Cost Drivers: Does anything influence your cost estimate?
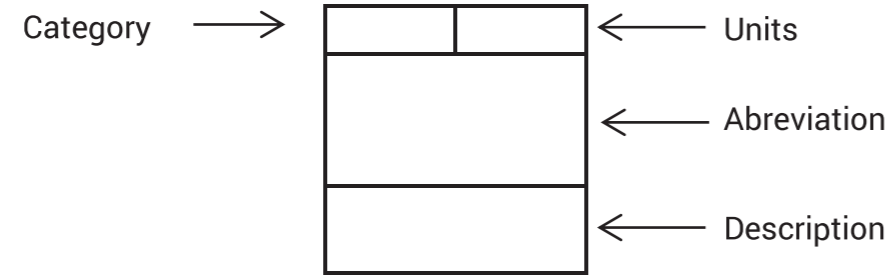
Providing robust decision support to the world's complex problems

Legend diagram:
Category → [box] ← Units
← Abreviation
← Description

Category / Key

Category	Key
Global	Glbl
Hardware	H/W
Software	S/W
Operating and Support	O&S
Information Technology	IT
Software Size	S/Size
Complexity Structure	CPXS
Complexity Electronics	CPXE
Team Complexity	TMCX

Main Cost Driver Grid

Category	Abbrev	Units	Description
Glbl	Cur	£, $, €	Currency
Glbl	BYr	Years	Base Year
Glbl	BOE	Doc	Basis of Estimate
Glbl	Ex	Cur	Exchange Rate
Glbl	CDAL	List	Cost Data & Assumptions
Glbl	PPP	Cur	Purchasing Power Parity
Glbl	NPV	%	Discount Rate
Glbl	IMP	T/F	Metric or Imperial
Glbl	Start	MMYY	Start Date
H/W	Site	Count	Multiple Site Development
H/W	Qty	Count	Production Quantity
H/W	Proto	Count	Prototype Quantity
H/W	EngCx	TMCX	Complexity of Engineering
H/W	CxSt	CxSt	Complex of Structure
H/W	CxEl	CxEl	Complex of Electronic
H/W	New	%	Heritage or New Design
H/W	RpDes	%	Repeat Design
H/W	YrTech	Years	Year of Technology
H/W	Dom	List	Domain
H/W	Vol	m3	Volume
H/W	Wght	Kg	Weight
H/W	WghtE	Kg	Weight of Electronics
H/W	LC		Learning Curve
H/W	Obs		Obsolescence
H/W	CxInt		Complexity of Integration
S/W	PrdFac	Index	Productivity
S/W	Appl	List	Application
S/W	CxFun		Complexity of Functionality
S/W	CxDT	TMCX	Complexity of Dev. Team
S/W	Lang	List	Language
S/W	OOL	T/F	Object Orientated Lang.
S/W	NwSz	%	New Size
S/W	PrNE	%	Percent Non-executable
S/W	AdSz	S/Size	Adapted Size
S/W	AuGeSz	S/Size	Auto Generate Size
S/W	PrDA	%	Percent Des. Adapted
S/W	PrCA	%	Percent Code Adapted
S/W	PrTA	%	Percent Test Adapted
S/W	PrDR	%	Percent Des. Repeat
S/W	ReSz	S/Size	Reused Size
S/W	AuTrSz	S/Size	Auto Translated Size
S/W	DevPr	List	Development Process
S/W	DeSz	S/Size	Deleted Size
S/W	CxCR		Code Removal Complexity
S/W	ToEff		Auto Translation Tool Efficiency
S/W	DeRe	%	Design for Reuse
S/W	DeT	Index	Design Tools Maturity
S/W	CdT	Index	Code Tools Maturity
S/W	TtT	Index	Test Tools Maturity
S/W	CxInn	Index	Complexity of Int. Integration
S/W	CxExIn	Index	Complexity of Ext Integration
S/W	CxTal	TMCX	Complexity of Tailoring
S/W	Secur	Index	Security Level
S/W	AdPor		Adapt. for Portability
S/W	ErDt		Error Detect Rate
IT	Inv	Qty	Inventory
IT	PvL	T/F	Purchase or Lease
IT	SLA		Service Level
IT	UL	Years	Unit Life
IT	Debug		Repair Maint. Rate
IT	TpEU	Hours	Training per End User
IT	Dply	Qty	Number of Deployments
IT	Inst	Hours	Install Time
O&S	NPPR	Qty	Avg Parts per Repair
O&S	AdPrf	Qty	Adapt. for Performance
O&S	AdEff		Adapt. for Efficiency
O&S	MTBF	Hours	Mean Time Between Failures
O&S	CTS	Cur	Checkout Test Set Cost
O&S	SPTS	Cur	Faulty Part Test Set
O&S	NFF	%	No Fault Found
O&S	PT	Qty	Number of Part Types
O&S	UCT	Hours	Unit Checkout Time
O&S	TEqFA	m2	Test Equip. Floor Area
O&S	AttR	%	Attrition Rate
O&S	OnTiF		On-time Fraction
O&S	MTTR	Hours	Mean Time To Repair
O&S	HrPW	Hours	Hours Worked per Week
O&S	NSP	%	Percent Non-Stand. Parts
O&S	UPE	Qty	Units Per Equip. Location
O&S	SPC	Cur	Spare Part Cost
O&S	StRe	Kg	Stock of Repairables
O&S	CodC	Cur	Codification Cost
O&S	OOS	Qty	Parallel Out of Service
O&S	SWght	Kg	Shipping Weight
O&S	StCo	Days	Stock of Consumables
O&S	SpacC	Cur/m3	Test Equip. Space Cost
O&S	CLS	Cur	Contractor Repair Cost
O&S	FSTS	Cur	Faulty S/Assy Test Set
O&S	ShipC	Cur/Kg	Shipping Cost
O&S	WareC	Cur/m3	Warehousing Cost

Software Size - S/Size

Abbrev	Units	Description
SLOC	S/Size	Source Lines of Code
FP	S/Size	Function Points
POP	S/Size	Predictive Object Points
COSMIC	S/Size	Com. S/W Measure Int.
Case	S/Size	Use Case Analysis
Story	S/Size	Story Points
SSU	S/Size	Software Size Units

Team Complexity - TMCX

Abbrev	Units	Description
MgtMat	Index	Management Maturity
ProdMat	Index	Product Maturity
MarMat	Index	Market Maturity
ProcMat	Index	Process Maturity
TmTu	Index	Team Turnover
TmCap	Index	Team Capability

Complexity of Structure - CxSt

Abbrev	Units	Description
Tol	mm	Tolerance
MM	Index	Material Machinability
NP	Qty	Number of Parts
GeTol	mm	Geometric Tolerance
RMR	%	Rough Material Removal
SuFi	micron	Surface Finish
AsTol	%	Assembly Tolerance
LoL		Layers of Laminate
Con	List	Construction

Complexity of Electronics - CxEl

Abbrev	Units	Description
Comp	List	Component Type
CirT	List	Circuitry Type
SMD	%	Surface Mount Devices
ElDe	Kg/cm	Electronic Density
QStd	Index	Quality Standard

Transforming The Way You Make Decisions

Capitalise on our outstanding analytical capability to understand your problem, evaluate what really matters and make better decisions. Using our 6,000+ professionals with proven experience in supporting strategic decisions underpinning complex programmes worth over £200Bn worldwide, let QinetiQ help you to achieve success.

QinetiQ offers unique risk maturity assessment and cost estimation health check services that employ repeatable processes to audit and benchmark cost understanding and risk management capability in a project, programme or business. Additionally, we provide a range of bespoke cost and risk analysis services and tools, delivered by a team of experts in their field to help our customers ensure that the cost and risk implications of decisions and projects are effectively managed.

Whole Life Cost Modelling

Whole Life Cost (WLC) analysis needs to cover the entire budget that will be consumed through the life of the service or system. This will cover the equipment cost from conception to disposal, but also the capability generation cost such as training and infrastructure. To ensure that there is confidence in the outcome multiple methods of estimating need to be employed to form a consensus view of the total cost.

Cost Engineering Health Check (CEHC)

QinetiQ's Cost Engineering Health Check is a tried and tested approach to assessing the maturity of a cost estimating organisation or projects against our knowledge based estimating (KBE) pillars; data, tool, people and process. The results can be used to identify improvement opportunities within our clients' cost estimating capability, enabling them to focus on areas that have the potential to increase competitiveness or value for money (VfM) from a budget.

Risk Maturity Model (RMM)

The project RMM is specifically developed to assess the risk management capability of projects throughout their lifecycle. Our assessment ensures the risk management process adopted by project teams is of a sufficient maturity to meet the needs of the organisation and its clients. The output of the assessments provide an objective view of capability, identifying areas for improvement and allows comparison with peer organisations.

Cost Benefit Analysis

QinetiQ are expert in electronic voting and workshop facilitation for the purposes of benefits elicitation. A causal benefits map is then developed to capture the set of dependencies and enablers associated with each of the benefits. This map will be used to help qualify and derive metrics that could be used to score each of the benefits and demonstrate their importance in terms of system or service output relative to the whole life cost of acquisition and maintenance.

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