



## **Importance of Appropriate and Robust SLAs in Outsourcing A Case Study of London Underground Limited**

### **The Scene**

London Underground Limited (LUL) outsourced its communications infrastructure and operations through a Special Purpose Vehicle (SPV) called Citylink (through a PFI scheme). Citylink is owned by the partner companies contributing to the project, including Thales, Motorola and Fluor Daniel.

### **The Businesses Problems**

As part of project Connect, LUL granted Citylink a licence to provide telecommunications services to LUL for a period of 25 years. Citylink is allowed to charge a tariff for the provision of these services, but it is a condition of the licence that the whole radio and transmission infrastructure of the London Tube will be replaced.

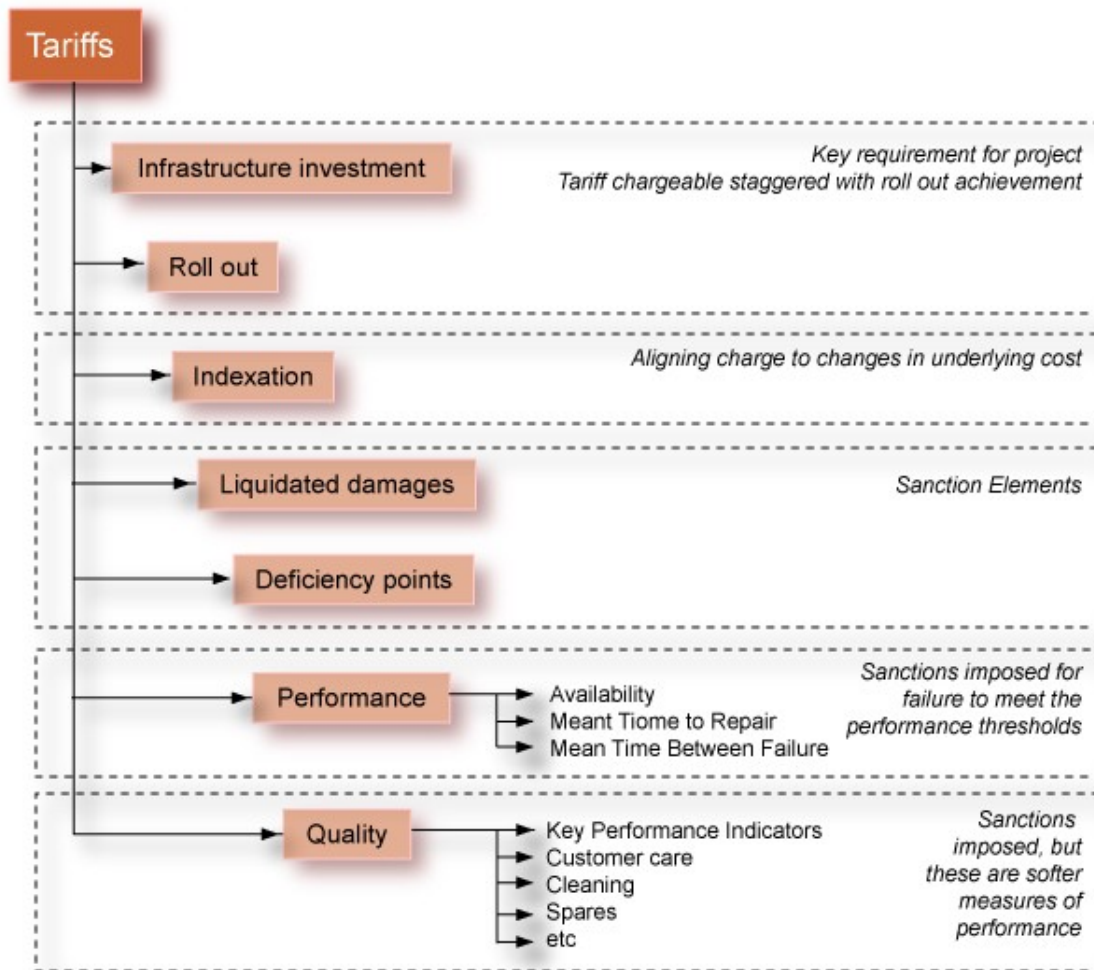
Citylink has two primary sub-contractors. Flour Daniel is charged with the regeneration project and the delivery of the new infrastructure. Thales Translink is responsible for the operation of the services throughout the life of the project.

LUL was keen to establish robust Service Level Agreements (SLAs) to ensure that: the outsource provider delivers services as required; is incentivised to improve performance; and that sanctions are available where it fails to deliver as required.

### **The Business Solution**

LUL set up a complex SLA structure that is imposed on Citylink. Citylink has passed this on, where relevant to its sub-contractors. The purpose of the SLAs are to ensure that Citylink meets all of its obligations to the project.

In the procurement specification, LUL allowed the bidders considerable freedom in constructing their tariff, but insisted that its format and construction should be to a predetermined pattern. The bidders could alter the relative parameters, but not the structure of the tariffs. Whilst some of the tariff structure revolved about finance and indexation, much of it was controlled by the requirements of the SLAs. This definition resulted in a large and complex formula that took all of the aspects of pricing into account at one go.



The Connect project was divided into two primary parts, one the replacement of the fibre transmission infrastructure and the other the replacement of the radio infrastructure.

The contractor was allowed to charge for the provision of services by means of a tariff that was controlled by a range of factors that included delivery of the new infrastructure as well as the operational performance that was achieved throughout the life of the project.

For each of the main projects (transmission and radio) the tariff was forced to start low and then increase in proportion to the rate of roll out of new infrastructure as the building programme progressed. The intent was that over the long period of the licence, the contractor would be able to obtain funding from the City to invest and that the profit on that investment would build up towards the latter years in order to make the whole project attractive as an investment proposition.

There are also two sanction elements over and above the performance SLAs, these are Deficiency Points and Liquidated Damages. These operate in addition to the sanctions that are imposed for failure to meet the performance / quality thresholds.

Deficiency points are intended to ensure that basic procedures are kept up to scratch. Some 41 different procedural failures are defined in different areas of the operation of the project. These include:

- Safety
- Quality
- Audit
- Contract management
- Contract programme
- Contract conditions
- Record keeping
- Service procedures

Each type of failure is allocated to a specific class, A, B or C. A Class A failure accrues 5 deficiency points, Class B 2 points and Class C 1 point.

Each failure can be 'Redeemable' or not. If redeemable then the contractor is given a period within which to overcome the failure. If this fails then the deficiency points stand. Equally, each type of failure can be classified as a 'Withholding' failure. This type of failure can give rise to retention of some part of the payment from LUL until it is resolved. Further, there is a mechanistic link to the tariff so that in addition to the penalties already described, there is a tariff penalty that bears little relationship to the severity of the failure or the attempts that have been made to correct it.

In imposing its Liquidated Damages, LUL first produced a set of tables that quantified the earnings of the Tube for every 15-minute segment of the day for every line and station in respect of

- Slow running and delay
- Speed restriction
- Partial line closure
- Late start up of depots
- Train cancellation
- Station closure
- Signal failure
- Reduced service

The tables that define these earning figures are extremely complex. The impact of every failure of the telecommunications system is then analysed in terms of these parameters and penalties extracted from the contractor that are in proportion to the loss of business caused by that failure.

## **Implementation**

### **Performance SLAs**

There are three aspects of performance that LUL recognises in its SLAs. Only two of them affect the tariff:

- Performance
- Quality
- Capacity (this parameter is not linked to the tariff)

Performance always relates to Availability, Time to Repair and Number of Faults. Quality relates to softer measures of performance and includes Key Performance Indicators (KPIs); Customer care; cleaning, spares etc.

Below this level, each project has sub services and the performance figures for each service vary, but the structure of the SLAs does not.

Each service is defined in terms of a service category and a sub-category. Each sub-category has a Quality of Service (QoS) definition. For each sub-category, there are three operational SLA parameters specified, Target Availability, Maximum Time To Restore service and Maximum failures per circuit per annum.

There are three Implementation parameters specified, and these are the average and maximum days to Provide, Cease and Move a service and finally there are capacity measures (Capacity utilised, Capacity installed and Maximum capacity).

The outsource provider must report against all these parameter on a four weekly basis.

Quality of Service measures apply to a number of parameters including:

- Key performance indicators
- Cleaning
- Customer care
- Spares
- etc

### **Operational SLAs**

Their structure is described in more detail with typical figures for some of the parameters to show how the SLAs are constructed. Again, this is not an exhaustive catalogue of the whole SLA contract.

For the Target Availability parameter, services are divided into three categories:

- Safety related services (1)
- Business critical services (2)
- Other services (3)

Each service and sub-service then has an Availability target specified for each of these categories and in the transmission class of services.

Reporting is required on a four weekly basis for the average availability, with a report on the percentage of circuits not meeting the target as supplementary information.

A similar approach is taken with the Time To Restore service (TTR) parameter. Again the three categories (1 – 3 above) apply, but in addition failures are divided into Actual Loss of Service and Loss of a Redundant Service that puts the primary service in jeopardy.

The final Operational SLA parameter is Loss of Service per Circuit. This is a measure of the reliability (MTBF) of the circuits.

### **Implementation SLAs**

LUL divided these up by the type of location into which services are being provided. These are defined as Office, Railway and Tunnel. For obvious reasons there are safety implications of working on railway locations. Similarly tunnels are highly restricted as far as access is concerned and the four-hour access window overnight can be oversubscribed. In addition, a distinction is made between the provision of Infrastructure and the provision of services over existing infrastructure

## Overriding SLA Factors

LUL require that the SLAs that apply to any third party provided services (e.g. from the incumbent telecommunications operator) should be passed through Citylink unchanged.

To ensure that there are no elements of doubt, each service sub-category has a clearly defined demarcation point that specifies where responsibility for the service changes from Citylink to LUL.

There are three other features of the LUL SLAs.

a) A general requirement placed on Citylink that its Network Management System must:

- Be capable of reporting down to individual circuit level
- Be capable of reporting current status
- Provide a remote access terminal for LUL users

b) A responsibility accepted by LUL to provide a 'load' prediction covering the period from 3 – 10 years ahead of the current date.

c) A clause that appears in similar form in each of the technology areas:

“As part of the design process, the Contractor shall demonstrate by means of reliability and maintainability analysis, that the New Transmission Network [Radio network etc...] is capable of meeting the relevant Service Performance criteria given in this section of the specification”

## Op2i

A Business Improvement Firm Specialising in Outsourcing

Providing Advisory, Implementation, Brokerage and Managed  
Outsourcing Solutions

[Contact@Op2i.com](mailto:Contact@Op2i.com)

[www.Op2i.com](http://www.Op2i.com)