

Il Project Cost Control di una Corporate - Il caso Technip



Roma , 28 Marzo 2013

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Technip

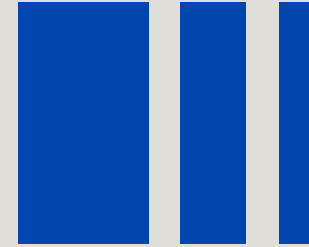
take it further.



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1. Technip Italy nel Gruppo Technip



Tre Settori di Business, una sola Technip



Subsea

- Design, manufacture and supply of deepwater flexible and rigid pipelines, umbilicals and riser systems
- Subsea construction, pipeline installation services and Heavy Lift
- Six state-of-the-art flexible pipe and / or umbilical manufacturing plants
- Five spoolbases for reeled pipeline assembly as well as four logistic bases
- A constantly evolving fleet strategically deployed in the world's major offshore markets



Offshore

- Engineering and fabrication of fixed platforms for shallow waters (TPG 500, Unideck®)
- Engineering and fabrication of floating platforms for deep waters (Spar, semi-submersible platforms, FPSO)
- Leadership in floatover technology
- Floating Liquefied Natural Gas (FLNG)
- Construction yard



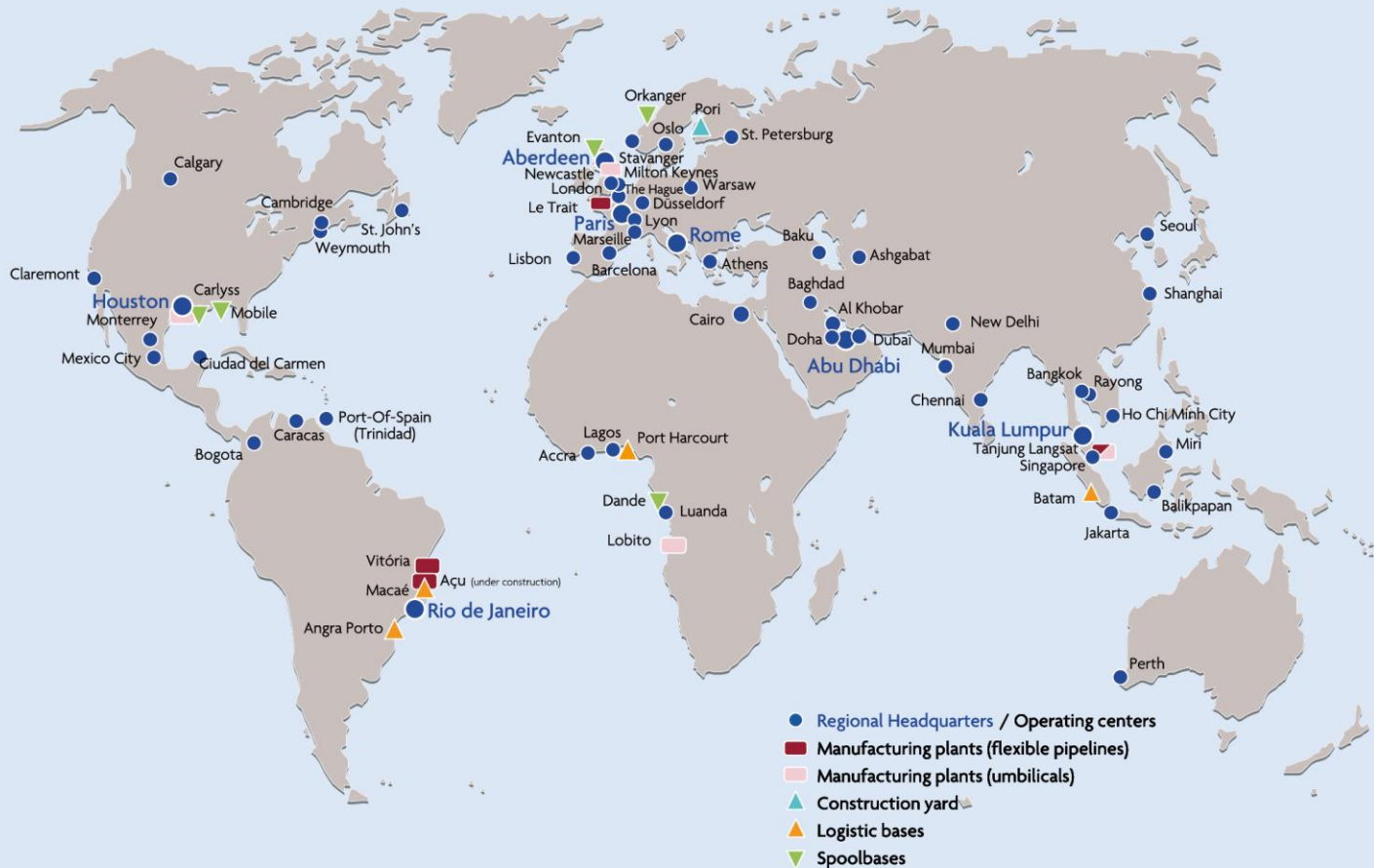
Onshore

- Gas treatment and liquefaction (LNG), Gas-to-Liquids (GTL)
- Oil refining (refining, hydrogen and sulphur units)
- Onshore pipelines
- Petrochemicals (ethylene, aromatics, olefins, polymers, fertilizers)
- Process technologies (proprietary or through alliances)
- Biofuel and renewable energies (including offshore wind)
- Non-oil activities (principally in life sciences, metals & mining, construction)

Un'unica impronta nel mondo

A UNIQUE FLEET

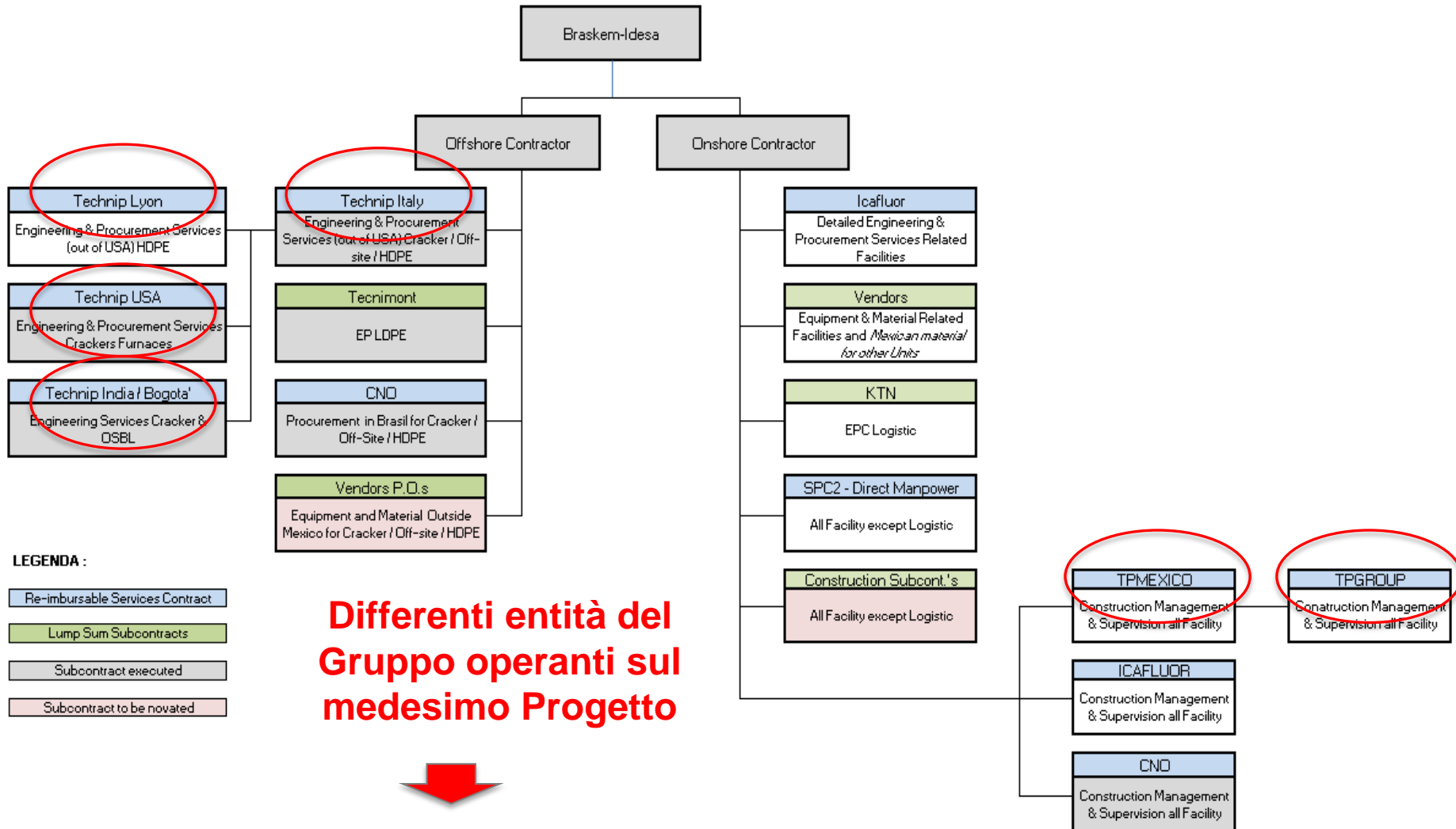
To undertake our offshore operations, we operate a specialized fleet comprised of **33*** vessels (of which 5 are under construction) which is unique in the industry.



*As of December, 2012

Complex Projects Organization

Etileno XXI - Mexico



Necessità di processi comuni di Cost Control

2. Nuovo sistema di Cost Control e Processi di lavoro



Situazione fino all'anno 2010

- **Mancanza di Tool standard di Controllo Costi**

- I Processi di Cost Control erano basati su Excel Spreadsheets

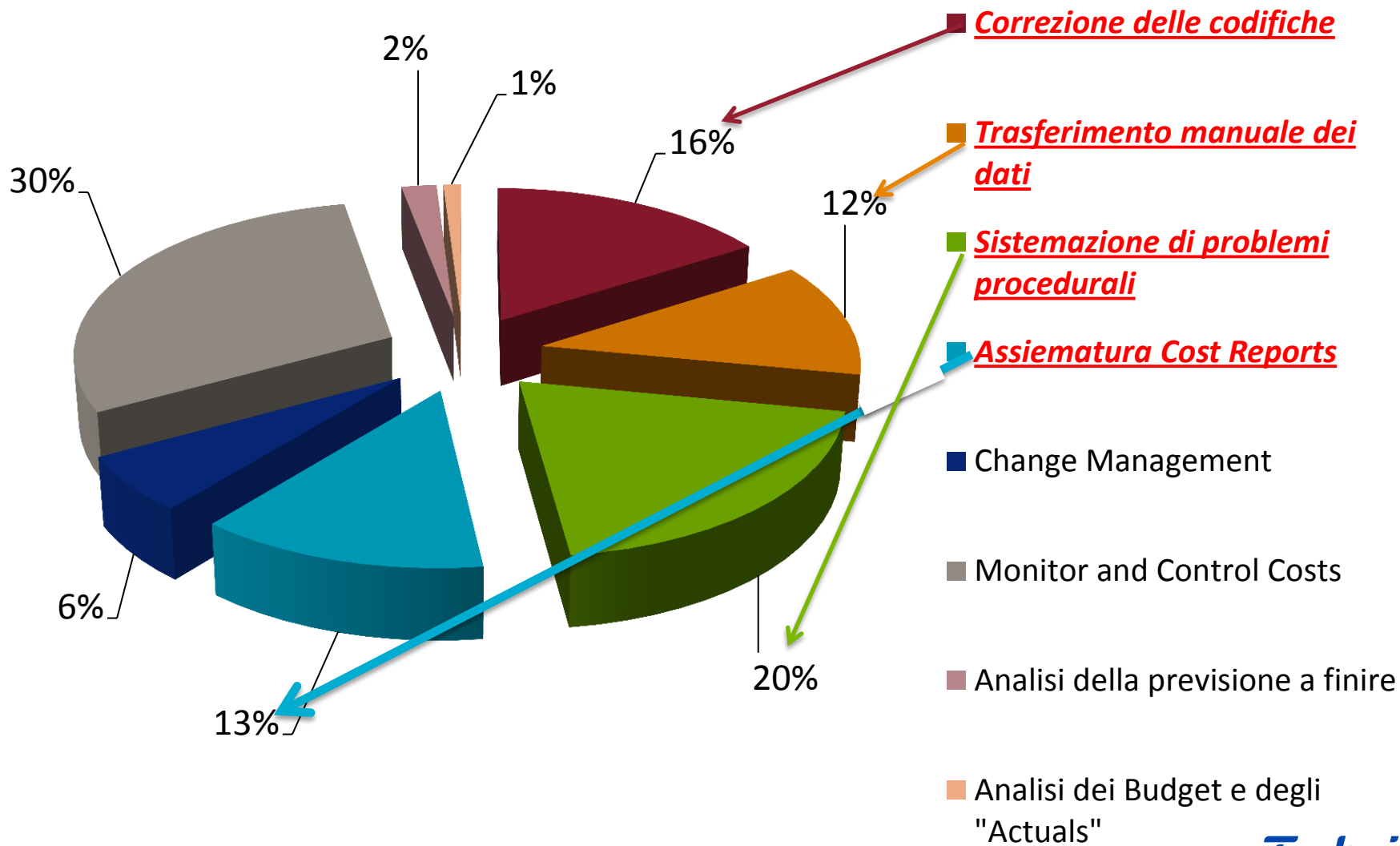
- **Percezione dei Clienti**

- I clienti giudicavano negativamente Technip come Contractor per i sistemi di Cost Control in uso
- Il Cost Control appariva più dedicato alla contabilità che concentrato sull'analisi della previsione a finire

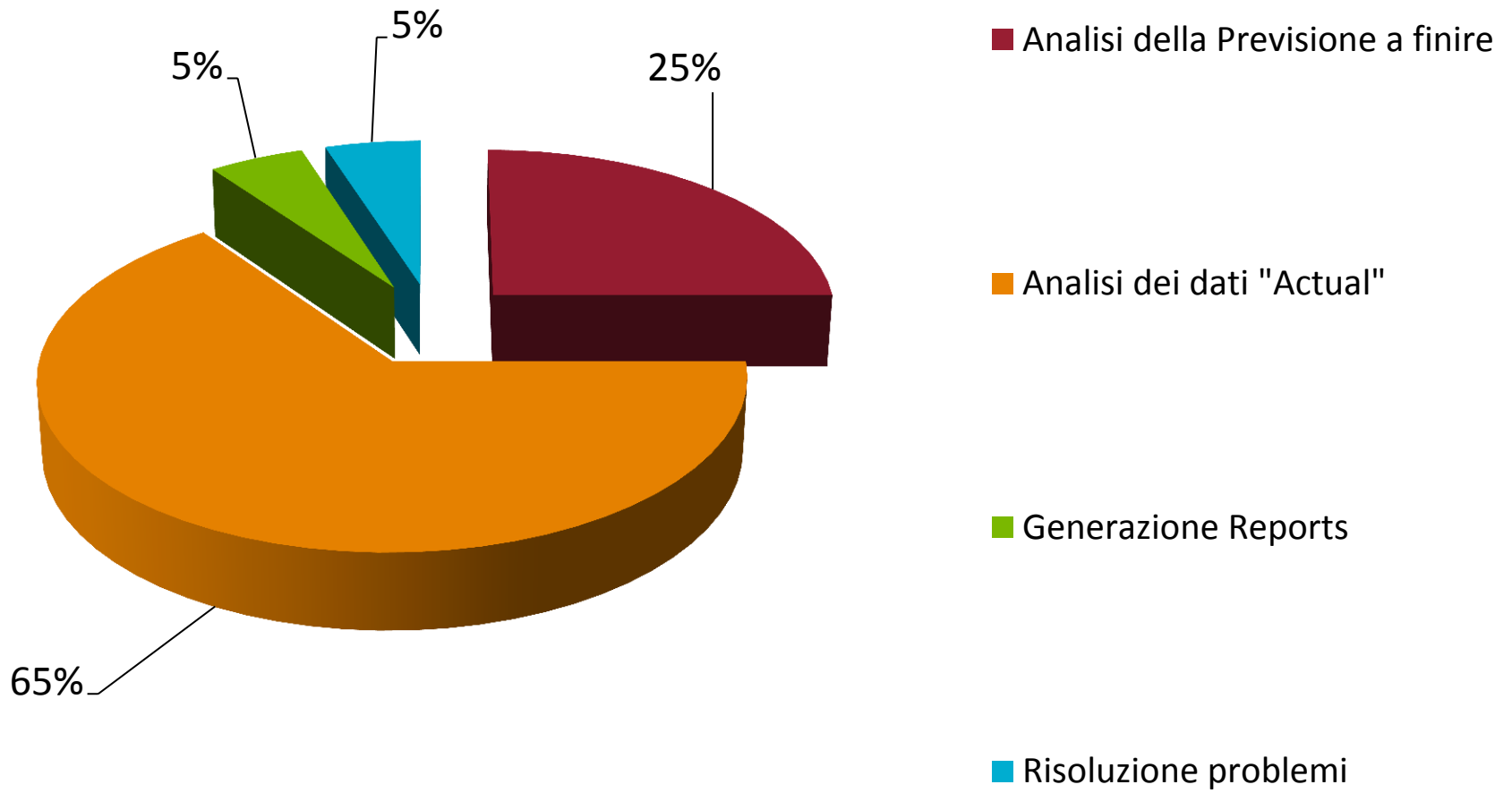
- **Necessità di risolvere alcune inefficienze**

- Uso inefficiente delle risorse e il non rispetto dei processi di Cost Control dava svantaggi alla competitività sui Costi di Progetto
- Processi non standard erano soggetti a manipolazioni non controllabili
- Le strutture erano differenti nei diversi progetti
- Le sorgenti dei dati, non strutturate, creavano una serie di inefficienze quali:
 - Integrità dei dati a causa del trasferimento manuale degli stessi da un sistema all'altro
 - Duplicazione delle informazioni in diversi sistemi sorgente
 - Mancanza di una codifica comune

Attività di Cost Control - Impiego del tempo



Attività di Cost Control - Aspettative



Sistema di Cost Control

Nel 2010 Il Project Management System Domain ha lanciato un progetto per lo sviluppo e la standardizzazione dei tools di Cost Control





Sistema di Cost Control

STRATEGIA

- **Utilizzo delle applicazioni Regionali cosiddette “Best of Breeds”**
- **I Cost manager di ciascun regione personalmente coinvolti con le migliori risorse**
- **Team di Cost Control direttamente coinvolti nello sviluppo dei tools**
- **Controllo delle attività attraverso uno Steering Committee**



Sistema di Cost Control

VINCOLI IMPOSTI DALLA CORPORATE

- ***General Cost Control Procedure.*** I Processi di Cost Control riassunti in un unico documento (Group Operating Principles and Standard)
- ***Project Management Reports.*** Produzione a cadenza mensile di Cost Report per il Management su piattaforma Web per la sommarizzazione dei Costi a livello di Regione e di Corporate
- ***Corporate Cost Breakdown Structure (CBS).*** Codifica universale di Cost Control
- ***ERP.*** Interfaccia e/o integrazione del Sistema di Cost Control di Gruppo per assicurare la totale riconciliazione con la contabilità dei progetti



Sistema di Cost Control

OBIETTIVI

- **Assicurare l'affidabilità e la tracciabilità dei citati processi di lavoro**
- **Gestire contemporaneamente Quantità e Costi**
- **Gestire la duplice codifica WBS / CBS in modo da avere un linguaggio comune tra le varie regioni**
- **Costruire un database storico utilizzabile per le stime**
- **Assicurare la flessibilità al tool necessaria per rispondere alle esigenze dei Clienti sui progetti rimborsabili**
- **Utilizzare lo stesso tool tra le Regioni sui progetti multi entity**
- **Utilizzare un tool informatico stabile, assistito e performante**



Sistema di Cost Control

RISULTATI PER I COST CONTROLLERS

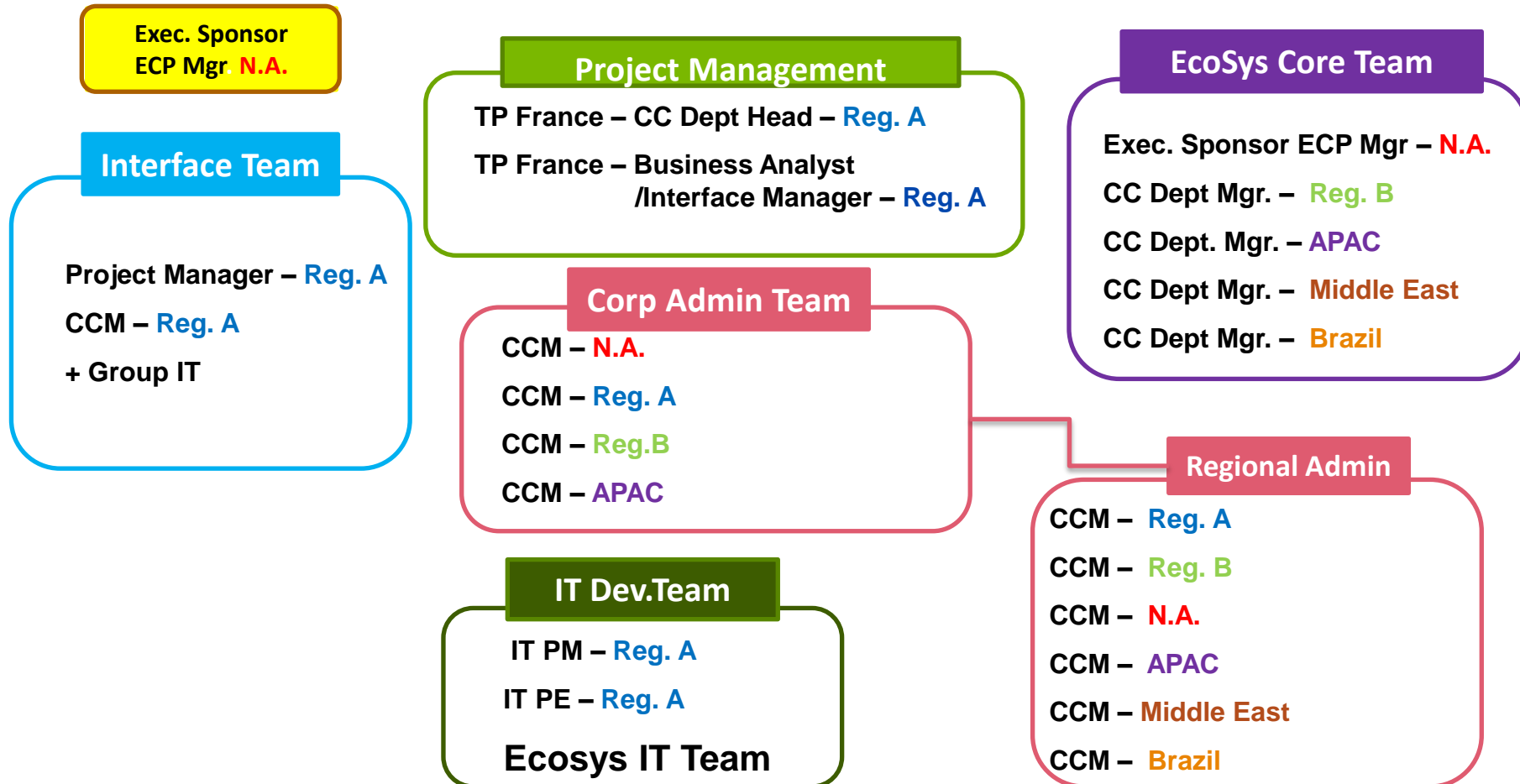
- **Maggiore competenza nel Cost Control:**
Più tempo per l'analisi dei trend = Più valore aggiunto
- **Maggiore attenzione alla previsione a finire**
- **Robusto sistema di Change Management e reporting**
- **Interfaccia tra il “Project Management Cost Tool” ed il sistema di Contabilità**
- **Utilizzo di un tool semplice e performante**
- **Processi guidati di Cost Control per i meno esperti**
- **Reportistica standard a vari livelli della CBS**
- **Completa trasparenza per ogni audit**

3. Come TECHNIP ha raggiunto gli obiettivi attraverso EcoSys



Un Gruppo di Cost Control alla guida di EcoSys

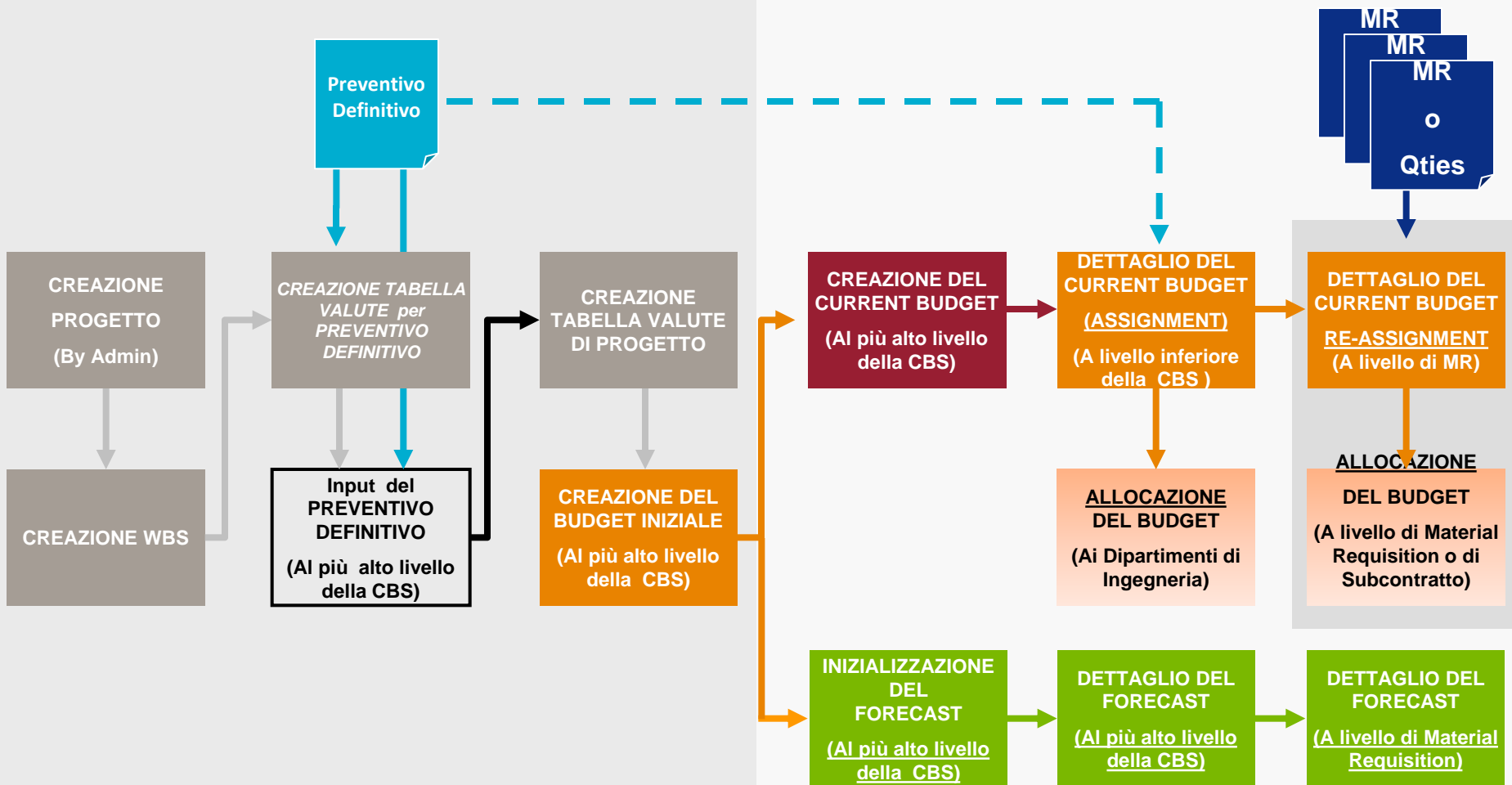
Nasce un'organizzazione multiregionale con diversi ruoli per lo sviluppo e l'amministrazione del sistema allo scopo di allineare tutte le regioni su processi comuni e sulle relative funzionalità



Processo in EcoSys

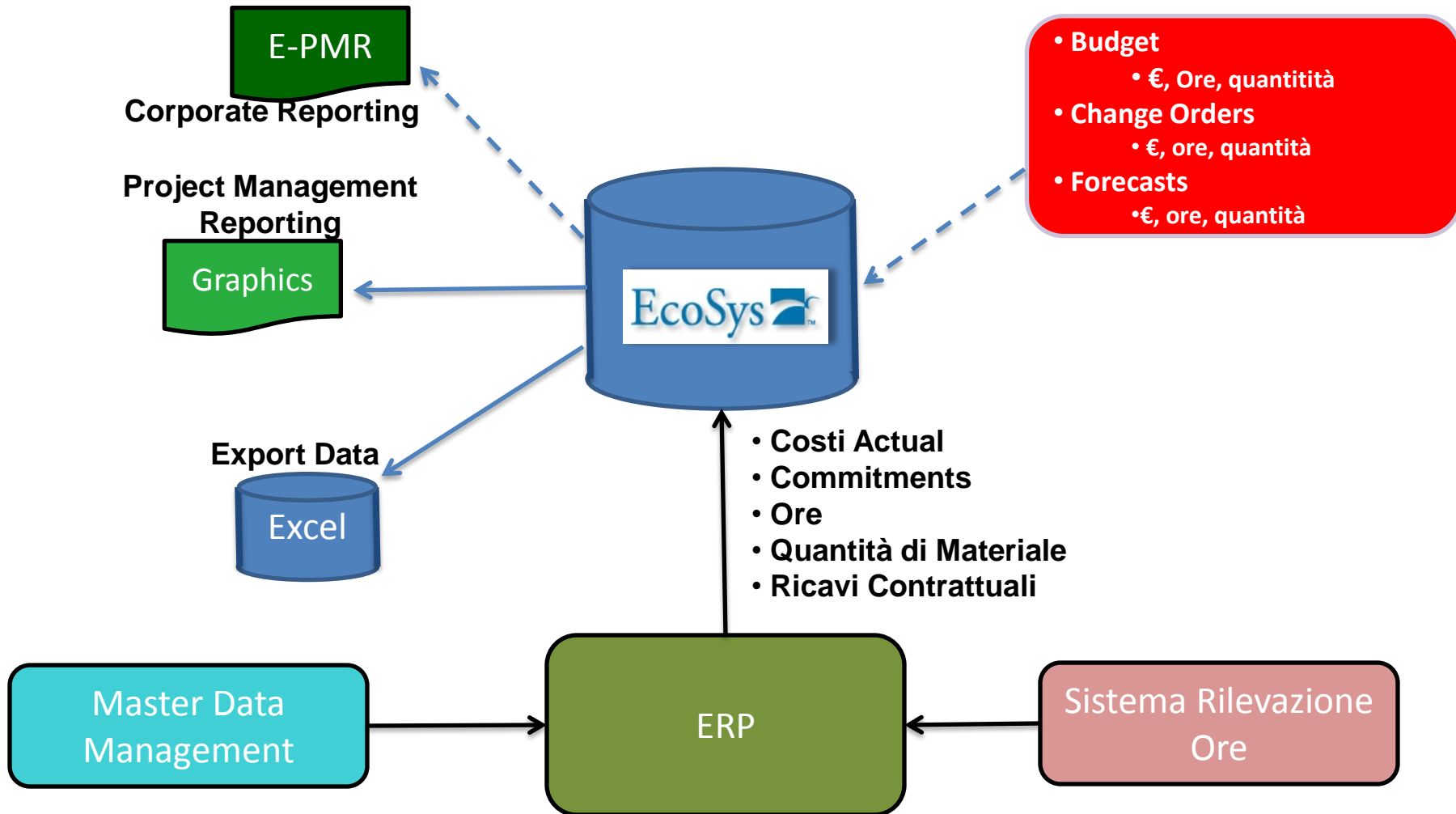
INIZIALIZZAZIONE PROGETTO

ESECUZIONE PROGETTO

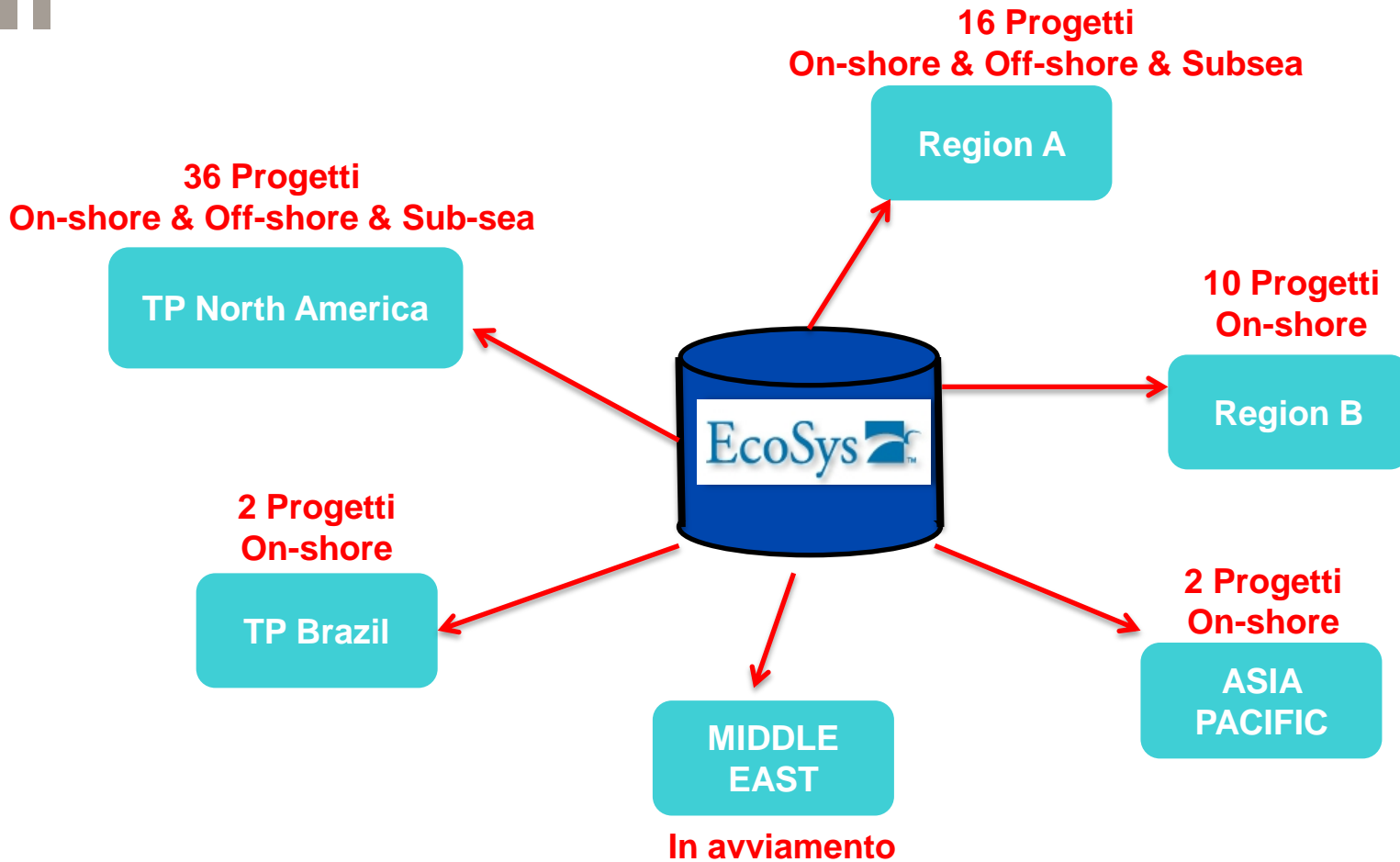


Interfaccia di Ecosys col sistema ERP

Si è interfacciato Ecosys con i sistemi esistenti per il recupero delle informazioni e per consolidare il Corporate Reporting



Un sistema distribuito in tutte le Regioni



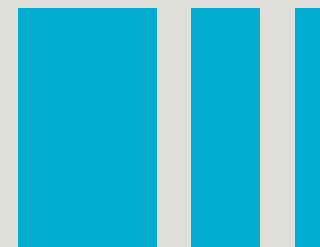
- **EcoSys** → Un sistema comune per il Controllo Costi che permette di lavorare più facilmente insieme



Maggiori Funzionalità di Ecosys

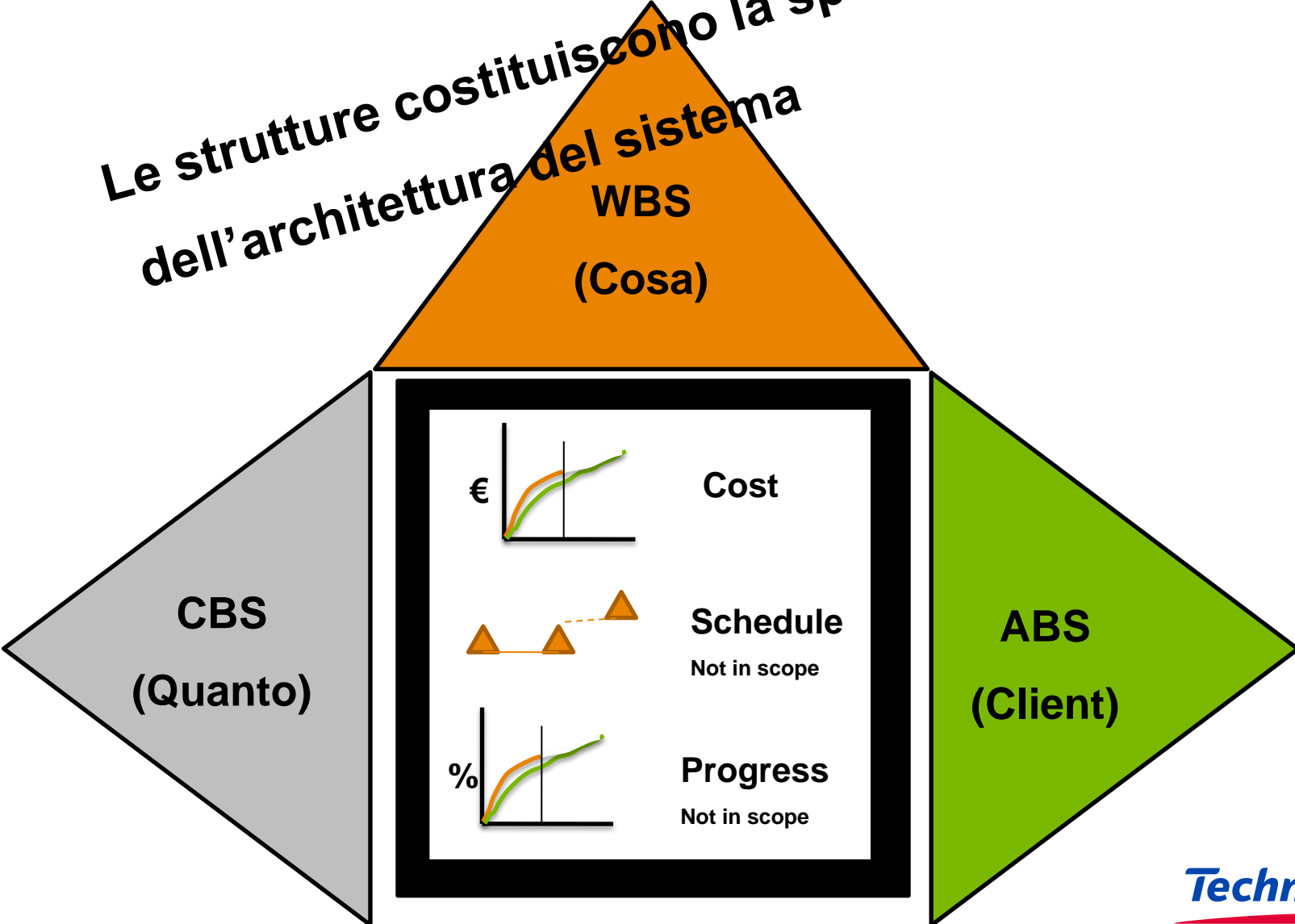
- **Supporta Progetti Onshore, Offshore e Subsea**
- **Supporta progetti lump sum e rimborsabili**
- **Gestisce strutture multiple (CBS/WBS)**
- **Permette l'inserimento dei dati a vari livelli di CBS/WBS di:**
 - Budgets
 - Commitments
 - Actual
 - Forecast
- **Registrazione dei dati a livello di Material Requisition / Ordine e singolo Equipment tag**
- **Gestione multi valute**
- **Modulo per la gestione delle Varianti**
- **Registrazione ore e quantità di materiale**
- **Gestione dei PDN (Project Deviation Notice) a fini del controllo della variazione del forecast**
- **Completa possibilità di verifica da parte di audit esterni e Cliente**

4. Panoramica delle caratteristiche di Ecosys

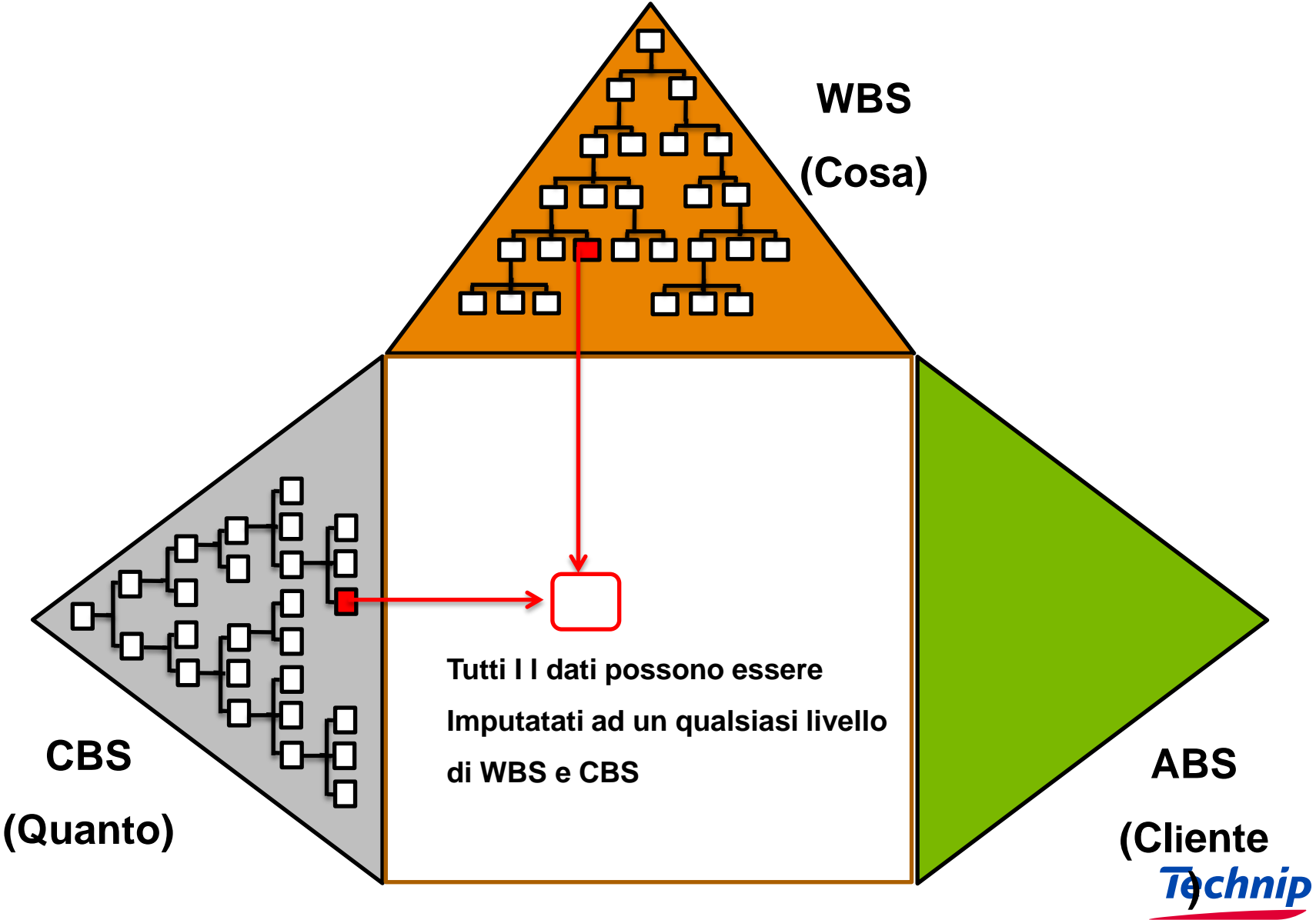


Strutture di EcoSys

Le strutture costituiscono la spina dorsale dell'architettura del sistema



Filosofia di base per l'architettura dei dati



3. Esempio di Work Breakdown Structure

EcoSys Region A Production v2.0

Spreadsheets Actions Reports User Data System Admin Special Corp

Spreadsheets > Project Info > P1: Project Maintenance

* Project: 61039X - Dong LS * Preset: Project Currency: Euro * Preset: Cost Co

Project / WBS Code	Project / WBS Desc
61039X	Dong LS
001	Preliminaries LS
100	Jacket / Wellbay
300	Flare
801	LS Business Travels

EcoSys Region A Production v2.0

Spreadsheets Actions Reports User Data System Admin Special Corp

Spreadsheets > Project Info > P1: Project Maintenance

* Project: 61024F - TPF - Jubilee EPIC 1 * Preset: Project Currency: Euro * Prese

Project / WBS Code	Project / WBS Description	ObjectType
61024F	TPF - Jubilee EPIC 1	Project
100	General	Work Element
200	Handling frame	Work Element
300	Interface piece connection	Work Element
400	FPSO Heading Control	Work Element
500	Support for Tullow	Work Element
600	Doc Control Extra Works	Work Element
Package1	S-Lay, Plets & Manifolds	Work Element
Package3	Flexible Fabrication	Work Element
Package4	Installation & Precom	Work Element
Common	Common	Work Element
700	Hold Back	Work Element
800	800	Work Element

Registri

E' consentita la tracciabilità dei dati secondo i seguenti registri

Transfers

Assignments

Tags

Material Requisitions

Purchase Orders

Poject Deviation Notices

Change Orders

ID	Description	Notes
----	-------------	-------

Cost Proposed :	Quantity, Cost
------------------------	----------------

Revenue Proposed :	Quantity, Cost
---------------------------	----------------

Cost Approved :	Quantity, Cost
------------------------	----------------

Revenue Approved :	Quantity, Cost
---------------------------	----------------

5. Alcune schermate di Ecosys



Caratteristiche EcoSys: Spreadsheets

Spreadsheets Actions Reports User Data

Spreadsheets > Budgeting > B3c2: Current Budget PO... (CBS)

* Project: Project 6 - Test VC * Current Budget: Current Budget (Cost)

Sheet Edit Display Rows

Utilizzati per inserire o importare dati

CBS	WBS Code	WBS Description	Row Description	Tag #	AltTag#	Qty1	1	2	Transfers	Assignmts	ProjCurrency CO	
						52,251		113,000		\$0	\$0	\$518,212
+	01 - PROJECT MANAGEMENT & SERVICES					40,248		0		\$0	\$0	\$928
-	03 - PROCUREMENT					12,003		113,000		\$0	\$0	\$515,397
	03 - PRO TP U1	Unit 1				0		0		(\$154,619)	(\$566,937)	\$0
	03 - PRO TP U2	Unit 2				0		0		\$154,619	(\$283,469)	\$0
-	03.2 - MAIN EQUIPMENT					3		113,000		\$0	\$695,787	\$515,397
-	03.22 - Pressure Vessel Equipment					3		113,000		\$0	\$695,787	\$515,397
-	03.222 - Columns					2		95,000		\$0	\$566,937	\$515,397
-	M510 - Columns					2		95,000		\$0	\$566,937	\$515,397
	TP U1	Unit 1	Separator	C01		1 EA	50,000 KG			\$0	\$566,937	\$0
	TP U1	Unit 1		C02		1 EA	45,000 KG			\$0	\$0	\$515,397
-	03.224 - Drums & other Vessels					1		18,000		\$0	\$128,849	\$0
-	M810 - Metallic Drums (Molecular Sieves & Static Dryers Included)					1		18,000		\$0	\$128,849	\$0
	TP U2	Unit 2	Flash drum	D51		1 EA	18,000 KG			\$0	\$128,849	\$0
-	03.3 - BULK MATERIAL					12,000		0		\$0	\$154,619	\$0
-	03.31 - Home Office Procurement					12,000		0		\$0	\$154,619	\$0
-	03.313 - Electrical					12,000		0		\$0	\$154,619	\$0
-	M1620 - Power Installation					12,000		0		\$0	\$154,619	\$0

Caratteristiche EcoSys – Actions

Spreadsheets **Actions** Reports User Data

Home

- Budgeting ▶
 - BUD: Copy Temp Budget to Reference
- Archiving ▶
 - BUD 1: Copy Reference Cost to Revenue
- Change Management ▶
 - BUD 2: Approve Lock & Copy Reference to Initial
- Client Actions ▶
 - BUD 3: Copy Initial Budget to Current
 - BUD 3a: Approve & Lock Initial Budget
 - BUD 3b: Copy Current Budget to Forecast
 - BUD ASSIGN: Copy Cost to Revenue
 - BUD ASSIGN: Lock Assignment
 - BUD ASSIGN: Unlock Assignment
 - BUD TRANSFER: Copy Cost to Revenue
 - BUD TRANSFER: Lock Transfer
 - BUD TRANSFER: Unlock Transfer

Include i Processi di Cost Control. Utilizzato per copiare/ approvare e congelare situazioni

Caratteristiche EcoSys – Project Reports

Spreadsheets Actions **Reports** User Data

Current Minor Period: Apr 2010

Date: 06-May-2010

Technip USA

PMR Data Report

DH015428 - Flare Gas Recovery

CBS ID	CBS Description	Reference Budget	Initial Budget	Current Budget	Committed	Previo Forec
Default	Exceptions	0	0	0	134,896	
1	Project Management	11,858,419	11,858,419	12,292,269	0	24,405,
1.1	Management and Engineer	11,858,419	11,858,419	12,292,269	0	24,405,
1.11	Home Office Manhours	11,858,419	11,858,419	12,292,269	0	24,405,
1.111	Project Management	1,705,736	1,705,736	1,799,175	0	3,621,
1.112	Engineering	9,659,033	9,659,033	9,959,813	0	19,875,
1.113	Procurement Subcontracts	261,766	261,766	273,633	0	592,
1.114	Support Services	231,885	231,885	259,647	0	515,
3	Procurement	0	2,738,079	2,265,000	2,155,624	2,265,
3.2	Main Equipment	0	1,973,079	1,500,000	1,470,990	1,500,
3.21	Rotating Equipment	0	1,973,079	1,500,000	1,470,990	1,500,
M0900	Pumps		1,973,079	1,500,000	1,470,990	1,500,
3.3	Bulk Materials		765,000	765,000	684,634	765,
3.31	Home Office Procurement		765,000	765,000	684,634	765,
3.311	Structural Steel				63,064	515,
3.314	Instrumentation				21,570	250,
6	Jobsite Works				92,526	1,250,
6.1	Main Subcontractor For Works				92,526	1,250,
6.12	Civil & Structure Sub Contracts	0	750,500	1,250,000	792,526	1,250,
S1400	Onshore Site Preparation And Underground Systems	0	750,500	1,250,000	792,526	1,250,
TOTAL:		11,858,419	15,346,998	15,807,269	3,083,046	27,920,

Utilizzato per la produzione dei cost reports standard e dei Corporate reports

Preventivo (Reference), Initial e Current Budgets

EcoSys

Organization Cost Object Spreadsheets Actions Reports Financial Admin Enterprise Data User Data Integration System Admin User: amon

Spreadsheets > Budgeting > B2c: Budget Entry (CBS) Current Period

* Project: PROJECT 05 - 8653F * Budget Version: Current Budget (Cost) Currency: (all) Refresh

Sheet Edit Display Rows Budget Version

CBS Code	CBS Description	Rate 1	Qty 2	UOM 2	Transaction Total	Trans Curr	ProjCurrency Total
05			0				€317,619
05.5			0				€196,245
05.53			0				€196,245
05	Third Party Supp		0				€196,245
09		0.00	0		287,480	US Dol	€196,245 Pe
09.2			0				€15,054
09.24			0				€9,080
09	General Risks In		0				€9,080
09.3		0.00	0		9,080	Euro	€9,080 Pe
09.3	IT & GLOBAL P		0		5,974	Euro	€5,974 Pe
60			0				€106,320
60.1			0				€22,698
60.1	GENERAL & AD	0.00	0		22,698	Euro	€22,698 Pe
60.2			0				€35,838
60.2	MANAGEMENT	0.00	0		35,838	Euro	€35,838 Pe
60.3			0				€47,784
60.3	SELLING & TEN	0.00	0		47,784	Euro	€47,784 Pe

Recent Items

- Current Budget (Cost)
- Initial Budget (Cost)
- Changes (Cost)
- Changes (Revenue)
- Current Budget (Revenue)
- Current Forecast (Cost)
- Reference Budget (Revenue)
- Reference Budget (Cost)

Version Type

- Actuals - Actuals
- Budgets - Budgets
 - Client Original Budget
 - Client Temp Budget
 - Current Budget (Cost)
 - Current Budget (Revenue)
 - Initial Budget (Cost)
 - Initial Budget (Revenue)
 - Original Current Budget (Cost)
 - Original Current Budget (Revenue)
 - Reference Budget (Cost)
 - Reference Budget (Revenue)
 - Temp Budget (Cost)

OK Cancel

Records 1 - 17 of 17 Show All Page Size 20 << First < Prev | Next >

Gestione Budget Multi – Valuta

Spreadsheets > 01a: Budget Entry - Materials

* Project: Flare Gas Recovery * Start Month: Aug 2009 * Version: Initial Budget (Cost)

Sheet Edit Display Rows

WBS	CBS Code	CBS Description	Life Total	LifeTotal Hours	Quantity	Unit of Measure	Currency	Aug 2009 Hours	Aug 2009	Sept 2009 Hours
			\$15,346,998	111,556				9,286	\$1,737,066	9,286
+ 700			\$2,199,386	20,766				1,728	\$182,948	1,728
+ 7043			\$5,073,074	47,124				3,926	\$422,660	3,926
+ 742			\$1,524,004	14,500				1,206	\$126,756	1,206
+ 743			\$1,524,004	14,500				1,206	\$126,756	1,206
+ 744			\$1,537,951	14,666				1,220	\$127,947	1,220
- 999			\$765,000	0				0	\$0	0
	M1545-02	Piloted Safety Relief Valve	\$50,000	0	16	EACH	US Dollar	0	\$0	0
	M1321-01	Pipe Seamless - Carbon Ste	\$475,000	0	8,000	LF	US Dollar			
	M1330	Fittings Diameters 2 Inches C	\$31,000	0	450	EACH	US Dollar			
	M1350	Flanges General	\$9,000	0	150	EACH	US Dollar			
	M1543	Automatic Valves	\$150,000	0	10	EACH	US Dollar			
	M1546-04	Wedge Flow Element	\$50,000	0	12	EACH	US Dollar			
- PIL001			\$750,500	0						
	S1430	Piling	\$750,500	0	1	EACH	US Dollar			
- PS446P001A			\$736,540	0						
	M0910	Centrifugal Pumps	\$736,540	0	1	EACH	Euro			
- PS446P001B			\$736,540	0						
	M0910	Centrifugal Pumps	\$736,540	0	1	EACH	Euro			
- PS446P001C			\$500,000	0						
	M0910	Centrifugal Pumps	\$500,000	0	1	EACH	US Dollar	0	\$0	0

Currency

- USD - US Dollar
- EUR - Euro**
- GBP - British Pound
- CAD - Canadian Dollar
- NOK - Norwegian Krone
- KPW - Korean Won

OK Cancel

Budgeting delle Quantità dei Materiali

Spreadsheets > 01a: Budget Entry - Materials

* Project: Flare Gas Recovery * Start Month: Aug 2009 * Version: Initial Budget (Cost)

Sheet Edit Display Rows

WBS ^A	CBS Code	CBS Description	Life Total	LifeTotal Hours	Quantity	Unit of Measure	Currency	Aug 2009 Hours	Aug 2009	Sept 2009 Hours	Sept 2009
			\$15,346,998	111,556				9,286	\$1,737,066	9,286	\$987,566
+	700		\$2,199,386	20,766				1,728	\$182,948	1,728	\$182,948
+	7043		\$5,073,074	47,124				3,926	\$422,660	3,926	\$422,660
+	742		\$1,524,004	14,500				1,206	\$126,756	1,206	\$126,756
+	743		\$1,524,004	14,500				1,206	\$126,756	1,206	\$126,756
+	744		\$1,537,951	14,666				1,220	\$127,947	1,220	\$127,947
-	999		\$765,000	0							\$0
	M1545-02	Piloted Safety Relief Valve	\$50,000	0	16	EACH	US Dollar				\$0
	M1321-01	Pipe Seamless - Carbon Ste	\$475,000	0	8,000	LF	US Dollar				\$0
	M1330	Fittings Diameters 2 Inches (\$31,000	0	450	EACH	US Dollar				\$0
	M1350	Flanges General	\$9,000	0	150	EACH	US Dollar				\$0
	M1543	Automatic Valves	\$150,000	0	10	EACH	US Dollar				\$0
	M1546-04	Wedge Flow Element	\$50,000	0	12	EACH	US Dollar				\$0
-	PIL001		\$750,500	0							\$0
	S1430	Piling	\$750,500	0	1	EACH	US Dollar				\$0
-	PS446P001A		\$736,540	0							\$0
	M0910	Centrifugal Pumps	\$736,540	0	1	EACH	Euro				\$0
-	PS446P001B		\$736,540	0							\$0
	M0910	Centrifugal Pumps	\$736,540	0	1	EACH	Euro				\$0
+	PS446P001C		\$500,000	0							\$0

Category Value

Category Search

Search Go

- CURRENCY - Currency
- DAY - Day
- EACH - Each
- FEET - Feet
- HOURS - Hours
- LF - Linear Feet
- LOT - Lot
- MONTHS - Months
- SQUARE FEET - Square Feet
- TONNE - Tonne

OK Cancel

Records 1 - 19 of 19 Show All Page Size 20

Registro dei trasferimenti di Budget



Organization Cost Objects Spreadsheets Actions Reports Financial Admin Enterprise Data User Data Integration System Admin

Spreadsheets > 05a: Budget Transfers

* [Project](#): Flare Gas Recovery * [Version](#): Current Budget (Cost)

Sheet Edit Display Rows

Project #	Budget Transfer #	Transfer Description	Budget Transfer Notes	Cost	Revenue	Hours - Cost	Hours - Revenue
				\$0	\$0	0	0
DH015428	BT-001	BT-001	Moving Instrument/Electrical hours from 744 to 7043	\$0	\$0	0	0
DH015428	BT-002	BT-002	Moving civil/structural hours from 7043 to 742				0

Budget Transfer Notes [X]

Moving civil/structural hours from 7043 to 742

[Save](#) [Cancel](#)

Dettaglio Trasferimento di Budget



Organization Cost Objects Spreadsheets Actions Reports Financial Admin Enterprise Data User Data Integration System Admin

Spreadsheets > 05b: Budget Transfer Entry

* [Project](#): Flare Gas Recovery * [Version](#): Current Budget (Cost) [Budget Transfer](#): (all)

Sheet Edit Display Rows

Transfer ID	Transfer Description	WBS	CBS	CBS Description	Comments	Transfer Date	Quantity	Unit of Measure	Rate	Rate / None?	Currency	Cost Amount	Reporting Cost
							0					0	\$0
BT-002													
							0					0	\$0
	BT-002	7043	1330	Civil/Structural		01-May-2010	-150	HOURS	114.51	Transaction Rate	US Dollar	-17,176	(\$17,176)
	BT-002	742	1330	Civil/Structural		01-May-2010	150	HOURS	114.51	Transaction Rate	US Dollar	17,177	\$17,176
BT-001													
							0					0	\$0
	BT-001	744	1320	Instrument/Electrical		30-Apr-2010	-150	HOURS	104.48	Transaction Rate	US Dollar	-15,672	(\$15,672)
	BT-001	7043	1320	Instrument/Electrical		30-Apr-2010	150	HOURS	104.48	Transaction Rate	US Dollar	15,672	\$15,672
	BT-001	7043	1320	Instrument/Electrical		17-May-2010	100	HOURS	104.48	Transaction Rate	US Dollar	10,448	\$10,448
	BT-001	744	1320	Instrument/Electrical		17-May-2010	-100	HOURS	104.48	Transaction Rate	US Dollar	-10,448	(\$10,448)

Grazie

