

ISP Operations & Project Delivery

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Purpose

- Three pillars
- How they involved in service operations
- Customer oriented/Internal Customers vs External Customers
- Operations itself

ISP Operational Framework (Three Pillars)

1. Marketing / Sales
2. Operations / Technical
3. Finance / Accounts

Internal Customers VS External Customers

ISP Operational Framework (Three Pillars)

Marketing / Sales

Acquire and retain customers.

- Customer acquisition
- Product/package design
- Promotions and pricing
- Customer relationship management
- Contract management
- Demand forecasting

• Key Outputs to Other Departments

- Customer orders
- Service requirements
- Installation location details
- SLA commitments
- Package details

ISP Operational Framework (Three Pillars)

- **2. Operations / Technical**

Deliver and maintain network service quality.

- Network planning/execution
- Customer installation
- Network monitoring
- Incident management
- Maintenance
- Change management
- Capacity management
- Project Management
- Partner/Vendor/Supplier Management

- **Key Outputs**

- Service activation
- Network/Service availability reports
- Fault resolution
- Network change implementation

ISP Operational Framework (Three Pillars)

- **3. Finance / Accounts**

Ensure financial sustainability/ perform financial Management

- Billing
- Revenue assurance
- Payment collection
- Vendor payments
- Cost control
- Financial reporting

- **Key Outputs**

- Customer invoices
- Payment status
- Financial analysis
- Procurement approval

ISP Operational Framework (Three Pillars)

Scenario	Sales	Operations Cost	Sales Cost	Finance Cost	Profit	Profit Change
Base Case	100%	65%	15%	10%	10%	—
Sales + 10%	110%	71.5%	16.5%	11%	11%	+10%
Finance Cost -20%	100%	65%	15%	8%	12%	+20%
Operations Cost -10%	100%	58.5%	15%	10%	16.5%	+65% 🚀

ISP Operational Framework (Three Pillars)

Scenario	Sales	Operations Cost	Sales Cost	Finance Cost	Profit	Profit Change
Base Case	100%	60%	20%	10%	10%	—
Sales + 10%	110%	66%	22%	11%	11%	+10%
Finance Cost -20%	100%	60%	20%	8%	12%	+20%
Operations Cost -10%	100%	54%	20%	10%	16%	+60% 🚀

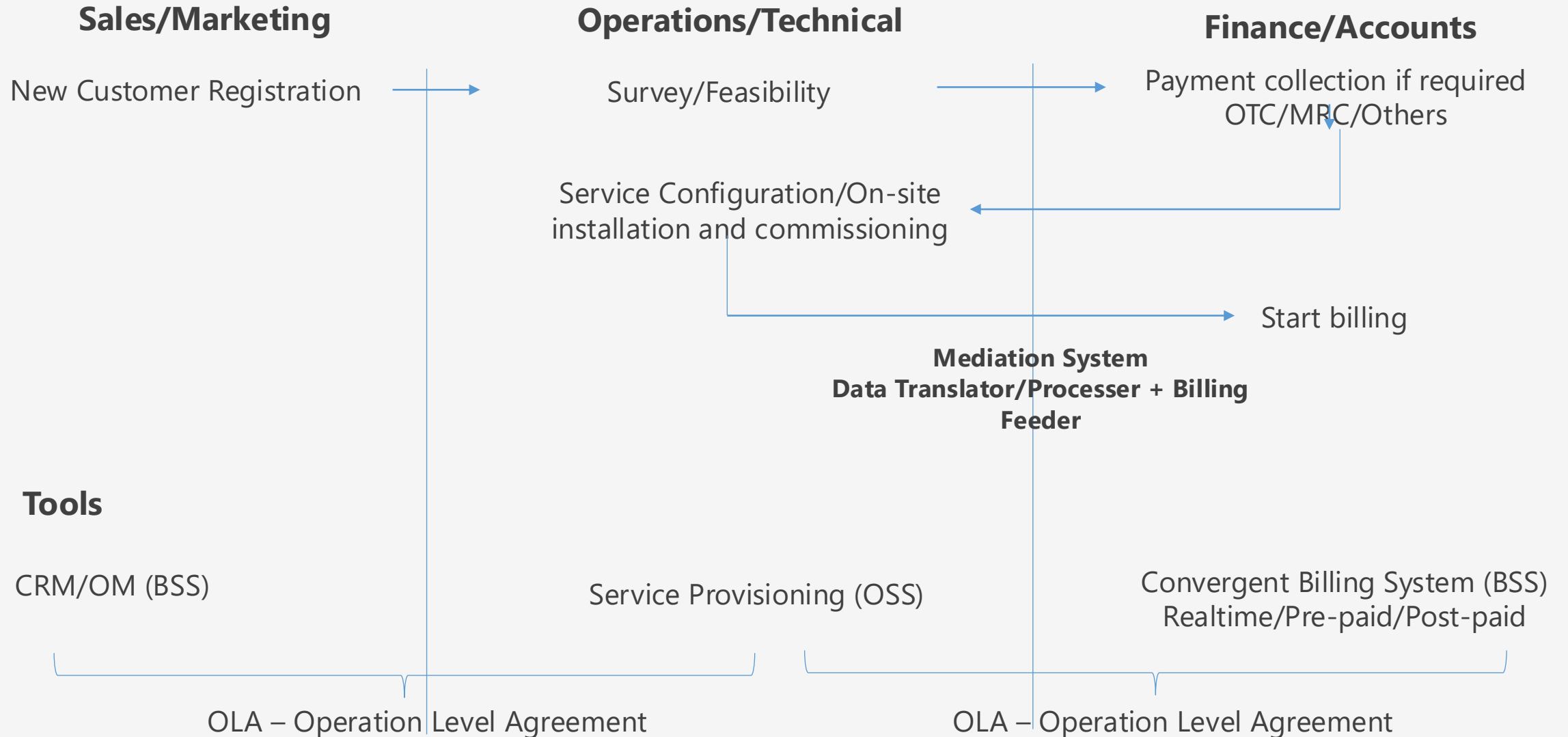
ISP Operations – Work/Job Orders

- New Service Request
- Incident Report (Customer/Network)
- Change Request (Customer/Network)

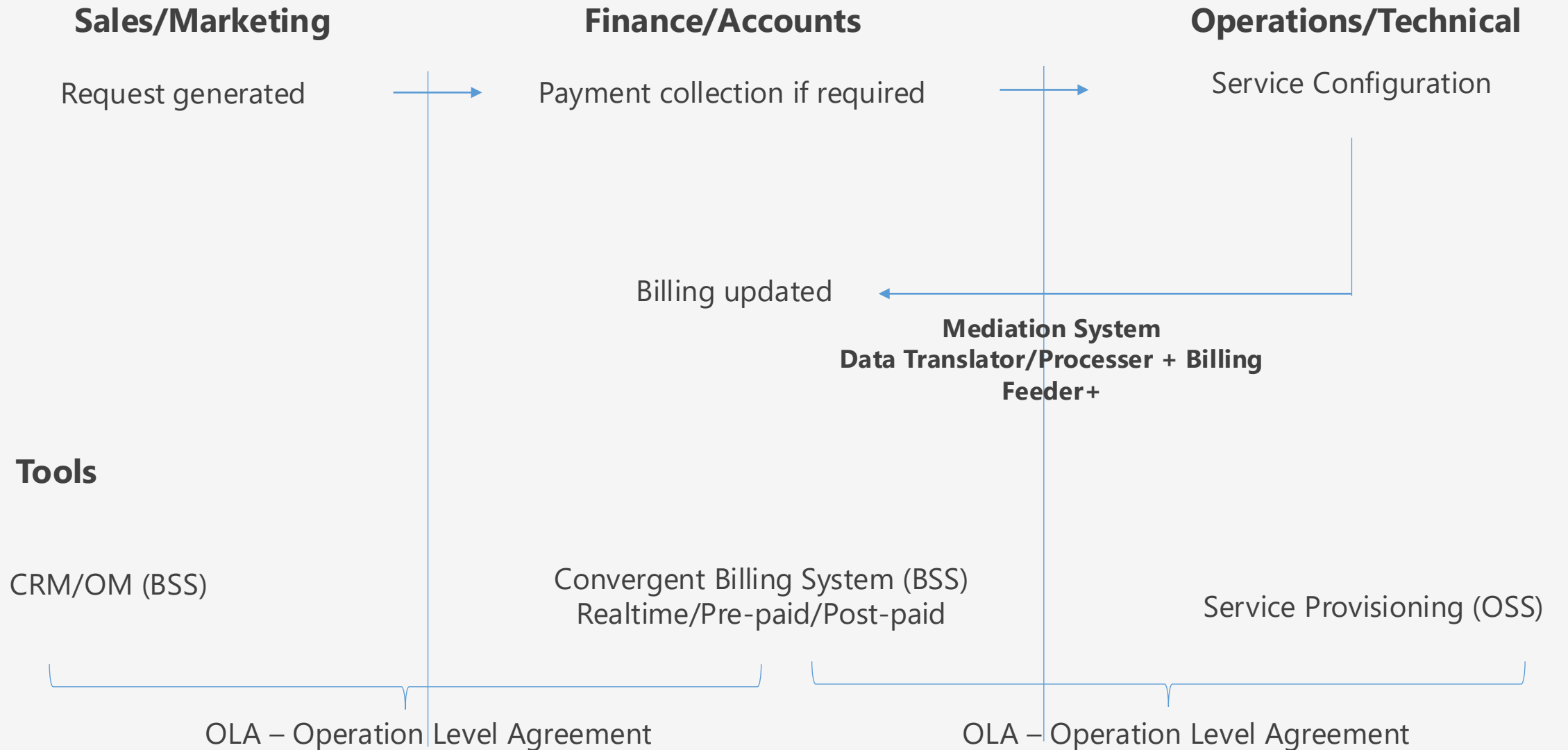
ISP Project

- New Network Implementation/Expansion
- Migration

ISP Operations – New Service Workflow - idle



ISP Operations – Change Request – Individuals



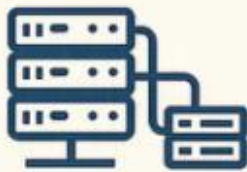
ISP Operations – Tools

Network-facing

customer-facing and revenue-related processes

OSS

OPERATIONS SUPPORT SYSTEMS



Network
Inventory
Management



Network
Configuration



Service
Provisioning



Fault
Management

BSS

BUSINESS SUPPORT SYSTEMS



Customer
Relationship
Management (CRM)



Billing
& Charging

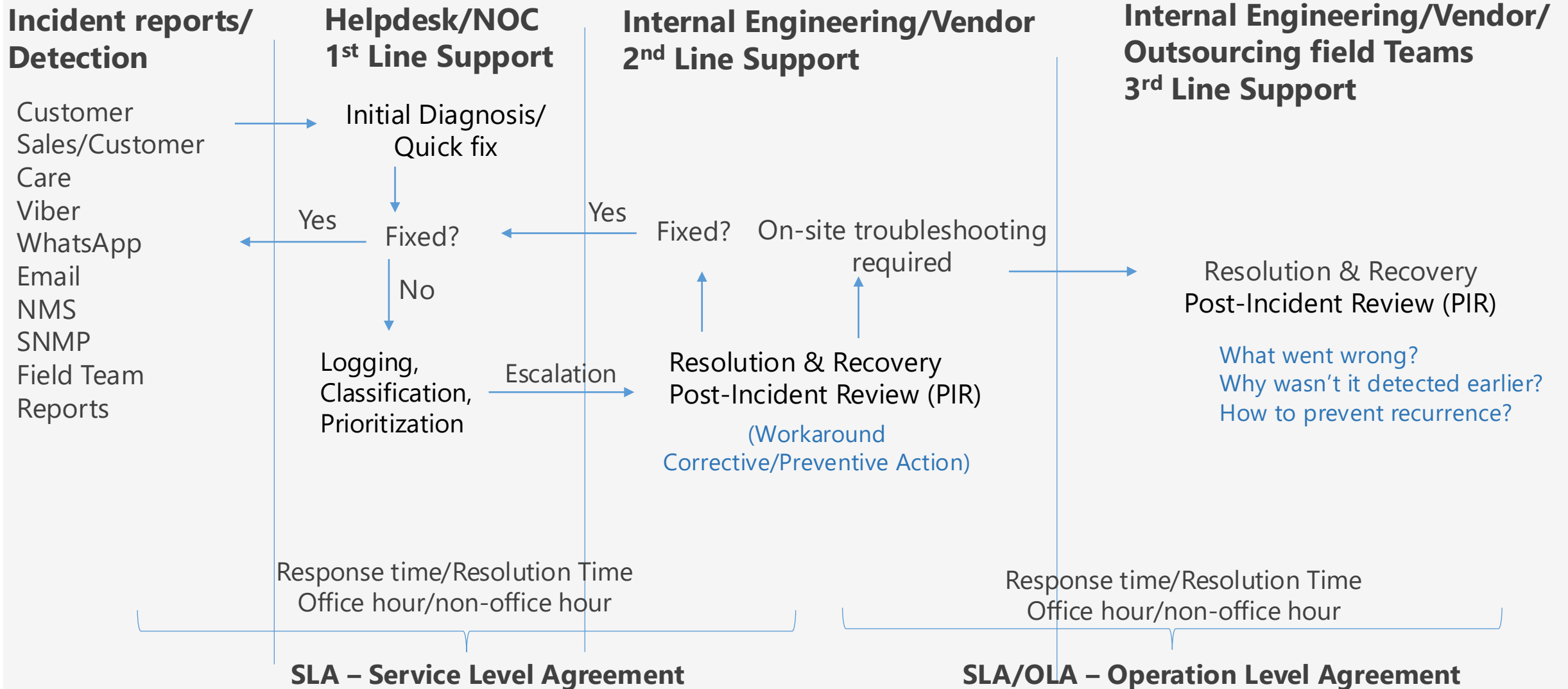


Order
Management



Product
Management

ISP Operations – Incidents handling procedure



Types of Changes in Network

Standard Changes (Low Risk)

Pre-approved, repeatable, minimal impact

- Adding new ONU/ONT subscriber, Assigning VLAN for new customer
- Bandwidth profile update (50M → 100M)
- Adding OLT device to NMS, Routine config backup
- Battery replacement/Engine Oil replacement for stand-by generator

Normal Changes (Planned – Medium to High Risk)

Requires planning, approval, and scheduling

- OLT firmware upgrade, Uplink upgrade (1G → 10G)
- Fiber rerouting due to construction
- Split ratio change (1:32 → 1:64)
- Batteries replacement for Data Center UPS

Emergency Changes (Urgent, High Risk)

Urgent fixes (e.g., security patch during attack, Failed OLT card replacement)

Immediate approval via Chat, Teams, WhatsApp approval, Formal change request to be generated only after fixed.

Change Request Components

Network Change Request Form	
Change Details	Active Network Change / Passive Network Change
	Change Description (clear description of the change including devices, systems, and components affected.)
	Reason for Change / Business Justification
Impact Assessment	Minimal / Moderate / High Impact
	Affected systems/services/customers
	Downtime required ? Yes – Estimated duration
	Risk Mitigation / Backout Plan/ Rollback Plan
Change Implementation Plan	Schedule Date & Time/Change, Duration, Actual Date & Time of Change, Duration
	Step-by-step implementation plan
Required Resources	Hardware/equipment/personnel/Vehicle
Testing and Validation	Pre-Change Testing (if applicable):
	Post-Change Testing / Verification Plan: / Outcome
Approval	Team Leads/Manager/HOD etc

Project Delivery – Methodologies

Waterfall

Linear, sequential approach. Each phase must be completed before moving to the next.

Typical phases: Requirements → Design → Implementation → Testing → Deployment → Maintenance.

Agile

Iterative, incremental, and flexible. Work is divided into short cycles (sprints), with continuous feedback and adaptation.

Build → Test → Activate → Sell → Feedback → Improve next sprint

Hybrid Approach (Sample)

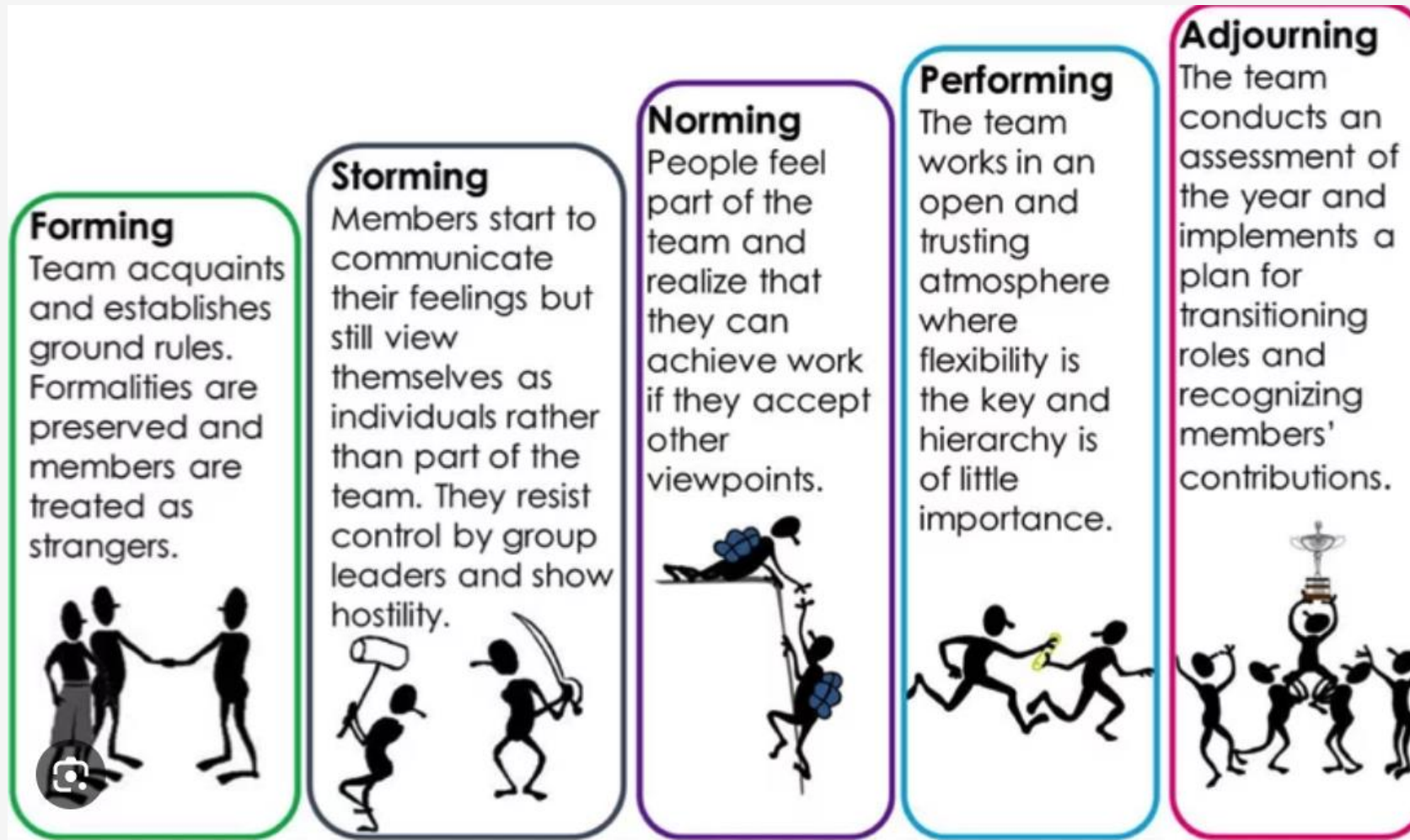
Implementation of FTTH Backbone and Access Network in Yangon, 30 townships. A hybrid method being applied by delivering the optical network area by area, enabling sales to begin customer acquisition as each completed area became operational while construction continued elsewhere.

Using Waterfall for planning and compliance, and Agile for execution PoP by PoP.

Penny Game : [Penny Game, Agile, Hands-Off Technique.](#)

[Agile Lean Penny Game - Reduce batch size to increase productivity](#)

Project Delivery – Stages of Team Building Tuckman's Model



Product/Service Differentiation?

Conflict Resolution Techniques

1. **Avoiding (Withdrawal)** : Ignore or delay conflict. **Use when:**

- Issue is minor/Need time to cool down
- Problem may worsen

2. **Accommodating (Smoothing)** : One party gives in. **Use when:**

- Relationship is more important than outcome
- Accept vendor timeline to maintain long-term partnership

Conflict Resolution Techniques

3. Competing (Forcing) : One party wins. **Use when:**

- Urgent decisions required
- Safety or compliance issue
- Stop unsafe construction immediately

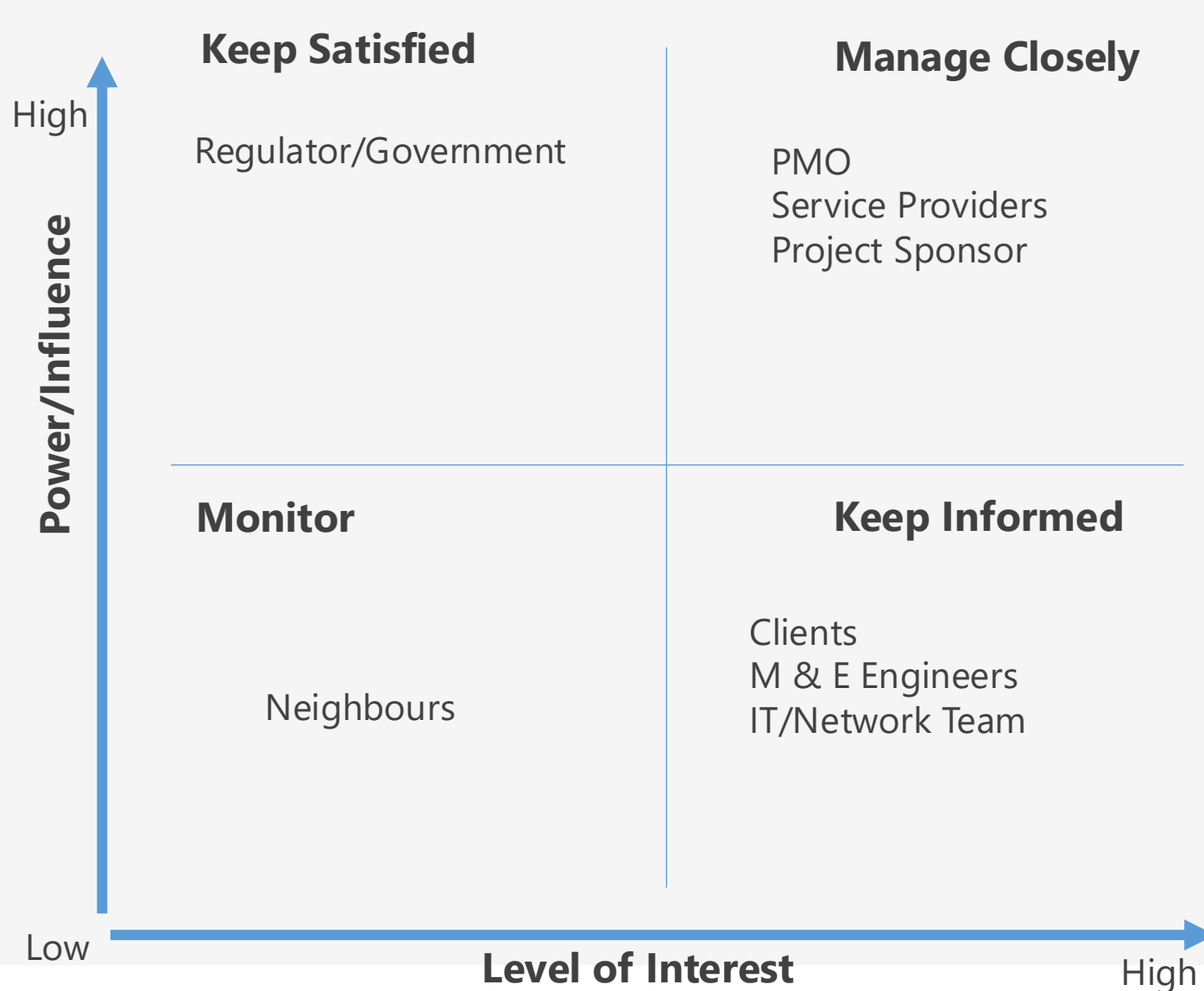
4. Compromising (Middle Ground) : Both parties give up something.

- Contractor wants 10 days extension → agree on 5 days

5. Collaborating (Win-Win) ★ Best Approach : Solve root cause.

- Residents don't want trenching for fiber.
- Switch to micro-trenching or aerial fiber

Project Delivery – Stakeholders



Regulator/Government

Construction permit/license/Fire Safety
Electricity

Service Providers

Cooling and fire suppression systems
Fiber / connectivity
Construction Companies
Network Equipment suppliers

Internal Project Teams

PMO
M & E Engineers
IT/Network Team

Clients

Co-location Customers

Others

Neighbours : affected by construction noise,
Traffic
Project Sponsor

Project Delivery – Risk

Risk	likelihood	Impact	Score	Impact\$	Owner	Mitigation	Status
R1	5	5	25	100,000	O1	Avoid	Active
R2	2	1	2	8,000	O2	Accept	Expired
R3	4	3	12	20,000	O3	Mitigate	Active
R4	3	3	9	14,000	O4	Transfer	Active

Avoid (Eliminate the Risk) : Change the plan so the risk no longer exists.

- Risk: Fiber route passes through politically sensitive or restricted area
- Mitigation: Redesign route to avoid that zone completely

Mitigate : Reduce Probability or Impact

- Risk: Power failure
- Mitigation: Install dual power feeds + UPS + generators
- Risk: Fiber Cut
- Mitigation: Ring topology instead of linear

Project Delivery – Risk

Transfer : Shift the Risk

Move risk to a third party. Insurance, Outsourcing, Contract (SLA penalties)

Use contractor for civil work → contractor bears delay penalties

Accept : Do Nothing but Prepare

Passive : Just accept. Active : Prepare contingency plan

Minor delay due to rain. Add buffer days in schedule. Add cost buffer in budget.