolled-up” overall **Vulnerability Index** for each WSA

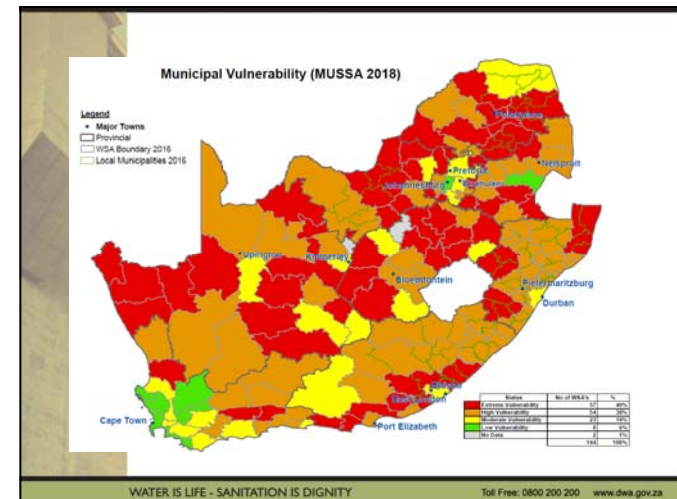
Municipal Strategic Self-Assessment of Water Services (MuSSA) (2016)

Score: 0 - 50% (Extreme Vulnerability) | 50 - 60% (High Vulnerability) | 60 - 75% (Moderate Vulnerability) | 75 - 100% (Low Vulnerability)

Attribute	Score (%)
1. Water Services Planning	70.0%
2. Management Skill Level (Technical)	70.0%
3. Staff Skill Levels (Technical)	60.0%
4. Technical Staff Capacity (Numbers)	35.0%
5. Water Resource Management (WRM)	40.0%
6. Water Conservation & Water Demand Management (WC/WDM)	70.0%
7. Drinking Water Safety & Regulatory Compliance	70.0%
8. Basic Sanitation	65.0%
9. Wastewater/Environmental Safety & Regulatory Compliance	70.0%
10. Infrastructure Asset Management (IAM)	60.0%
11. Operation & Maintenance of Assets	60.0%
12. Financial Management	55.0%
13. Revenue Collection	40.0%
14. Financial Asset Management	55.0%
15. Information Management (IT)	65.0%
16. Organisational Performance Monitoring	65.0%
17. Water and Sanitation Service Quality	65.0%
18. Customer Care (CRM)	55.0%


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Some National Conclusions

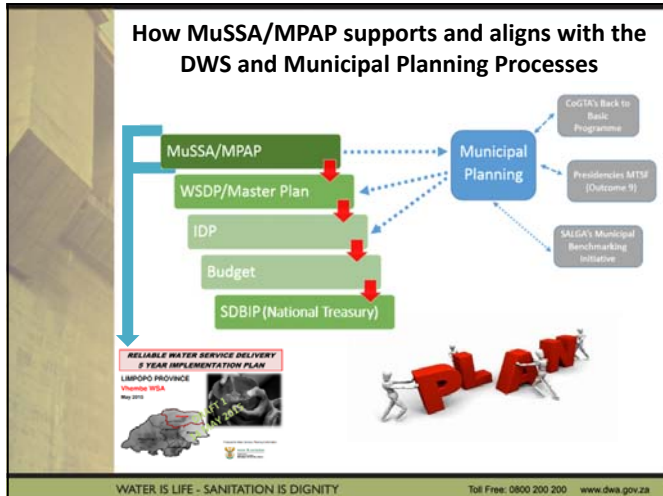


Nationally a high proportion of WSAs reflect Extreme Vulnerability (40% of WSAs) or High Vulnerability (38% of WSAs). A combination of weak finances (see Financial Asset Management, Revenue Collection and Financial Management), poor Operations and Maintenance of Assets, and weak Technical Capacity (both technical skills and staffing numbers) result in elevated vulnerabilities in services provision attributes, most notably Waste-Water / Environmental Safety & Regulatory Compliance.

Observations include: 64% of WSAs are not implementing an appropriate water & sanitation services plan; 58% have not developed a suitable WC/WDM strategy/plan; 53% indicate WWTWs are fast approaching capacity; 51% indicate that WWTWs are fast approaching capacity; and 44% indicate a water shortage of >20% of current needs. Steps to address the "Call to Action" items would substantially improve Business Health across most WSAs.

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WC/WDM questions in MuSSA

6.1	Your WSA has developed a council approved Water Conservation and Water Demand Strategy which includes a standard water balance (e.g. modified IWA).
6.2	Please indicate your percentage Non-Revenue Water (NRW) as per the modified IWA water balance.
6.3	System input volumes (bulk) to the WSA are accurately monitored using calibrated bulk meters (e.g. check metering).
6.4	Please indicate what percentage of all connections are metered and billed (residential and non-residential (commercial, industrial, etc.)) on a monthly basis.
6.5	Your WSA is implementing appropriate intervention programmes to reduce NRW (e.g. minimisation of night flows through pressure management, removal of unlawful connections, leak detection and repairs, consumer education/awareness).

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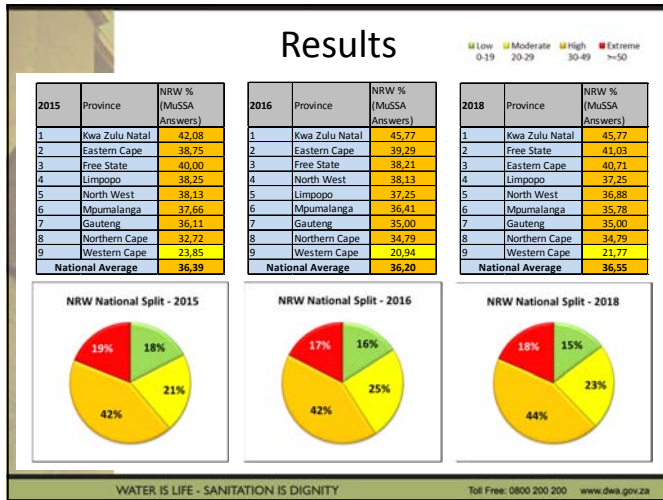
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Questions and possible answers

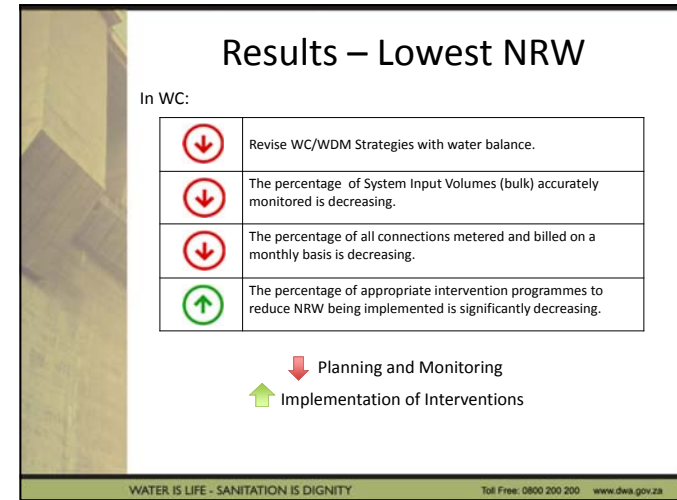
Q. Water Conservation & Water Demand Management (WC/WDM)	Answers						
6.1	Your WSA has developed a council approved Water Conservation and Water Demand Strategy which includes a standard water balance (e.g. modified IWA).	WC/WDM Strategy and water balance developed	Only WC/WDM Strategy developed	None developed	Don't know		
6.2	Please indicate your percentage Non-Revenue Water (NRW) as per the modified IWA water balance.	Less than 15%	Less than 20%	Less than 30%	Less than 40%	Less than 50%	50% or more
6.3	System input volumes (bulk) to the WSA are accurately monitored using calibrated bulk meters (e.g. check metering).	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)
6.4	Please indicate what percentage of all connections are metered and billed (residential and non-residential (commercial, industrial, etc.)) on a monthly basis.	>98%	75% - 98%	50% - 75%	<50%	< 25%	No metering
6.5	Your WSA is implementing appropriate intervention programmes to reduce NRW (e.g. minimisation of night flows through pressure management, removal of unlawful connections, leak detection and repairs, consumer education/awareness).	Yes, strongly agree (i.e. 100% implementation)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	<50% implementation	No implementation (i.e. 0%)	Don't know

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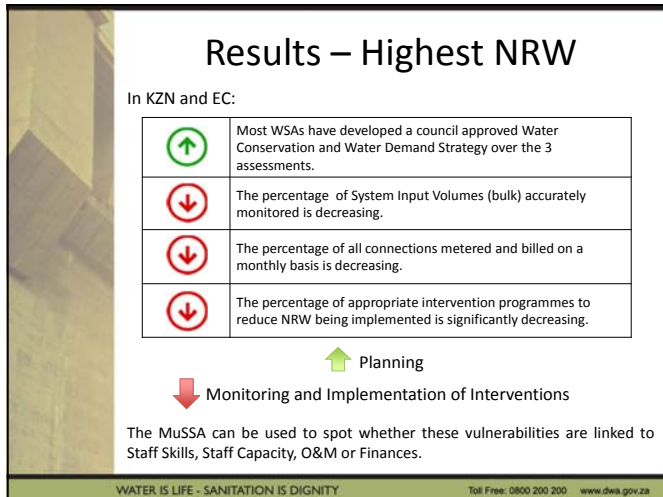
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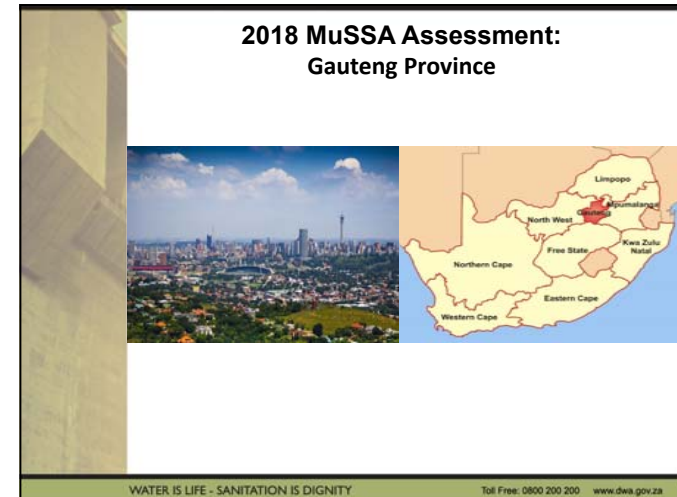
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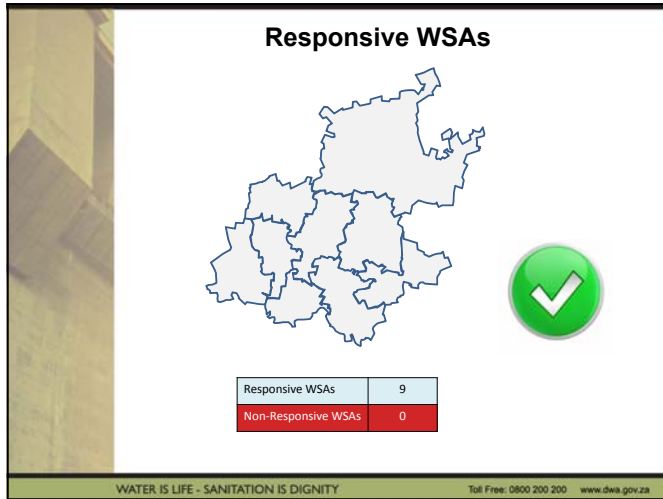
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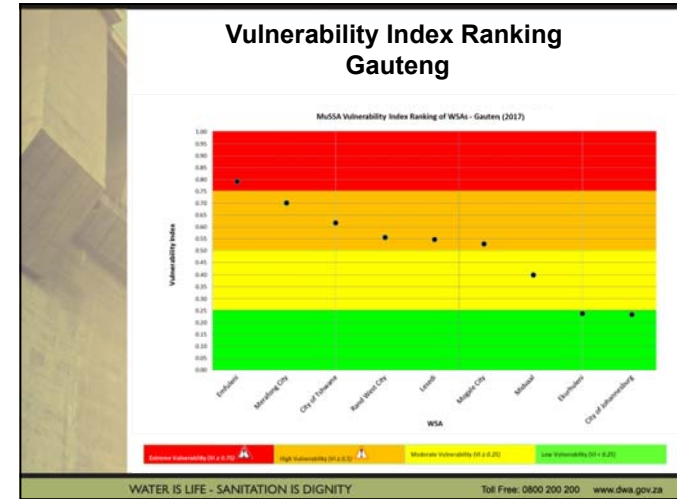
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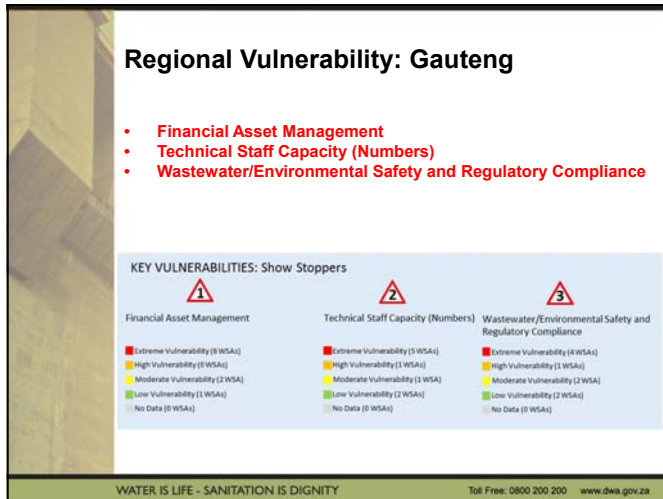
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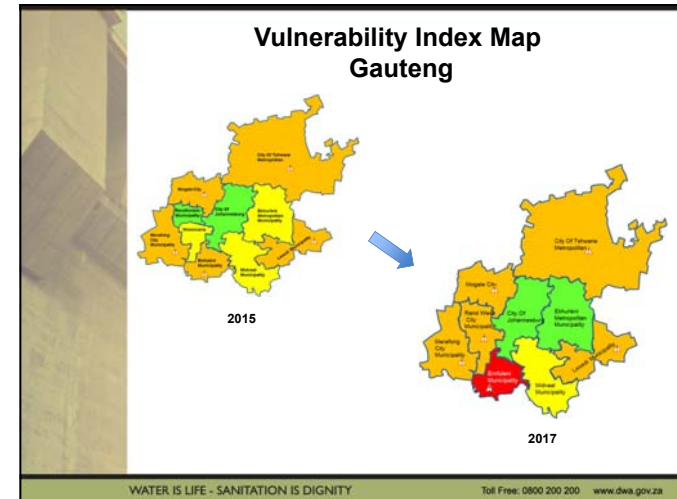
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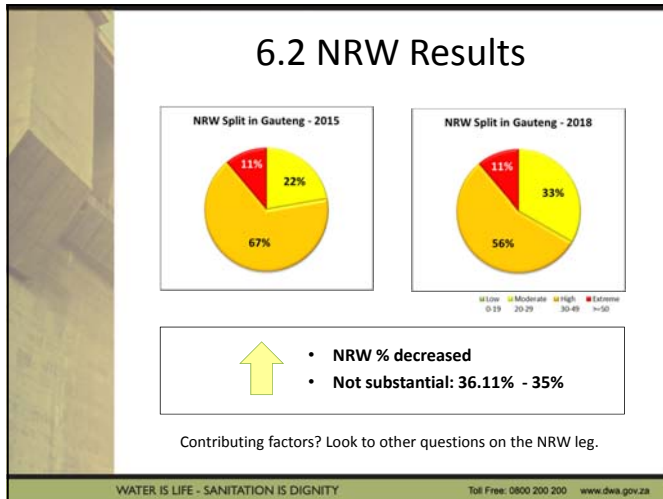
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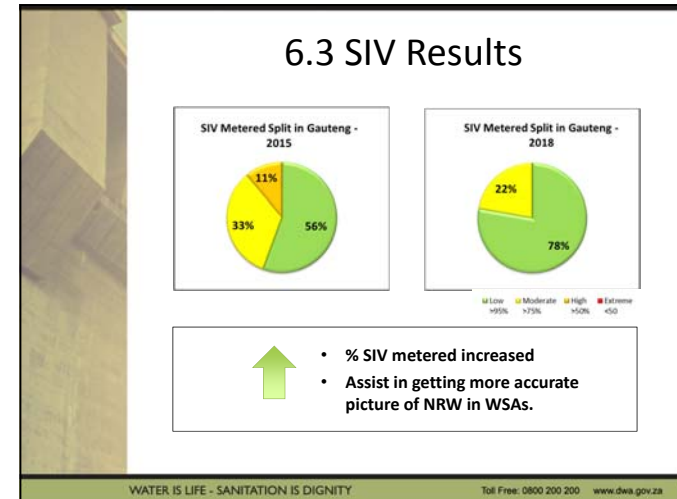
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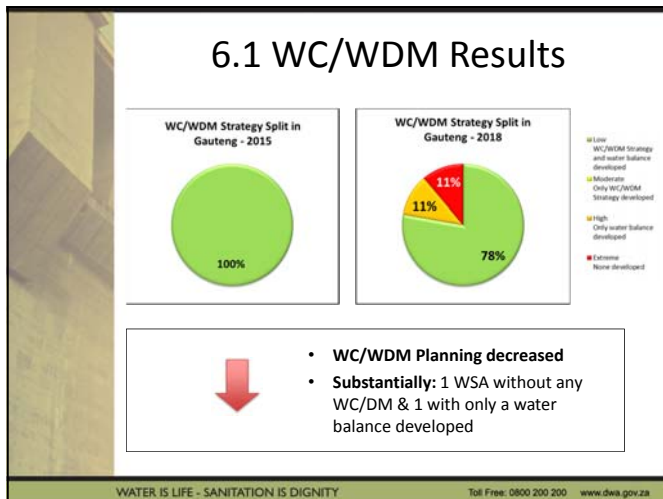
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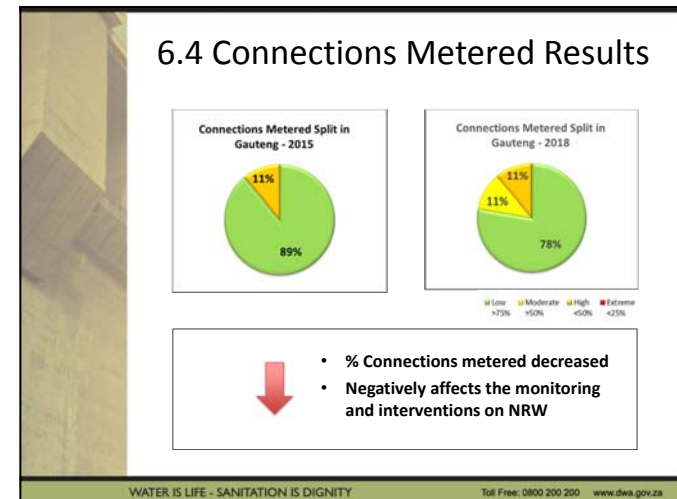
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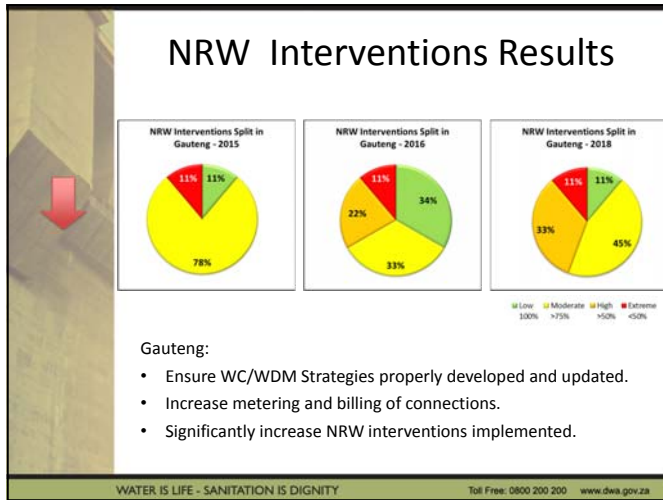
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