

Telecom Product Development:

Industry Best Practices, Business Cases and Product Cost Modelling

3rd Annual CANTO Sales, Marketing & Customer Care Forum

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Agenda

1. Telecom product development:
 - a) Why are new products required
 - b) Product development issues
 - c) End-to-end process overview
 - d) Importance of framework and market focus
 - e) Steps in product cost model development
 - f) Key data required
 - g) Modelling approach
 - h) Next steps post modelling
 - i) Product development process improvements

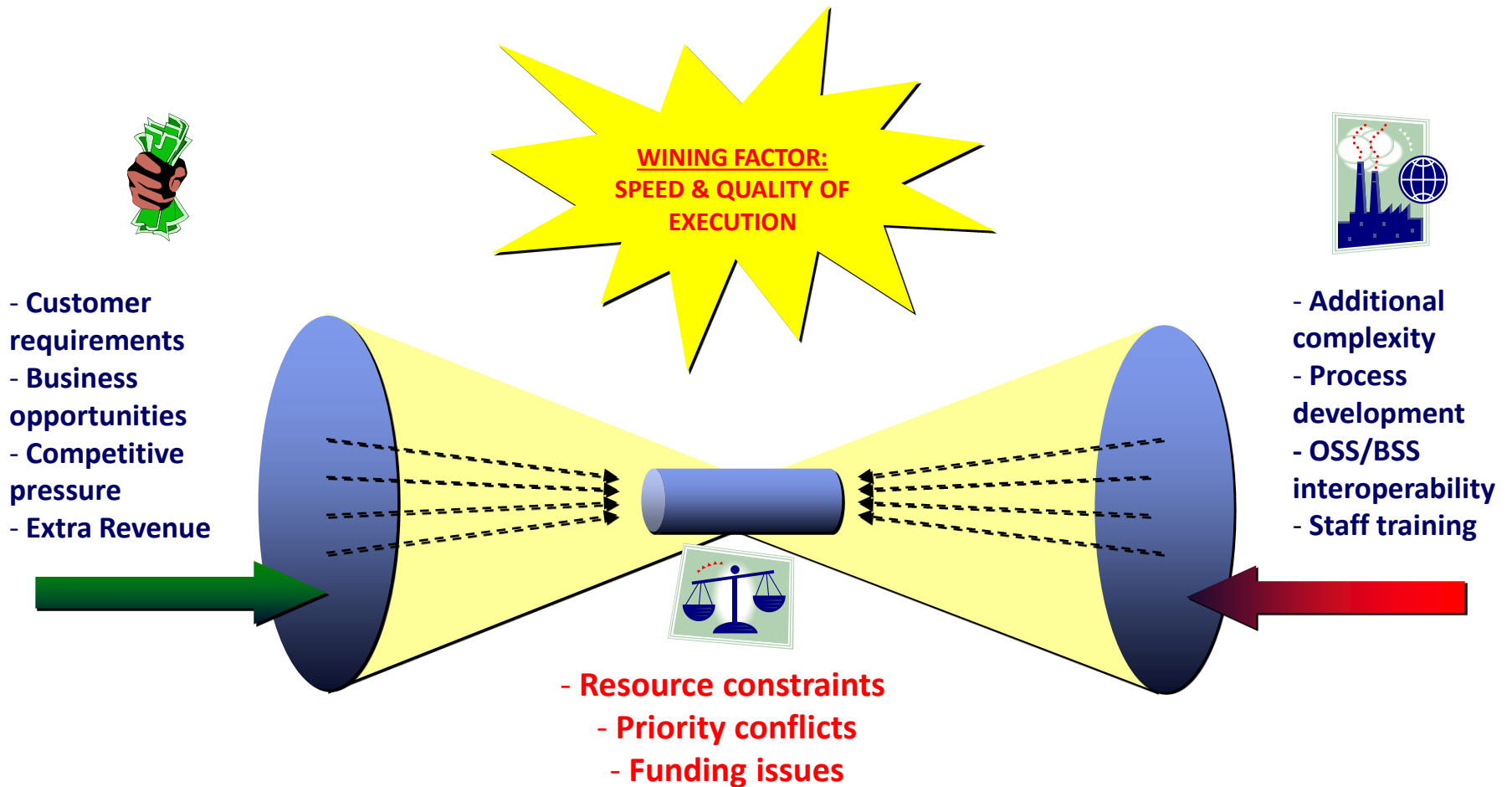
Why are New Products Required?

<p>Carriage Only</p> 	<p>Router Supply</p> 	<p>Install Service</p> 	<p>Managed Service</p> 
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Prevailing prices for various coffee offerings

 <p>1¢-2¢ Per Cup</p>	 <p>5¢-25¢ Per Cup</p>	 <p>75¢-\$1.50 Per Cup</p>	 <p>\$2-\$5 Per Cup</p>
<p>Commodity</p>	<p>Good</p>	<p>Service</p>	<p>Experience</p>

Product Development Issues



The cost of lost revenue & opportunities needs to balance or outweigh the cost of doing the work, including the consideration of timing & resource availability.

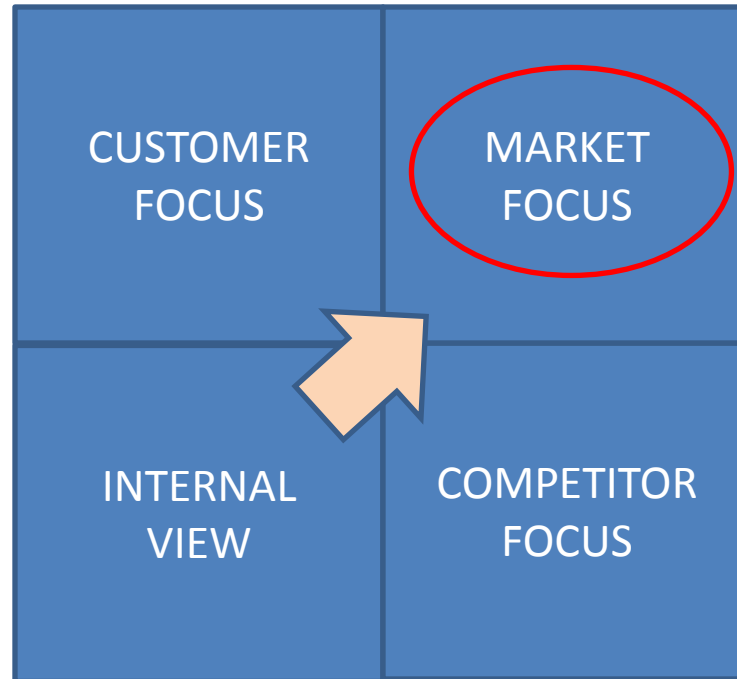
Importance of Framework

Phase 1: Market Research

- Competitors
- Customers
- Competitive Position
- Value Proposition

CUSTOMERS

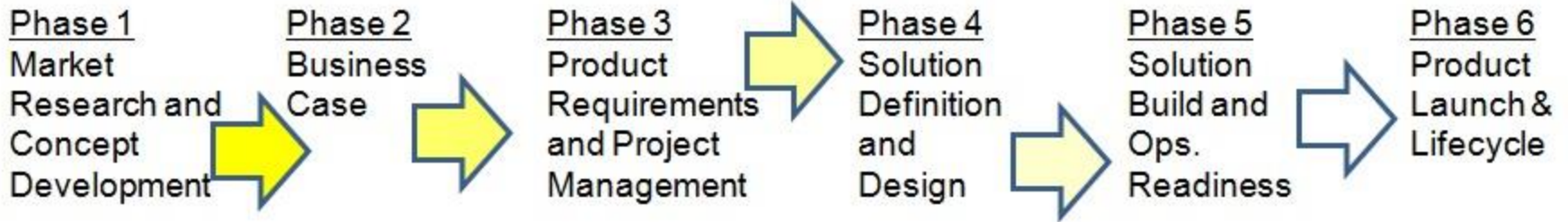
Level of
Insight



COMPETITORS

Parcus Group

Example Product Development Framework



PHASE 1: Market Research and Concept Development

- Market Analysis
- Idea Generation and Idea Screening
- Concept Development & Feasibility Study

PHASE 2: Business Case

- Strategy considerations
- Business impacts incl. staff, systems, technology, legal and other issues
- Business case risk assessment
- Financial analysis (cost, revenue, pricing)

PHASE 3: Product and Business Requirements Document (PRD)

- Project Planning (time, resources, costs...)
- Product Requirements Document (PRD)

PHASE 4: Solution Design and Planning

- Technical solution definition and design
- Business systems solution definition and design
- Product description

PHASE 4: Solution Design and Planning

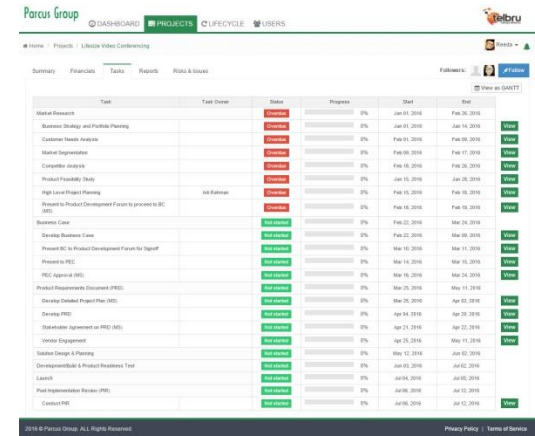
- Technical solution definition and design
- Business systems solution definition and design
- Product documentation

PHASE 6: Launch & Lifecycle Management

- Commercial Launch
- Product Lifecycle Management

Creation of Best Practice Development Framework

Telecom Project Example	Requirements Characteristics	Impact
Complex Product (eg. New fibre IP VPN network required)	High CAPEX spend, lots of planning & design required, strong product management, vendor and engineering engagement required.	Suggest use of traditional waterfall framework and workflows with stages and approval gates and dedicated project management resource.
Simple Product (eg. Change of CPE model on ADSL service)	Low CAPEX, small amount of planning and design, some vendor and engineering engagement required.	Use waterfall framework for the overall project while applying agile for specific project tasks or sub-tasks such as development of new CPE test plan, CPE testing, and documentation.
Product Feature (eg. New online product reporting portal functions)	Low CAPEX, some amount of planning and mainly IT design, some vendor and IT engagement required.	Use agile based workflow given software product component and IT systems impact. Overlay with gating stages to ensure quality and consistent documentation of deliverables.
Product Pricing Papers (eg. change to Broadband Internet price plans)	No CAPEX, no planning & design and no engineering or external vendor engagement. Finance approval may be required.	Due to relative simplicity of the task and non-iterative nature of tasks, a simple waterfall workflow would be sufficient to cover all the tasks and gate approvals.
Product Exit (eg. exit legacy ATM product)	No CAPEX, some planning & and low amount of engineering or external vendor engagement. Very significant impact on existing customers.	Simple tasks but requiring precision around execution due to customer impact. Waterfall workflow would work best lead by an experienced project manager to ensure minimal customer impact.
Product Lifecycle (eg. ongoing management of a living product)	Some lifecycle CAPEX, limited engagement of engineering, IT & vendors. Senior management high visibility.	Considering repetitive nature of lifecycle tasks such as monthly reporting, forecasting, market reviews etc... a simple agile workflow can be used.



1. Start with Structure
2. Review and complete
3. Improve with Agile (for some sub-tasks)
4. BU buy-in and agreement

See: <http://parcusgroup.com/blog/best-telecom-product-management-framework>

Business Case Financial Analysis

The purpose of financial analysis is to as accurately as possible identify and estimate future revenues and costs from the new product, thus having a direct impact on the return on capital, which is being sought.

Business Case Cost Factors:

$$\text{Cost} + \$ \text{ Margin} = \text{Price} \times \text{\# of Services} = \text{Revenue \$}$$

- [Link to Service Creation Guide](#): Section 2.04 (MS Word)

Key Tips:

- Where do you get each of the above components?
- How reliable and 'market based' is your data?
- Depth of view?

Step 1: Model Alignment to Product Portfolios

MAIN MENU
SAMPLE PRODUCT COST MODELS

Developed by:
Parcus Group

Model Version: 1 Updated: 1st Jan 2015

<i>VOICE PRODUCTS</i>	<i>OTHER PRODUCTS</i>	<i>DATA PRODUCTS</i>	<i>INTERNET PRODUCTS</i>	<i>MOBILE PRODUCTS</i>
A1. Landline (Postpaid)	B1. Co-Location	C1. MPLS	D1. Internet (ADSL)	E1. Mobile
A2. Landline (Prepaid)	B2. Internet	C2. IP VPN	D2. Internet (Satellite)	
A3. Fixed Line PBX	B3. Cable 1		D3. Internet (Mobile)	
A4. Fixed Line Radio	B4. Cable 2		D4. Internet (WiMax & Hotspot)	
A5. Fixed Line Satellite	B5. Dark Fibre		D5. VAS Offerings	
	BC1. Leased Lines			

Data gathering note: must gather all the billable product entities in the business and consolidate to an agreed view

2: Define Product Unit Cost View

Data gathering note: must gather all product unit options available for inputs into modelling (eg. number of services, minutes of use, bandwidth, download...)

SAMPLE MODEL - UNIT COST VIEW										
	Voice products						Wholesale products			
	A1. Landline (Postpaid) - incl. Fixed Wireless	A2. Landline (Prepaid)	A3. Fixed Line PBX Incl Indial	A4. Fixed Line Radio	A5. Fixed Line Satellite	A6. Fixed Line Public Phone	B1. Co-Location	B2. Internet	B3. Cable	B4. Cable
Unit cost (Montly)	£ 2.53	£ 7.47	£ 6.69	£ 175.88	£ 345.17	£ 1,166.67	£ 527.11	£ 111.82	£ 9,722.22	£ 2,243.59
Unit cost (Annual)	£ 30.41	£ 89.64	£ 80.24	£ 2,110.55	£ 4,142.01	£ 14,000.00	£ 6,325.30	£ 1,341.85	£ 116,666.67	£ 26,923.08
Variable cost	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00	£ 100,000.00
Semi-variable cost	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00
Fixed costs	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00	£ 1,000,000.00
TOTAL COSTS	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00	£ 2,100,000.00
Physicals										
Calls										
Minutes of Use										
Ends in operation										
Services in operation	69,049	23,427	26,173	995	507	150	332	243	18	78
Average bandwidth								1,565		
Available bandwidth										
Number of customers										
NOTE:	Unit cost calculation above based on Services in Operation (SIO) count A1 - includes 63,673 PrePaid SIOs B2. Tiare unit cost based on Average BW bought (excluding free Google Link)									

4: Define Key Platforms Costs View

MAIN MENU													Developed by:																												
SAMPLE - PLATFORM UNIT COST MODEL													Parcus Group																												
PLATFORM UNIT COST																																									
PLATFORM																																									
ADSL CDMA Fibre Internet MPLS PSTN Radio Satellite Wimax MSAN CABLE CABLE 2																																									
Total Attributable platform costs													£	-																											
Annual Platform Unit Cost:													£	963.70	£	992.60	£	217.69	£	126.85	£	387.10	£	442.51	£	177.35	£	1,266.56	£	622.30	#DIV/0!	£	162.14	£	76.60						
Per SIO																																									
Bandwidth (Mb)																																									
Call																																									
Minute of Use																																									
PLATFORM UTILISATION BY PRODUCTS																																									
PLATFORM																																									
PSTN - incl.																																									
PRODUCT	SIO's	Platform unit cost	ADSL	CDMA	Fibre	Internet	MPLS	PSTN - incl. ISDN)	Radio	Satellite	Wimax	MSAN	PIPE	APNG2																											
A1. Landline (Postpaid) - incl. Fixed Wireles	10000	£ 589.44	£ -	£ -	#####	£ -	£ -	#####	#####	£ -	£ -	£ -	#####	#####																											
A2. Landline (Prepaid) - Tellicard	10000	£ 589.44	£ -	£ -	#####	£ -	£ -	#####	#####	£ -	£ -	£ -	#####	#####																											
A3. Fixed Line PBX Incl Indial	10000	£ 589.44	£ -	£ -	#####	£ -	£ -	#####	#####	£ -	£ -	£ -	#####	#####																											
A4. Fixed Line Radio	10000	£ 589.44	£ -	£ -	#####	£ -	£ -	#####	#####	£ -	£ -	£ -	#####	#####																											
A5. Fixed Line Satellite	10000	£ 1,444.37	£ -	£ -	#####	£ -	£ -	#####	#####	#####	£ -	£ -	#####	#####																											
A6. Fixed Line Public Phone	10000	£ 589.44	£ -	£ -	#####	£ -	£ -	#####	#####	£ -	£ -	£ -	#####	#####																											
B1. Co-Location	10000	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -																											
B2. TIARE ISP Internet	10000	£ 5,211.18	£ -	£ -	#####	#####	£ -	£ -	#####	£ -	£ -	£ -	#####	#####																											
B3. PIPE Cable	10000	£ 447.28	£ -	£ -	#####	£ -	£ -	£ -	£ -	£ -	£ -	£ -	#####	£ -																											
B4. APNG2 Cable	10000	£ 641.35	£ -	£ -	#####	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -																											
B5. Dark Fibre	10000	£ 0.33	£ -	£ -	£ 3,265.28	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -																											
B6. Inmarsat / Mobilesat	10000	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -																											
C1. Leased Lines (incl. MPLS & Sat)	10000	£ 2,065.16	£ -	£ -	#####	£ -	#####	£ -	#####	#####	£ -	£ -	#####	#####																											
C2. IP VPN	10000	£ 1,155.76	£ -	£ -	#####	#####	#####	£ -	#####	£ -	£ -	£ -	#####	#####																											
C3. X.25	10000	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -																											
D1. Internet (ADSL)	10000	£ 4,100.00	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####																											

Required Financial Data

You will require:

- Full GLs for the business including summary as well as source GL data
- COGS Data
- Access to staff, managers and other experts who may be able to assist with sourcing of required information

- Key categories of costs where detailed breakdown would be recommended:
 - Depreciation breakdown
 - Electricity breakdown
 - Motor vehicles
 - Network support contracts
 - Staff costs and HR Org charts details
 - Property costs, water, insurance, rates etc
 - Financial costs, loans, interest, bad debts, impairments
 - Marketing spend breakdown or budgets
 - Other costs

Required Engineering & Other Data

Engineering / Operations Data Required:

- a) Network platforms types & details (network & design diagrams, BOMs..)
- b) Key network platforms usage (based on engineering traffic usage stats)
 - a) Key links by type eg. fibre, copper, satellite...
 - b) Traffic stats and usage on all key links
 - c) Traffic stats by type on key links (data, internet, mobile, voice...)

Other Data

- a) Staff to complete timesheets or use survey approach
- b) Number of services by product (as per item 2)

Modelling Approach

1. Obtain all data
2. Allocation process
 - a) Where possible allocate costs direct to products (eg. Residential Internet)
 - b) Where not possible allocate to product family (eg. Data products family)
 - c) Where not possible allocate to platform (eg. fibre, ADSL....)
3. Aim is to get as much into direct cost. So allocations will be done from that point only for cost where direct product attribution is not possible. Target for the final model, indirectly allocated costs will comprise <30% of total costs.
4. Allocations will be done on several levels
 - a) Platforms usage (based on engineering traffic usage stats)
 - b) Platform type (eg. depreciation based on line-by-line data checks of all cost items)
 - c) Staff based on timesheet or survey approach
 - d) Number of services by product (SIO) approach
 - e) Revenue and costs weighted average approach

Staged Development

1. Introduction & data collection
 - a) Identify key staff and conduct briefing on the project requirements and business impact
 - b) Data collection based on this briefing
 - c) Meetings with key business unit heads to seek their support and assistance (to be organised by CEO, COO or CFO)

2. Model development
 - a) Regular progress updates
 - b) Escalation and support
 - c) Work in progress communication and briefings

3. Finalised model presentation
 - a) Finalised model and key findings & recommendations presentation face to face
 - b) Presentation to CEO and leadership team
 - c) Optional presentation to board of directors

5: Detailed Costs By Product and all GL Input Costs Reconciled

Product 1

Product 2

Product 3 ETC...

GL Leased Lines (Incl. P2P Over MPLS & P2P Over Satellite)				
ITEM	TAIL OR	SCALE	QNTL	TOTAL AMOU
PRODUCT REVENUE				
14000 Tel Data Lease Revenue	000000			000000
19209 Lease Line IP - Via Satellite	000000			000000
19204 Mobile Circuit Revenue	000000			000000
TOTAL PRODUCT REVENUE	0000	0000	0000	0000
PRODUCT EXPENSES				
Cost of Goods Sold				
21400 COGS- Lease 4 Data Circuit APNG+MAINT	000000	0000		000000
21401 COGS- Lease 4 Data Circuit Pipe	000000	0000		000000
21402 COGS- High PPL Data Sat Serv-BSP Salomon Wfs	000000	0000		000000
PPL Fibre + Spectrum License Over + Satellite Usage	000000	0000		000000
Total Cost of Goods Sold	000	000	000	000
Employee Related Expenses				
Direct Salary	000000	0000		000000
Indirect Salary	000000	0000		000000
Total Employee Related Expenses	000	000	000	000
Human Resources Related Expenses				
Recruitment Expense	000000	0000		000000
Training Expense	000000	0000		000000
Other HR Related Expense	000000	0000		000000
Total Human Resources Related Expenses	000	000	000	000
Property Related Expenses				
Total Property Rental Expense	000000	0000		000000
Property Charge	000000	0000		000000
Security Cost	000000	0000		000000
Other Property Related Expense	000000	0000		000000
Total Property Related Expenses	000	000	000	000
Finance Related Expenses				
Finance Charge	000000	0000		000000
Foreign Exchange Gain/Loss	000000	0000		000000
Impairment & Transition Charge	000000	0000		000000
Bad & Doubtful Debt	000000	0000		000000
Prior Year Adjustments	000000	0000		000000
Other Finance Cost	000000	0000		000000
Total Finance Related Expenses	000	000	000	000
Professional Fees				
Contract Fee	000000	0000		000000
Audit Fee	000000	0000		000000
Legal Fee	000000	0000		000000
Other Professional Fee	000000	0000		000000
Total Professional Fees	000	000	000	000
Motor Vehicle Costs				
Vehicle Purchase Costs	000000	0000		000000
Other Vehicle Costs	000000	0000		000000
Total Motor Vehicle Costs	000	000	000	000
Duty Travel Related Expenses				
Air Charter Costs	000000	0000		000000
Vehicle Hire Costs	000000	0000		000000
Duty Travel	000000	0000		000000
Total Duty Travel Related Expenses	000	000	000	000
Material Related & Admin Expenses				
Direct Purchase of Material Related to Admin	000000	0000		000000
Office Admin Purchase	000000	0000		000000
Other General Admin Expense & Postage	000000	0000		000000
Storage & Goods in Transit & Write Off	000000	0000		000000
Freight & Duty Cost	000000	0000		000000
Other Storage Related Expense	000000	0000		000000
Total Material Related & Admin Expenses	000	000	000	000

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Cost of Goods Sold				
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21401 COGS- Lease 4 Data Circuit Pipe	000000	0000		000000
21402 COGS- High PPL Data Sat Serv-BSP Salomon Wfs	000000	0000		000000
PPL Fibre + Spectrum License Over + Satellite Usage	000000	0000		000000
Total Cost of Goods Sold	000	000	000	000
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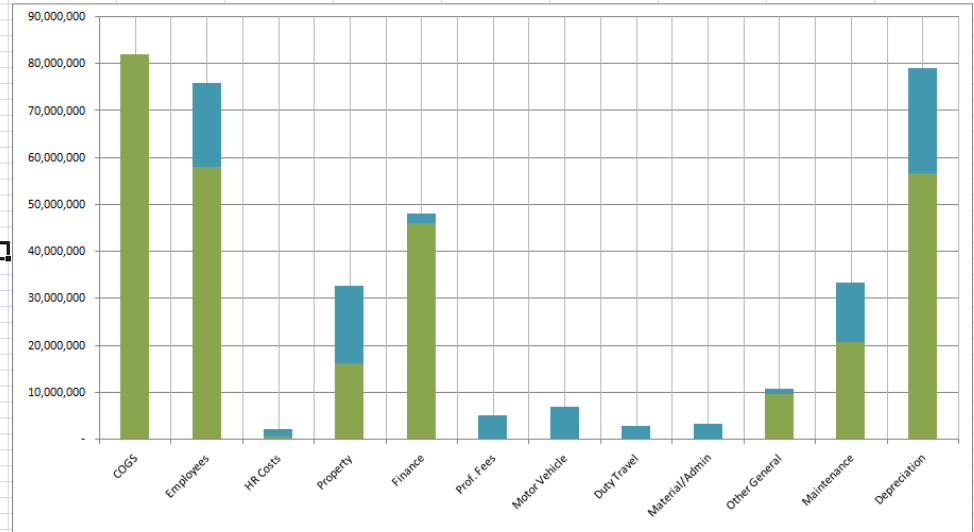
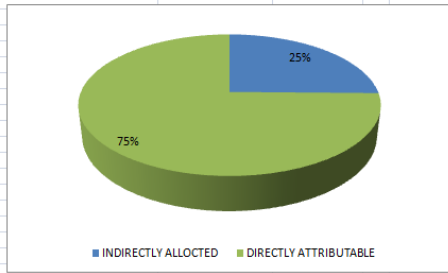
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Storage & Goods in Transit & Write Off	000000	0000		000000
Freight & Duty Cost	000000	0000		000000
Other Storage Related Expense	000000	0000		000000
Total Material Related & Admin Expenses	000	000	000	000

Allocations Reconciliation

TOTAL IN CATEGORY	161,961,607.77	82,854,885.89	76,834,839.55	4,479,744.74	92,727,869.84	49,246,339.59	2,287,397.51	6,934,845.93	2,388,199.97	3,964,872.32	19,879,188.83	39,554,755.99	79,195,328.95
DIRECTLY ATTRIBUTABLE	236,276,608.74	82,854,885.89	58,116,829.51	592,565.87	16,284,985.82	46,179,428.48	-	39,249.58	924,715.58	-	3,737,684.83	28,737,688.57	56,793,281.94
INDIRECTLY ALLOCATED	32,276,654.32	0.00%	17,877,238.31	1,658,857.48	16,442,884.02	2,975,738.92	2,287,397.51	6,895,626.44	2,463,477.29	3,964,872.32	1,621,495.94	32,747,871.76	22,395,849.81
ALLOCATED %	24.03%	0.00%	23.51%	39.07%	50.24%	4.30%	100.00%	98.60%	95.93%	100.00%	10.31%	37.94%	28.30%

Improved result after team leaders survey

INDIRECTLY ALLOCATED 16,872,528.99
DIRECTLY ATTRIBUTABLE 236,478,795.91



Next Steps Post Cost Modelling

Establishment of Activity Based Costing to enable future automation of product costs capture

Example High Level Dictionary For Data Capture

Activity Based Costing - Dictionary For Data Capture		
Activity (mandatory)	Product (and/or)	Portfolio/Platform (and/or)
Billing (including credit check, collections)	A1. Landline Voice	A. VOICE
Engineering (all activities)	A3. Fixed Line PBX	B. WHOLESALE SERVICES
Finance (all activities incl. pricing)	B1. Co-Location	C. DATA PRODUCTS
IT (general systems work)	B2. Internet Wholesale	D. INTERNET PRODUCTS
IT (product specific projects/platforms work)	BC1. Leased Lines (Wholesale)	E. MOBILE PRODUCTS
Management (HR, staff, strategy, planning...)	C1. Leased Lines (Retail)	F. OTHER
Marketing (all activities)	C2. IP VPN	Access - Radio
Operations: Service Assurance (all activities)	D1. Internet (ADSL)	Access - Copper
Operations: Service Implementations (all activities)	D2. Internet (Satellite)	Access - Fibre
Other not listed	D3. Internet (Mobile)	Access - Satellite
Product Management (all activities)	D4. Internet (WiMax)	Access - Mobile
Project Management (all activities)	D5. VAS Offerings	Transmission - Radio
Property management and related property activity	E1. Mobile 3G/4G	Transmission - Copper
Sales Retail (all activities)	F1. Other revenue	Transmission - Fibre
Sales Wholesale (all activities)		Transmission - Satellite
		MPLS & IP VPN
		ADSL Network
		ISDN Network
		Property (Commercial and Residential)
		IT Systems (all)
		Other

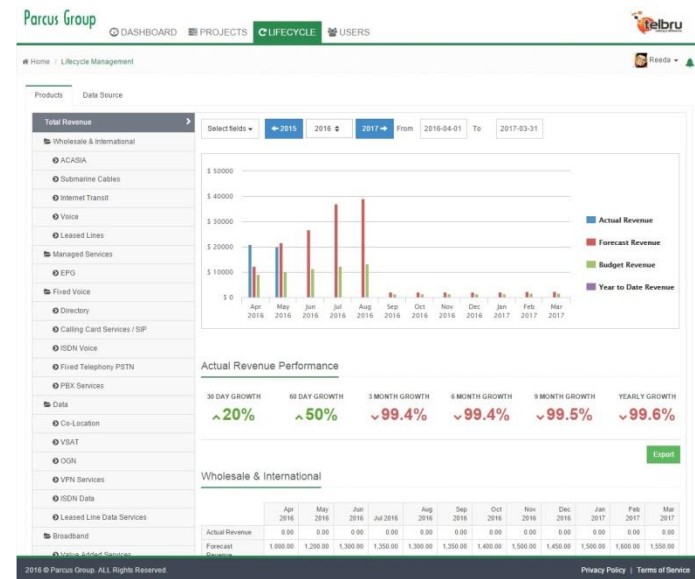
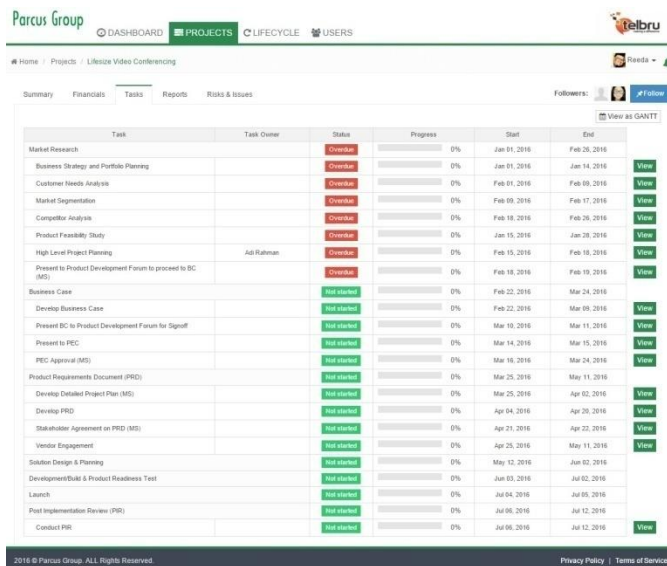
Product Development Improvements

Manual:

- Develop and implement detailed product development framework and process
- Include templates for each activity
- Seek business agreement and alignment from other business units

Automated:

- Software based product management platform
- <http://parcusgroup.com/product-management-software>



Thank You

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And for more information please visit:

<http://parcusgroup.com/product-management-training>