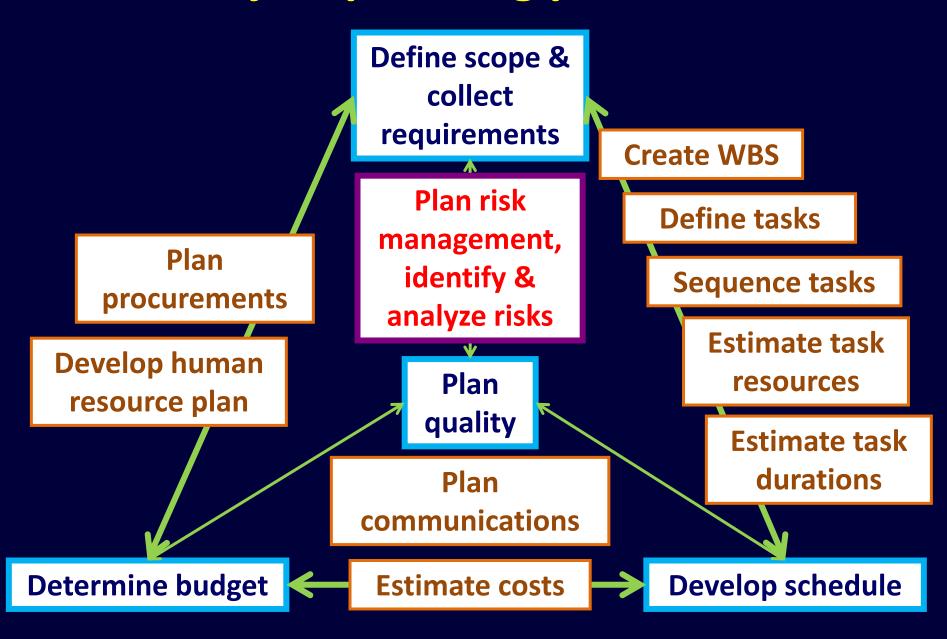
Project Management

Project Planning Costs & Budget

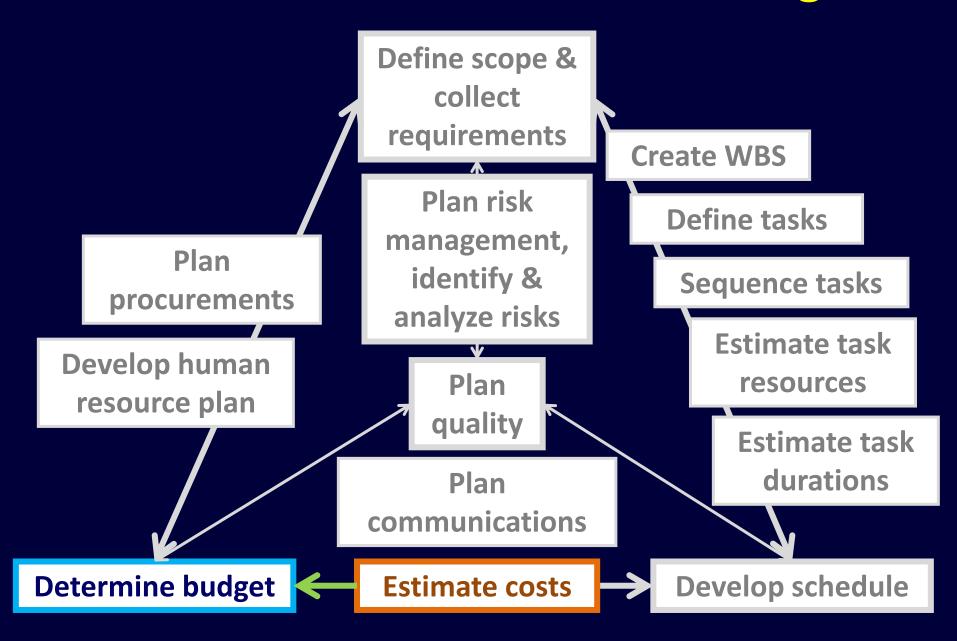
Project planning processes



Planning processes: where do we stand?



Estimate costs & Determine budget



Estimate costs (1)

Estimate the cost of each of the resources needed to successfully complete the project tasks

Estimate costs

> Costs expressed in numbers of monetary units

Determine budget

Estimate task resources

Estimate task durations

Develop schedule

Estimate costs (2)

- Estimates may incorporate a "contingency reserve" to take into account changes due to the realization of potential risks
- Estimates refined as the project moves forward and more details are available

Estimate task resources

Estimate task durations



Costs (1)

- > Labour
- > Overhead
- > Hiring
- > Offices



Costs (2)

- > Workstations
- > Servers
- > Other equipment
- Supplies



Costs (3)

- > Materials
- > **Documentation**
- > Competitors' products
- > Multimedia assets





Costs (4)

- > Travel
- > Events



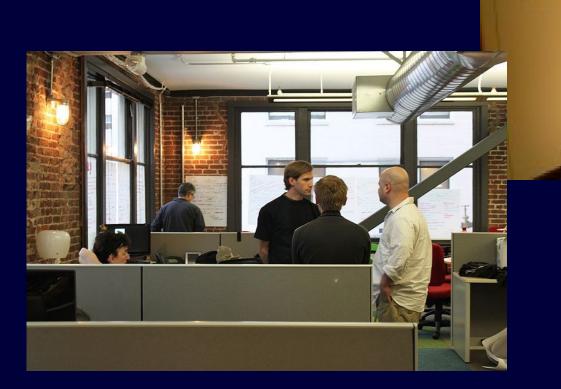


Costs (5)

> Services

> Consultancy

> Contractors



Cost of salaried employees (example)

Weeks per year	52
Days per year excluding weekends	260
Public holidays	10
Total potential workdays	250
Vacation days	30
Total actual workdays in a year	220

Taking idle time into account:

✓ add 10% or so to cost per day or

- ✓ count 200 workdays per year
 - > Cost per day = Gross annual salary / 100

Gross annual salary	36,000
Employer's social contributions (%)	50%
Employer's social contributions	18,000
Annual cost excluding overhead	54,000
Overhead (%)	33%
Overhead	17,820
Annual cost including overhead	71,820
Total cost / gross salary	2
Cost per day of work	326

Project EXONE Contractor's costs (1)

Project manager
Senior technical consultant
Junior technical consultant
Developer 1
Developer 2
Tester 1
Tester 2
Client
Travel

Resource Name	Type 🕌	Max. Units ▼	Std. Rate
PM	Work	100%	€ 500.00/day
STC	Work	100%	€ 450.00/day
ЈТ С	Work	100%	€ 350.00/day
DVPR1	Work	100%	€ 400.00/day
DVPR2	Work	100%	€ 350.00/day
TSTR1	Work	100%	€ 300.00/day
TSTR2	Work	100%	€ 300.00/day
CLT	Work	100%	€ 0.00/day
TRAVEL	Cost		2

Project EXONE Contractor's costs (2)

	WBS →	Task Name	Predecessors +	Resource Names 🕌	Duration 💂	Start 💂	Finish 💂	VVork 😛	Cost 💂
1	1	□ PROJECT EXONE			65 days	03/01/17	03/04/17	177 days	€ 65,225.00
2	1.1	☐ REQUIREMENTS			4 days	03/01/17	06/01/17	14 days	€ 4,550.00
3	1.1.1	Review and complete requirements & plan with client		STC;DVPR1;CLT;PM	3 days	03/01/17	05/01/17	12 days	€ 4,050.00
4	1.1.2	Final discussion and agreement with client on req'ts & plan	3	CLT;PM	1 day	06/01/17	06/01/17	2 days	€ 500.00
5	1.2	□ DESIGN			11 days	09/01/17	23/01/17	26 days	€ 10,350.00
6	1.2.1	Write design specifications	4	DVPR1;STC	7 days	09/01/17	17/01/17	14 days	€ 5,950.00
7	1.2.2	Check design with respect to requirements	6	DVPR1;STC;PM[50%]	2 days	18/01/17	19/01/17	5 days	€ 2,200.00
8	1.2.3	Meet with client to discuss & agree on design	7	STC;PM[50%];DVPR1;CLT	2 days	20/01/17	23/01/17	7 days	€ 2,200.00
9	1.3	☐ IMPLEMENTATION			46 days	24/01/17	28/03/17	61 days	€ 22,800.00
10	1.3.1	Coding - Alpha version	8	DVPR2;DVPR1	7 days	24/01/17	01/02/17	14 days	€ 5,250.00
11	1.3.2	Debugging phase 1 (following internal Alpha testing)	27;10	DVPR2;DVPR1	3 days	06/02/17	08/02/17	6 days	€ 2,250.00
12	1.3.3	Production of Alpha version and delivery to client	22	DVPR2	1 day	10/02/17	10/02/17	1 day	€ 350.00
13	1.3.4	Debugging phase 2 (following client Alpha testing)	28	DVPR1;DVPR2	2 days	15/02/17	16/02/17	4 days	€ 1,500.00
14	1.3.5	Coding - Beta version	13	DVPR2;DVPR1	8 days	17/02/17	28/02/17	16 days	€ 6,000.00
15	1.3.6	Debugging phase 3 (following internal Beta testing)	29;14	DVPR2;DVPR1	3 days	02/03/17	06/03/17	6 days	€ 2,250.00
16	1.3.7	Production of Beta version and delivery to client	24	DVPR2	1 day	09/03/17	09/03/17	1 day	€ 350.00
17	1.3.8	Debugging phase 4 (following client Beta testing)	30	DVPR1;DVPR2	4 days	16/03/17	21/03/17	8 days	€ 3,000.00
18	1.3.9	Production of Final version and delivery to client	17	DVPR2	1 day	22/03/17	22/03/17	1 day	€ 350.00
19	1.3.10	Debugging phase 5 & delivery (following client Final testing)	31	DVPR2;DVPR1	2 days	27/03/17	28/03/17	4 days	€ 1,500.00
20	1.4	□ INTEGRATION			23 days	06/02/17	08/03/17	5 days	€ 1,050.00
21	1.4.1	Delivery of content subset by client	11FF-2 days	CLT	1 day	06/02/17	06/02/17	1 day	€ 0.00
22	1.4.2	Integration of content subset	21;11	DVPR2	1 day	09/02/17	09/02/17	1 day	€ 350.00
23	1.4.3	Delivery of complementary content by client	15FF-2 days	CLT	1 day	02/03/17	02/03/17	1 day	€ 0.00
24	1.4.4	Integration of complementary content	23; 15	DVPR2	2 days	07/03/17	08/03/17	2 days	€ 700.00
25	1.5	☐ TESTING & ACCEPTANCE			47 days	24/01/17	29/03/17	32.5 days	€ 7,675.00
26	1.5.1	Prepare test plan and test cases	8	STC[50%];JTC	5 days	24/01/17	30/01/17	7.5 days	€ 2,875.00
27	1.5.2	Internal testing - Alpha version	10SS+3 days;26	TSTR1;TSTR2	4 days	31/01/17	03/02/17	8 days	€ 2,400.00
28	1.5.3	Alpha testing by client	12	CLT	2 days	13/02/17	14/02/17	2 days	€ 0.00
29	1.5.4	Internal testing - Beta version	14SS+5 days	TSTR1;TSTR2	4 days	24/02/17	01/03/17	8 days	€ 2,400.00
30	1.5.5	Beta testing by client	16	CLT	4 days	10/03/17	15/03/17	4 days	€ 0.00
31	1.5.6	Final testing by client	18	CLT	2 days	23/03/17	24/03/17	2 days	€ 0.00
32	1.5.7	Acceptance by client	19	CLT	1 day	29/03/17	29/03/17	1 day	€ 0.00
33	1.6	DEPLOYMENT AT CLIENT'S SITE	32	DVPR2;JTC;TRAVEL[€ 750.00]	2 days	30/03/17	31/03/17	4 days	€ 2,150.00
34	1.7	PROJECT MANAGEMENT (After Req'ts WP & before Closure)	2;33FF	PM[50%]	60 days	09/01/17	31/03/17	30 days	€ 15,000.00
35	1.8	PROJECT CLOSURE	34	DVPR1;PM;STC;TSTR1;CLT[50%]	1 day	03/04/17	03/04/17	4.5 days	€ 1,650.00

EXONE Contractor's non-labour cost

	WBS →	Task Name			•	Predecessors 💂		Resource Names 🕌	Duration 🕌	Start 💂	Finish 💂	VVork 😛	Cost 😛
1		□ PROJECT EXONE							65 days	03/01/17	03/04/17	177 days	€ 65,225.00
	1.1	□ REQUIREMENTS							4 days	03/01/17	06/01/17	14 days	€ 4,550.00
	1.1.1	Review and com	plete requirements & plan	with client				STC;DVPR1;CLT;PM	3 days	03/01/17	05/01/17	12 days	€ 4,050.00
4	1.1.2	Final discussion	and agreement with client	on req'ts &	: plan	3		CLT;PM	1 day	06/01/17	06/01/17	2 days	€ 500.00
	1.2	□ DESIGN							11 days	09/01/17	23/01/17	26 days	€ 10,350.00
	1.2.1	Write design spe	ecifications			4		DVPR1;STC	7 days	09/01/17	17/01/17	14 days	€ 5,950.00
7	1.2.2	Check design wi	ith respect to requirements			6		DVPR1;STC;PM[50%]	2 days	18/01/17	19/01/17	5 days	€ 2,200.00
	1.2.3	Meet with client	to discuss & agree on des	ign		7		STC;PM[50%];DVPR1;CLT	2 days	20/01/17	23/01/17	7 days	€ 2,200.00
177.52	1.3	☐ IMPLEMENTATION	N						46 days	24/01/17	28/03/17	61 days	€ 22,800.00
	1.3.1	Coding - Alpha	Resource Name	Туре	Max.	Std. Rate		DVPR2;DVPR1	7 days	24/01/17	01/02/17	14 days	€ 5,250.00
	1.3.2	Debugging pha	·	, F- •	Units	2131.1340	•	DVPR2;DVPR1	3 days	06/02/17	08/02/17	6 days	€ 2,250.00
1000000	1.3.3	Production of A	PM	Work	100%	6 € 500.0	ı∩/dav	DVPR2	1 day	10/02/17	10/02/17	1 day	€ 350.00
	1.3.4	Debugging pha:			1		3,,	DVPR1;DVPR2	2 days	15/02/17	16/02/17	4 days	€ 1,500.00
14	1.3.5	Coding - Beta	STC	Work	100%	6 € 450.0	0/day	DVPR2;DVPR1	8 days	17/02/17	28/02/17	16 days	€ 6,000.00
15	1.3.6	Debugging pha:			100000000			DVPR2;DVPR1	3 days	02/03/17	06/03/17	6 days	€ 2,250.00
16	1.3.7	Production of B	JTC	Work	100%	6 € 350.0	0/day	DVPR2	1 day	09/03/17	09/03/17	1 day	€ 350.00
17	1.3.8	Debugging pha:				.00	S 15	DVPR1;DVPR2	4 days	16/03/17	21/03/17	8 days	€ 3,000.00
18	1.3.9	Production of F	DVPR1	Work	100%	6 € 400.0	10/day	DVPR2	1 day	22/03/17	22/03/17	1 day	€ 350.00
100	1.3.10	Debugging pha:						DVPR2;DVPR1	2 days	27/03/17	28/03/17	4 days	€ 1,500.00
	1.4	☐ INTEGRATION	DVPR2	Work	100%	6 € 350.0	10/day		23 days	06/02/17	08/03/17	5 days	€ 1,050.00
	1.4.1	Delivery of con					200 000	CLT	1 day	06/02/17	06/02/17	1 day	€ 0.00
	1.4.2	Integration of (TSTR1	Work	100%	6 € 300.0	10/day	DVPR2	1 day	09/02/17	09/02/17	1 day	€ 350.00
Control of the last	1.4.3	Delivery of com						CLT	1 day	02/03/17	02/03/17	1 day	€ 0.00
24	1.4.4	Integration of (TSTR2	Work	100%	6 € 300.0	10/day	DVPR2	2 days	07/03/17	08/03/17	2 days	€ 700.00
25	1.5	☐ TESTING & ACCE		t					47 days	24/01/17	29/03/17	32.5 days	€ 7,675.00
	1.5.1	Prepare test pl	CLT	Work	100%	€ 0.0	10/day	STC[50%];JTC	5 days	24/01/17	30/01/17	7.5 days	€ 2,875.00
	1.5.2	Internal testing	TRAVEL	Cost				TSTR1;TSTR2	4 days	31/01/17	03/02/17	8 days	€ 2,400.00
100000000	1.5.3	Alpha testing b	TRAVEL	COST				CLT	2 days	13/02/17	14/02/17	2 days	€ 0.00
- 10	1.5.4	Internal testing	5010 10151011			1,00.0 40,0		TSTR1;TSTR2	4 days	24/02/17	01/03/17	8 days	€ 2,400.00
30	1.5.5	Beta testing by	client			16		CLT	4 days	10/03/17	15/03/17	4 days	€ 0.00
31	1.5.6	Final testing by	client			18		CLT	2 days	23/03/17	24/03/17	2 days	€ 0.00
32	1.5.7	Acceptance by	client			19		CET	1 day	29/03/17	29/03/17	1 day	€ 0.00
33	1.6	.6 DEPLOYMENT AT CLIENT'S SITE				32	DV	PR2;JT(;;TRAVEL[€ 750.00]	2 days	30/03/17	31/03/17	4 days	€ 2,150.00
34	1.7	PROJECT MANAGI	EMENT (After Req'ts WP 8	k before Cl	losure)	2;33FF		F11[55%]	60 days	09/01/17	31/03/17	30 days	€ 15,000.00
35	1.8	PROJECT CLOSUR	RE			34	DVPR1	L;PM;STC;TSTR1;CLT[50%]	1 day	03/04/17	03/04/17	4.5 days	€ 1,650.00

Project EXONE Client's costs (1)

Overall project manager Editor 1 Editor 2 Editor 3 Editor 4 Data engineer Proofreader 1 Proofreader 2 Testing service provider Contractor Contractor's cost (price) Hardware (& software) Multimedia asset licences Travel

Name of the last o	1000		
Resource Name	Type -	Max. Units ▼	Std. Rate
ОРМ	Work	100%	€ 450.00/day
EDTR1	Work	100%	€ 300.00/day
EDTR2	Work	100%	€ 300.00/day
EDTR3	Work	100%	€ 300.00/day
EDTR4	Work	100%	€ 300.00/day
DATENG	Work	100%	€ 400.00/day
PRFRDR1	Work	100%	€ 250.00/day
PRFRDR2	Work	100%	€ 250.00/day
TSTSP	Work	100%	€ 350.00/day
CTR	Work	100%	€ 0.00/day
CTR_COST	Cost		
HW	Material		€ 3,000.00
MMLIC	Material		€ 2,000.00
TRAVEL	Cost		

Project EXONE Client's costs (2)

	WBS ↓	Task Name ▼	Predecessors 💂	Resource Names 🕌	Duration 💂	Start 💂	Finish 🕌	VVork 💂	Cost 🕌
1	1	□ PROJECT EXONE			66 days	03/01/17	04/04/17	200 day	€ 145,734.00
2	1.1	□ REQUIREMENTS			4 days	03/01/17	06/01/17	11 day	€ 4,000.00
3	1.1.1	Review and complete requirements & plan with contractor		CTR;OPM;DATENG;TRAVEL[€ 1,000.00]	3 days	03/01/17	05/01/17	9 day	€ 3,550.00
4	1.1.2	Final discussion and agreement with contractor on req'ts & plan	3	CTR; OPM	1 day	06/01/17	06/01/17	2 day	€ 450.00
5	1.2	□ SOFTWARE DESIGN			11 days	09/01/17	23/01/17	12 day	€ 850.00
6	1.2.1	Write and check design specifications	4	CTR	9 days	09/01/17	19/01/17	9 day	€ 0.00
7	1.2.2	Meet with contractor to discuss & agree on design	6	OPM[50%];CTR;TRAVEL[€ 400.00]	2 days	20/01/17	23/01/17	3 day	€ 850.00
8	1.3	☐ SOFTWARE IMPLEMENTATION			46 days	24/01/17	28/03/17	35 day	€ 0.00
9	1.3.1	Coding, internal testing & bug fixing - Alpha version	7	CTR	12 days	24/01/17	08/02/17	12 day	€ 0.00
10	1.3.2	Delivery of Alpha version by contractor	21	CTR	1 day	10/02/17	10/02/17	1 da	€ 0.00
11	1.3.3	Debugging following Alpha testing	28	CTR	2 days	15/02/17	16/02/17	2 day	€ 0.00
12	1.3.4	Coding, internal testing & bug fixing - Beta version	11	CTR	12 days	17/02/17	06/03/17	12 day	€ 0.00
13	1.3.5	Delivery of Beta version by contractor	25; 12	CTR	1 day	09/03/17	09/03/17	1 da	€ 0.00
14	1.3.6	Debugging following Beta testing	29	CTR	4 days	16/03/17	21/03/17	4 day	€ 0.00
15	1.3.7	Delivery of Final version by contractor	14	CTR	1 day	22/03/17	22/03/17	1 da	€ 0.00
16	1.3.8	Debugging following Final testing & delivery for acceptance	30	CTR	2 days	27/03/17	28/03/17	2 day	€ 0.00
17	1.4	☐ CONTENT CREATION & INTEGRATION			32 days	24/01/17	08/03/17	69 day	€ 19,800.00
18	1.4.1	Creation of content subset	7	EDTR1;EDTR2;EDTR3;EDTR4	6 days	24/01/17	31/01/17	24 day	€ 7,200.00
19	1.4.2	Proofreading of content subset	18SS+4 days	PRFRDR1;PRFRDR2	3 days	30/01/17	01/02/17	6 day	€ 1,500.00
20	1.4.3	Preparation of content subset & delivery to contractor	9FF-2 days; 19	DATENG	3 days	02/02/17	06/02/17	3 day	€ 1,200.00
21	1.4.4	Integration of content subset	20;9	CTR	1 day	09/02/17	09/02/17	1 da	€ 0.00
22	1.4.5	Creation of complementary content	28	EDTR1;EDTR2;EDTR3;EDTR4	6 days	15/02/17	22/02/17	24 day	€ 7,200.00
23	1.4.6	Proofreading of complementary content	22SS+4 days	PRFRDR1;PRFRDR2	3 days	21/02/17	23/02/17	6 day	€ 1,500.00
24	1.4.7	Preparation of complementary content & delivery to contractor	12FF-2 days;23	DATENG	3 days	28/02/17	02/03/17	3 day	€ 1,200.00
25	1.4.8	Integration of complementary content	24; 12	CTR	2 days	07/03/17	08/03/17	2 day	€ 0.00
26	1.5	☐ TESTING & ACCEPTANCE			41 days	01/02/17	29/03/17	33.5 day	€ 10,375.00
27	1.5.1	Prepare test plan and test cases	18	EDTR1;EDTR2	4 days	01/02/17	06/02/17	8 day	€ 2,400.00
28	1.5.2	Alpha testing	10;27	EDTR3;EDTR4	2 days	13/02/17	14/02/17	4 day	€ 1,200.00
29	1.5.3	Beta testing	13	EDTR3;EDTR4;TSTSP	4 days	10/03/17	15/03/17	12 day	€ 3,800.00
30	1.5.4	Final testing	15	EDTR3;EDTR4;TSTSP[50%]	2 days	23/03/17	24/03/17	5 day	€ 1,550.00
31	1.5.5	Acceptance	16	OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4	1 day	29/03/17	29/03/17	4.5 day	€ 1,425.00
32	1.6	DEPLOYMENT	31	CTR	2 days	30/03/17	31/03/17	2 day	€ 0.00
33	1.7	PROJECT MANAGEMENT (After Req'ts WP & before Closure)	2;32FF	OPM[50%]	60 days	09/01/17	31/03/17	30 day	€ 13,500.00
34	1.8	CONTRACTOR'S PROJECT CLOSURE	33	OPM[50%];CTR;TRAVEL[€ 250.00]	1 day	03/04/17	03/04/17	1.5 day	€ 475.00
35	1.9	OVERALL PROJECT CLOSURE	34	DATENG; EDTR1; EDTR3; OPM; EDTR2; EDTR4	1 day	04/04/17	04/04/17	6 day	€ 2,050.00
36	1.10	COST OF WORK DONE BY CONTRACTOR		CTR_COST[€ 89,684.00]				0 day	€ 89,684.00
37	1.11	OTHER NON-LABOUR COSTS	8	HW[1];MMLIC[1]				0 day	€ 5,000.00

EXONE Client's non-labour costs (MPP)

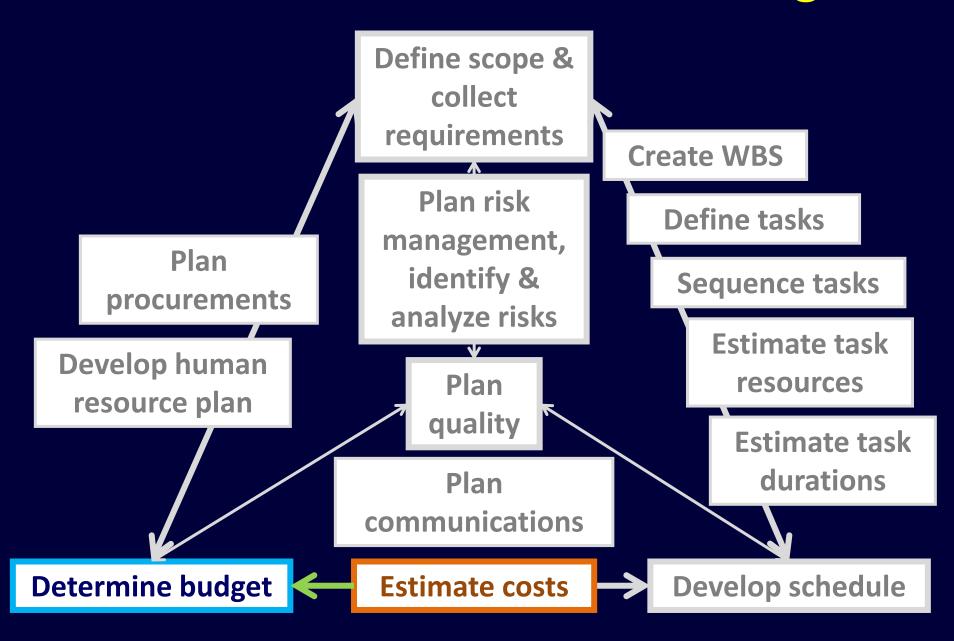
WBS .	Task Name			¥	Predecessors 💂	Resource Names	Duration 💂	Start 💂	Finish 🕌	Work 🕌	Cost 🕌
1 1	☐ PROJECT EXONE						66 days	03/01/17	04/04/17	200 days	€ 145,734.00
2 1.1	☐ REQUIREMENTS						4 days	03/01/17	06/01/17	11 days	€ 4,000.00
3 1.1.1	Review and comp	lete requirements & plan v	vith contra	ctor		CTR;OPM;DATEN;;TRAVEL[€ 1,000.00]	3 days	03/01/17	05/01/17	9 days	€ 3,550.00
4 1.1.2	Final discussion a	nd agreement with contra	ctor on red	q'ts & plan	3	STR, ST 1.1	1 day	06/01/17	06/01/17	2 days	€ 450.00
5 1.2	SOFTWARE DESIGN	V					11 days	09/01/17	23/01/17	12 days	€ 850.00
6 1.2.1	Write and check	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				CTD	9 days	09/01/17	19/01/17	9 days	€ 0.00
7 1.2.2	Meet with contra	Resource Name	Type 🕌	Max. Units	Std. Rate	OPM[50%];CTR TRAVEL[€ 400.00]	2 days	20/01/17	23/01/17	3 days	€ 850.00
8 1.3	☐ SOFTWARE IMPLE	220					46 days	24/01/17	28/03/17	35 days	€ 0.00
9 1.3.1	Coding, internal (OPM	Work	100%	€ 450.00/da	y CTR	12 days	24/01/17	08/02/17	12 days	€ 0.00
10 1.3.2	Delivery of Alpha	EDTR1	Work	100%	€ 300.00/da	CTR	1 day	10/02/17	10/02/17	1 day	€ 0.00
11 1.3.3	Debugging follow	EDIKI	WUIK	10070	€ 300,00/ua	CTR	2 days	15/02/17	16/02/17	2 days	€ 0.00
12 1.3.4	Coding, internal (EDTR2	Work	100%	€ 300.00/da	v CTR	12 days	17/02/17	06/03/17	12 days	€ 0.00
13 1.3.5	Delivery of Beta					CTR	1 day	09/03/17	09/03/17	1 day	€ 0.00
14 1.3.6	Debugging follow	EDTR3	Work	100%	€ 300.00/da	у стг	4 days	16/03/17	21/03/17	4 days	€ 0.00
15 1.3.7	Delivery of Final					CTR	1 day	22/03/17	22/03/17	1 day	€ 0.00
16 1.3.8	Debugging follow	EDTR4	Work	100%	€ 300.00/da	y ctr	2 days	27/03/17	28/03/17	2 days	€ 0.00
17 1.4	☐ CONTENT CREATIO						32 days	24/01/17	08/03/17	69 days	€ 19,800.00
18 1.4.1	Creation of conte	DATENG	Work	100%	€ 400.00/da	y EDTR1;EDTR2;EDTR3;EDTR4	6 days	24/01/17	31/01/17	24 days	€ 7,200.00
19 1.4.2	Proofreading of c	PRFRDR1	Work	100%	€ 250.00/da	PRFRDR1;PRFRDR2	3 days	30/01/17	01/02/17	6 days	€ 1,500.00
20 1.4.3	Preparation of co	PKFKDKI	WUIK	10076	€ 250.00/ua	DATENG	3 days	02/02/17	06/02/17	3 days	€ 1,200.00
21 1.4.4	Integration of co	PRFRDR2	Work	100%	€ 250.00/da	v CTR	1 day	09/02/17	09/02/17	1 day	€ 0.00
22 1.4.5	Creation of comp	1131132132			0 200,00, 40	EDTR1;EDTR2;EDTR3;EDTR4	6 days	15/02/17	22/02/17	24 days	€ 7,200.00
²³ 1.4.6	Proofreading of c	TSTSP	Work	100%	€ 350.00/da	y PRFRDR1;PRFRDR2	3 days	21/02/17	23/02/17	6 days	€ 1,500.00
24 1.4.7	Preparation of co					DATENG	3 days	28/02/17	02/03/17	3 days	€ 1,200.00
²⁵ 1.4.8	Integration of co	CTR	Work	100%	€ 0.00/da	y CTR	2 days	07/03/17	08/03/17	2 days	€ 0.00
²⁶ 1.5	☐ TESTING & ACCEP						41 days	01/02/17	29/03/17	33.5 days	€ 10,375.00
27 1.5.1	Prepare test plar	CTR_COST	Cost			EDTR1;EDTR2	4 days	01/02/17	06/02/17	8 days	€ 2,400.00
²⁸ 1.5.2	Alpha testing	1041			0.0.000.0	EDTR3;EDTR4	2 days	13/02/17	14/02/17	4 days	€ 1,200.00
29 1.5.3	Beta testing	HW	Material		€ 3,000.0	EDTR3; EDTR4; TSTSP	4 days	10/03/17	15/03/17	12 days	€ 3,800.00
30 1.5.4	Final testing	MMLIC	Material		€ 2,000.0	EDTR3;EDTR4;TSTSP[50%]	2 days	23/03/17	24/03/17	5 days	€ 1,550.00
31 1.5.5	Acceptance	Since	accmal		C 2,000.0	OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4	1 day	29/03/17	29/03/17	4.5 days	€ 1,425.00
³² 1.6	DEPLOYMENT	TRAVEL	Cost			CTR	2 days	30/03/17	31/03/17	2 days	€ 0.00
³³ 1.7	PROJECT MANAGE	AND THE STREET				OPM[50%]	60 days	09/01/17	31/03/17	30 days	€ 13,500.00
34 1.8	CONTRACTOR'S PR	OJECT CLOSURE			33	OPM[50%];CTR TRAVEL[€ 250.00]	1 day	03/04/17	03/04/17	1.5 days	€ 475.00
35 1.9	OVERALL PROJECT	CLOSURE			34	DATENG:EDTR1:EDTR3: OPW:EDTR2:EDTR4	1 dav	04/04/17	04/04/17	6 davs	€ 2.050.00
36 1.10	COST OF WORK DON	NE BY CONTRACTOR				CTR_COST[€ 89,684.00]				0 days	€ 89,684.00
37 1.11	OTHER NON-LABOUR	R COSTS				HW[1];MMLIC[1]	9			0 days	€ 5,000.00

EXONE Client's non-labour costs (POD)

	WBS		Nom		Prédécesseurs	Noms des res	sources	Durée	Début	Fin	Travail	Coût
1	1 [□PROJECT EXONE						66 jours O	3/01/17 08:00	04/04/17 17:00	1 600 heures	145734,00€
2	1.1	□ REQUIREMENTS	5					4 jours 0	3/01/17 08:00	06/01/17 17:00	88 heures	4000,00€
3	1.1.1	Review and cor	mplete requirements & pl	lan with contractor	(CTR;DATENG;OPN <mark>;TRAV</mark> E	EL1	3 jours 0	3/01/17 08:00	05/01/17 17:00	72 heures	3550,00€
4	1.1.3	Final discussion	and agreement with cor	ntractor on regits & plan	3 (CTR;OPM		1 jour 0	6/01/17 08:00	06/01/17 17:00	16 heures	450,00€
	1.2	□SOFTWARE DES	0000000					11 jours 0	9/01/17 08:00	23/01/17 17:00	96 heures	850,00€
_	1.2.1		design specifications		0.00	ETR	_		9/01/17 08:00	19/01/17 17:00	72 heures	0,00€
	1.2.3		ractor to discuss & agree		6	CTR;OPM[50 %]:TRAVEL:	2		0/01/17 08:00	23/01/17 17:00	24 heures	850,00€
8	1.3		ION, INTEGRATION, TE	STING & ACCEPTANCE						29/03/17 17:00	1 100 heures	30175,00€
	1.3.1	Coding, int	Nom	Catégorie	Unités max.	Tarif standard	V-100		4/01/17 08:00	08/02/17 17:00	96 heures	0,00€
1000000	1.3.2	Creation of	OPM	Travail	100 %	450/jour	R4	55.450.000.150	4/01/17 08:00	31/01/17 17:00	192 heures	7200,00€
	1.3.3	r roparo co.							1/02/17 08:00	06/02/17 17:00	64 heures	2400,00€
	1.3.4		EDTR1	Travail	100 %	300/jour		77777777777	0/01/17 08:00	01/02/17 17:00	48 heures	1500,00€
13	1.3.5		EDTR2	Travail	100 %	300/jour			2/02/17 08:00	06/02/17 17:00	24 heures	1200,00€
14 15	1.3.6	Integration Delivery of	EDTR3	Travail	100 %	300/jour			9/02/17 08:00 0/02/17 08:00	09/02/17 17:00 10/02/17 17:00	8 heures 8 heures	0,00€
16	1.3.7	7.07.00.0000000000000000000000000000000	EDTR4	Travail	100 %	300/jour		0.10000	3/02/17 08:00	14/02/17 17:00	32 heures	1200,00€
17	1.3.9	ripita coscii		Travail	100 %		D4	-	5/02/17 08:00	22/02/17 17:00	192 heures	7200,00€
18	1.3.10	D C					N.C		1/02/17 08:00	23/02/17 17:00	48 heures	1500,00€
19	1.3.11	Debugging		Travail	100 %			0.00	5/02/17 08:00	16/02/17 17:00	16 heures	0,00€
20	1.3.12	Coding, int	DATENG	Travail	100 %	400/jour			7/02/17 08:00	06/03/17 17:00	96 heures	0,00€
21	1.3.13	Preparation	TSTSP	Travail	100 %	350/jour		3 jours 2	8/02/17 08:00	02/03/17 17:00	24 heures	1200,00€
22	1.3.14	Integration	CTR	Travail	100 %	Oficur		2 jours 0	7/03/17 08:00	08/03/17 17:00	16 heures	0,00€
23	1.3.15	Delivery of	CTR_COST	Matériel		89 684		1 jour 0	9/03/17 08:00	09/03/17 17:00	8 heures	0,00€
24	1.3.16	Beta testin		Matériel		3 000		4 jours 1	0/03/17 08:00	15/03/17 17:00	96 heures	3800,00€
25	1.3.17	Debugging						4 jours 1	6/03/17 08:00	21/03/17 17:00	32 heures	0,00€
26	1.3.18	Delivery of		Matériel		2 000		1 jour 2	2/03/17 08:00	22/03/17 17:00	8 heures	0,00€
27	1.3.19		TRAVEL1	Matériel		1 000	•]	2 jours 2	3/03/17 08:00	24/03/17 17:00	40 heures	1550,00€
28	1.3.20	Debugging 1	TRAVEL2	Matériel		400			7/03/17 08:00	28/03/17 17:00	16 heures	0,00€
29	1.3.21	Acceptance	TRAVEL3	Matériel		250	R4;OPM[50 %]	-	9/03/17 08:00	29/03/17 17:00	36 heures	1425,00€
30	1.4	DEPLOYMEN	5.000.000000000000000000000000000000000	The second secon					0/03/17 08:00	31/03/17 17:00	16 heures	0,00€
31	1.5		SEMENT (After Regits Wi			OPM[50 %]		1000	9/01/17 08:00	31/03/17 17:00	240 heures	13500,00€
32	1.6	101-0001107110077777	PROJECT CLOSURE			CTR;OPM[50 % TRAVEL		-	3/04/17 08:00	03/04/17 17:00	12 heures	475,00€
2.00	1.7	OVERALL BROJEC		CTOD.	-	OVIENCIEDIDI PEDIDSIE	DID-SEDTB4-OBM		4/04/17 08:00	04/04/17 17:00	48 houres	2050,00.6
34	1.8		DONE BY MAIN CONTRA	CTOR	-	CTR_COST		G18,170 X 10	3/01/17 08:00	03/01/17 17:00	0 heures	89684,00€
35	1.9	OTHER NON-LAB	OUR COSTS			MMLIC;HW		1 jour 0	3/01/17 08:00	03/01/17 17:00	0 heures	5000,00€

Questions?

Estimate costs & Determine budget



Determine budget (1)

- > Add up all estimated costs
- The budget should be officially approved by the project sponsor

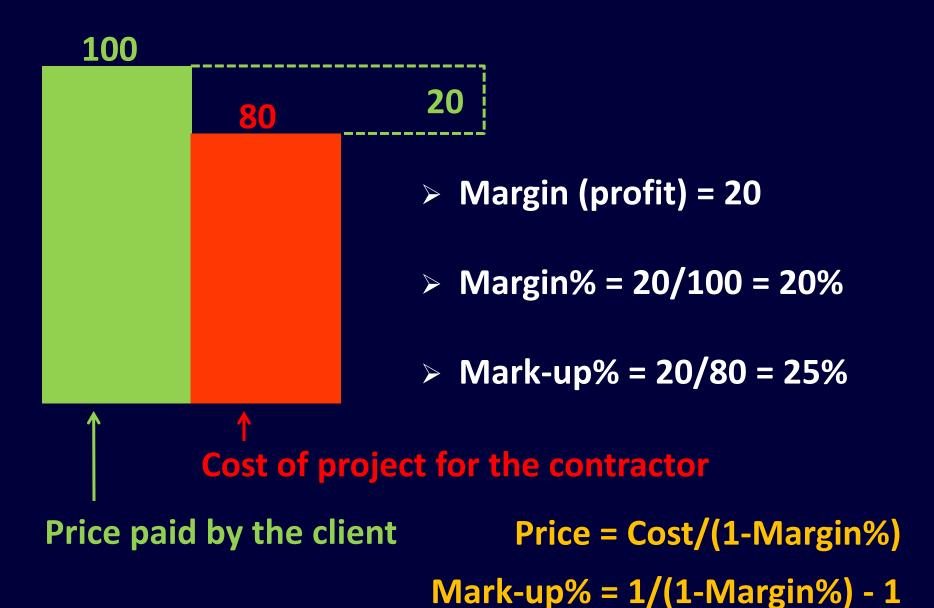
Determine budget (2)

- Authorized budget = baseline for the evaluation of the "cost performance" of the project
- May incorporate "management reserve" to provide for "imponderables"

Determine budget (3)

- > A contractor's budget for the execution of work for a client should include a profit margin
- Price = total cost of work + margin

Reminder: Margin & Mark-up



Example of profit margin

- Estimated cost = € 100,000
- > Required margin = 20%
- > Price = Cost / (1-Margin%) = 100,000 / 0.8
- > Amount invoiced to client = € 125,000
 - **♦ 25% mark-up**

 $(100,000 \times 1.25 = 125,000)$

Project EXONE Contractor's costs (MPP)

2 1.1 3 1.1.1 4 1.1.2 5 1.2 6 1.2.1 7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4	PROJECT EXONE REQUIREMENTS Review and complete requirements & plan with client Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client	3 4 6 7 8 27;10 22 28 13 29;14	STC;DVPR1;CLT;PM CLT;PM DVPR1;STC DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR1;DVPR2 DVPR2;DVPR1	65 days 4 days 3 days 1 day 11 days 7 days 2 days 2 days 46 days 7 days 3 days 1 day 2 days	09/01/17 18/01/17 20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	03/04/17 06/01/17 05/01/17 06/01/17 23/01/17 17/01/17 19/01/17 23/01/17 28/03/17 01/02/17 08/02/17 10/02/17	177 days 14 days 12 days 2 days 26 days 14 days 5 days 7 days 61 days 6 days	€ 5,950.00 € 2,200.00 € 2,200.00
3 1.1.1 4 1.1.2 5 1.2 6 1.2.1 7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Review and complete requirements & plan with client Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	4 6 7 8 27;10 22 28	CLT;PM DVPR1;STC DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR2	3 days 1 day 11 days 7 days 2 days 2 days 46 days 7 days 3 days 1 day	03/01/17 06/01/17 09/01/17 09/01/17 18/01/17 20/01/17 24/01/17 24/01/17 06/02/17	05/01/17 06/01/17 23/01/17 17/01/17 19/01/17 23/01/17 28/03/17 01/02/17 08/02/17	12 days 2 days 26 days 14 days 5 days 7 days 61 days 14 days	€ 4,050.00 € 500.00 € 10,350.00 € 5,950.00 € 2,200.00 € 2,200.00 € 22,800.00 € 5,250.00
4 1.1.2 5 1.2 6 1.2.1 7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	4 6 7 8 27;10 22 28	CLT;PM DVPR1;STC DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR2	1 day 11 days 7 days 2 days 2 days 46 days 7 days 3 days	06/01/17 09/01/17 09/01/17 18/01/17 20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	06/01/17 23/01/17 17/01/17 19/01/17 23/01/17 28/03/17 01/02/17 08/02/17	2 days 26 days 14 days 5 days 7 days 61 days	€ 500.00 € 10,350.00 € 5,950.00 € 2,200.00 € 2,200.00 € 22,800.00 € 5,250.00
5 1.2 6 1.2.1 7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	□ DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design □ IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	4 6 7 8 27;10 22 28	DVPR1;STC DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR2;DVPR2	11 days 7 days 2 days 2 days 46 days 7 days 3 days	09/01/17 09/01/17 18/01/17 20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	23/01/17 17/01/17 19/01/17 23/01/17 28/03/17 01/02/17 08/02/17	26 days 14 days 5 days 7 days 61 days 14 days	€ 10,350.00 € 5,950.00 € 2,200.00 € 2,200.00 € 22,800.00 € 5,250.00
6 1.2.1 7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	6 7 8 27;10 22 28 13	DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR1;DVPR2	7 days 2 days 2 days 46 days 7 days 3 days 1 day	09/01/17 18/01/17 20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	17/01/17 19/01/17 23/01/17 28/03/17 01/02/17 08/02/17	14 days 5 days 7 days 61 days 14 days	€ 5,950.00 € 2,200.00 € 2,200.00 € 22,800.00 € 5,250.00
7 1.2.2 8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	6 7 8 27;10 22 28 13	DVPR1;STC;PM[50%] STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR1;DVPR2	2 days 2 days 46 days 7 days 3 days 1 day	18/01/17 20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	19/01/17 23/01/17 28/03/17 28/03/17 01/02/17 08/02/17	5 days 7 days 61 days 14 days	€ 2,200.00 € 2,200.00 € 22,800.00 € 5,250.00
8 1.2.3 9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	7 8 27;10 22 28 13	STC;PM[50%];DVPR1;CLT DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR2 DVPR2	2 days 46 days 7 days 3 days 1 day	20/01/17 24/01/17 24/01/17 06/02/17 10/02/17	23/01/17 28/03/17 01/02/17 08/02/17	7 days 61 days 14 days	€ 2,200.00 € 22,800.00 € 5,250.00
9 1.3 10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	□ IMPLEMENTATION Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	8 27;10 22 28 13	DVPR2;DVPR1 DVPR2;DVPR1 DVPR2 DVPR1;DVPR2	46 days 7 days 3 days 1 day	24/01/17 24/01/17 06/02/17 10/02/17	28/03/17 01/02/17 08/02/17	61 days 14 days	€ 22,800.00 € 5,250.00
10 1.3.1 11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	27;10 22 28 13	DVPR2;DVPR1 DVPR2 DVPR1;DVPR2	7 days 3 days 1 day	24/01/17 06/02/17 10/02/17	01/02/17 08/02/17	14 days	€ 5,250.00
11 1.3.2 12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	27;10 22 28 13	DVPR2;DVPR1 DVPR2 DVPR1;DVPR2	3 days 1 day	06/02/17 10/02/17	08/02/17	100 (100 (100 (100 (100 (100 (100 (100	
12 1.3.3 13 1.3.4 14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	22 28 13	DVPR2 DVPR1; DVPR2	1 day	10/02/17	50 02 0	6 days	£ 2 250 00
13 1.3.4 1.4 1.3.5 1.5 1.3.6 1.6 1.3.7 1.7 1.3.8 1.8 1.3.9 1.9 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing)	28 13	DVPR1;DVPR2	2007 200 40		10/02/17		& Z,ZJU,UU
14 1.3.5 15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Coding - Beta version Debugging phase 3 (following internal Beta testing)	13		2 days	15/00/17	10,02,11	1 day	€ 350.00
15 1.3.6 16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Debugging phase 3 (following internal Beta testing)		DVPR2;DVPR1		15/02/17	16/02/17	4 days	€ 1,500.00
16 1.3.7 17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5		20:14		8 days	17/02/17	28/02/17	16 days	€ 6,000.00
17 1.3.8 18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Production of Beta version and delivery to client	25,17	DVPR2;DVPR1	3 days	02/03/17	06/03/17	6 days	€ 2,250.00
18 1.3.9 19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5		24	DVPR2	1 day	09/03/17	09/03/17	1 day	€ 350.00
19 1.3.10 20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Debugging phase 4 (following client Beta testing)	30	DVPR1;DVPR2	4 days	16/03/17	21/03/17	8 days	€ 3,000.00
20 1.4 21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Production of Final version and delivery to client	17	DVPR2	1 day	22/03/17	22/03/17	1 day	€ 350.00
21 1.4.1 22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	Debugging phase 5 & delivery (following client Final testing)	31	DVPR2;DVPR1	2 days	27/03/17	28/03/17	4 days	€ 1,500.00
22 1.4.2 23 1.4.3 24 1.4.4 25 1.5	□ INTEGRATION			23 days	06/02/17	08/03/17	5 days	€ 1,050.00
23 1.4.3 24 1.4.4 25 1.5	Delivery of content subset by client	11FF-2 days	CLT	1 day	06/02/17	06/02/17	1 day	€ 0.00
24 1.4.4 25 1.5	Integration of content subset	21; 11	DVPR2	1 day	09/02/17	09/02/17	1 day	€ 350.00
25 1.5	Delivery of complementary content by client	15FF-2 days	CLT	1 day	02/03/17	02/03/17	1 day	€ 0.00
12.000	Integration of complementary content	23; 15	DVPR2	2 days	07/03/17	08/03/17	2 days	€ 700.00
26 1.5.1	□ TESTING & ACCEPTANCE			47 days	24/01/17	29/03/17	32.5 days	€ 7,675.00
	Prepare test plan and test cases	8	STC[50%];JTC	5 days	24/01/17	30/01/17	7.5 days	€ 2,875.00
27 1.5.2	Internal testing – Alpha version	10SS+3 days;26	TSTR1;TSTR2	4 days	31/01/17	03/02/17	8 days	€ 2,400.00
28 1.5.3	Alpha testing by client	12	CLT	2 days	13/02/17	14/02/17	2 days	€ 0.00
29 1.5.4	Internal testing – Beta version	14SS+5 days	TSTR1;TSTR2	4 days	24/02/17	01/03/17	8 days	€ 2,400.00
30 1.5.5		16	CLT	4 days	10/03/17	15/03/17	4 days	€ 0.00
31 1.5.6	Beta testing by client	18	CLT	2 days	23/03/17	24/03/17	2 days	€ 0.00
32 1.5.7	Beta testing by client Final testing by client	19	CLT	1 day	29/03/17	29/03/17	1 day	€ 0.00
³³ 1.6			DVPR2;JTC;TRAVEL[€ 750.00]	2 days	30/03/17	31/03/17	4 days	€ 2,150.00
³⁴ 1.7	Final testing by client	32	DVPRZ;JTC;TRAVEL[€ 750.00]	CO 4	09/01/17	31/03/17	30 days	€ 15,000.00
35 1.8	Final testing by client Acceptance by client	32	PM[50%]	60 days				

Project EXONE Contractor's costs (XLS)

REQUIREMENTS Review and complete requirements & plan with client Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements OVPR1;STG	1 11 2 7	€ 65,225 € 4, 550 € 4,050 € 500 € 10,350		
Review and complete requirements & plan with client Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design DVPR1;STO IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV DVPR1;DV DVPR1;DV DVPR1;DV	1;PM;CLT 3 1 1 11 2 7	€ 4,050 € 500		
Final discussion and agreement with client on req'ts & plan DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design DVPR1;STO IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Production of Beta version and delivery to client Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	1 11 2 7	€ 500		
DESIGN Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Production of Beta version and delivery to client Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client DvPR2 Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	11 7			
Write design specifications Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DvPR1;DV Coding - Beta version DvPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client DvPR2 Debugging phase 5 & delivery (following client Final testing) DvPR1;DV Debugging phase 5 & delivery (following client Final testing)	7	€ 10.350	1	
Check design with respect to requirements Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV Debugging phase 5 & delivery (following client Final testing) DVPR1;DV		C 10,000		
Meet with client to discuss & agree on design IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV Debugging phase 5 & delivery (following client Final testing) DVPR1;DV		€ 5,950		
IMPLEMENTATION Coding - Alpha version DVPR1;DV Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client DVPR2 Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	C;PM[50%] 2	€ 2,200		
Coding - Alpha version Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	C;PM[50%];CLT 2	€ 2,200		
Debugging phase 1 (following internal Alpha testing) Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV Debugging phase 5 & delivery (following client Final testing)	46	€ 22,800	HUMAN	
Production of Alpha version and delivery to client Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	PR2 7	€ 5,250	RSRCs	Costs/day
Debugging phase 2 (following client Alpha testing) Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client DvPR2 DvPR1;DV DvPR1;DV DvPR1;DV	PR2 3	€ 2,250	PM	€ 500
Coding - Beta version DVPR1;DV Debugging phase 3 (following internal Beta testing) DVPR1;DV Production of Beta version and delivery to client DVPR2 Debugging phase 4 (following client Beta testing) DVPR1;DV Production of Final version and delivery to client DVPR2 Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	1	€ 350	STC	€ 450
Debugging phase 3 (following internal Beta testing) Production of Beta version and delivery to client Debugging phase 4 (following client Beta testing) Production of Final version and delivery to client Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	PR2 2	€ 1,500	JTC	€ 350
Production of Beta version and delivery to client DVPR2 Debugging phase 4 (following client Beta testing) DVPR1;DV Production of Final version and delivery to client DVPR2 Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	PR2 8	€ 6,000	DVPR1	€ 400
Debugging phase 4 (following client Beta testing) DVPR1;DV Production of Final version and delivery to client DVPR2 Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	PR2 3	€ 2,250	DVPR2	€ 350
Production of Final version and delivery to client DVPR2 Debugging phase 5 & delivery (following client Final testing)	1	€ 350	TSTR1	€ 300
Debugging phase 5 & delivery (following client Final testing) DVPR1;DV	PR2 4	€ 3,000	TSTR2	€ 300
	1	€ 350	CLT	€0
INTECDATION	PR2 2	€ 1,500		
INTEGRATION	23	€ 1,050	OTHER COST	Costs
Delivery of content subset by client CLT	1	€ 0	ITEMS	Costs
Integration of content subset DVPR2	1	€ 350	TRAVEL	€ 750
Delivery of complementary content by client CLT	1	€0		
Integration of complementary content DVPR2	2	€ 700		
TESTING & ACCEPTANCE	47	€ 7,675		
Prepare test plan and test cases STC[50%]	ITC 5	€ 2,875		
Internal testing - Alpha version TSTR1;TST	R2 4	€ 2,400		
Alpha testing by client CLT	2	€0		
Internal testing - Beta version TSTR1;TST	R2 4	€ 2,400		
Beta testing by client CLT	4	€0		
Final testing by client CLT	2	€0		
Acceptance by client CLT	1	€0		
DEPLOYMENT AT CLIENT'S SITE DVPR2;JTC	;TRAVEL 2	€ 2,150		
PROJECT MGMNT (After Reg'ts WP & before Closure) PM[50%]	60	€ 15,000		
PROJECT CLOSURE DVPR1;STO				

EXONE: summary budget - Contractor

Project	EXONE: c	ontractor's budget				
		Estimated cost of project	€ 65,225			
Manage	ement rese	erve (10% of estimated cost)	€ 6,523			
		Total cost of project	€ 71,748			
	25%					
	€ 17,937					
В	BUDGET (price to be paid by the client)					
	Profit margin amount					
	Profit m	argin % (% of budget/price)	20%			

Project EXONE Client's costs (MPP)

2 1.1	WBS 🕌	Task Name	Predecessors 💂	Resource Names 🔫	Duration 💂	Start 🕌	Finish 💂	Work	Cost 🕌
3 1.11 Review and complete requirements & plan with contractor CTR,OPM;DATENG;TRAVEL[€ 1,000.00] 3 days 0.5/01.77 0.5/01.77 2 days € 3.55.00 5 1.2 SOFTWARE DESIGN 1 day 0.6/01.71 2 days 0.5/01.77 2 days € 3.55.00 6 1.2.1 Write and check design specifications 4 0.6/01.71 2 days 0.5/01.77 2 days € 3.55.00 7 1.2.2 Meet with contractor to discuss & agree on design 6 0.6/01.71 0.6/01.71 2 days 0.5/01.71 7 days € 3.50.00 8 1.3.1 SOFTWARE IMPLEMENTATION 0.6/01.71 2 days 0.5/01.71 7 days € 6.50.00 9 3.3.2 0.6/01.71	1 1	□ PROJECT EXONE			66 days	03/01/17	04/04/17	200 da /	€ 145,734.00
1.12 Sinal discussion and agreement with contractor on regits & plan 3	2 1.1	□ REQUIREMENTS			4 days	03/01/17	06/01/17	11 day	€ 4, 000.00
S 1.2 SOFTWARE DESIGN	3 1.1.1	Review and complete requirements & plan with contractor		CTR;OPM;DATENG;TRAVEL[€ 1,000.00]	3 days	03/01/17	05/01/17	9 day	€ 3,550.00
	4 1.1.2	Final discussion and agreement with contractor on req'ts & plan	3	CTR; OPM	1 day	06/01/17	06/01/17	2 day	€ 450.00
7 1.2 Meet with contractor to discuss & agree on design 6 OPM[50%]; CTR; TRAVEL[€ 400.00 2 days 24,011/7 23,01/7 3 day € 850 8 1.3 SOFTWARE IMPLEMENTATION	5 1.2	□ SOFTWARE DESIGN			11 days	09/01/17	23/01/17	12 day	€ 850.00
8 1.3 SOFTWARE IMPLEMENTATION Coding, internal testing & bug fixing - Alpha version 7 CTR 12 days 24/01/17 09/02/17 12 day € 0.0 1.3.1 Coding, internal testing & bug fixing - Alpha version 7 CTR 12 days 24/01/17 10/02/17 1 day € 0.0 1.3.2 Debugging following Alpha testing 28 CTR 2 days 15/02/17 16/02/17 2 day € 0.0 1.3.5 Debugging following Alpha testing 29 CTR 1 day 09/03/17 09/03/17 1 day € 0.0 1.3.5 Debugging following Beta testing 29 CTR 1 day 09/03/17 09/03/17 1 day € 0.0 1.3.8 Debugging following Beta testing 29 CTR 4 days 15/02/17 26/03/17 24/03/17 1 day € 0.0 1.3.8 Debugging following Beta testing 29 CTR 4 days 16/03/17 24/03/17 24/03/17 1 day € 0.0 1.3.8 Debugging following Final testing & delivery for acceptance 30 CTR 2 days 27/03/17 24/03/17 2 day € 0.0 1.3.8 Debugging following Final testing & delivery for acceptance 30 CTR 2 days 27/03/17 24/03/17 2 day € 0.0 1.4.1 CTR CT	6 1.2.1	Write and check design specifications	4	CTR	9 days	09/01/17	19/01/17	9 day	€ 0.00
3 1.3.1 Coding, internal testing & bug fixing - Alpha version 7 CTR 12 days 4/01/17 08/02/17 12 day € 0 13.2 Deluvery of Alpha version by contractor 21 CTR 1 day 10/02/17 10/02/17 1 da € 0 13.3 Debugging following Alpha testing 28 CTR 2 days 17/02/17 16/02/17 2 day € 0 13.4 Coding, internal testing & bug fixing - Beta version 11 CTR 12 days 17/02/17 08/03/17 12 day € 0 13.5 Delivery of Beta version by contractor 25;12 CTR 1 day 09/03/17 08/03/17 12 day € 0 13.6 Debugging following Beta testing 29 CTR 1 day 16/03/17 22/03/17 24 day € 0 15.1 Delivery of Final version by contractor 14 CTR 1 day 16/03/17 22/03/17 24 day € 0 15.1 Delivery of Final version by contractor 14 CTR 1 day 22/03/17 22/03/17 24 day € 0 15.1 Delivery of Final version by contractor 14 CTR 1 day 22/03/17 22/03/17 24 day € 0 15.2 Deluvery of Final version by contractor 14 CTR 1 day 22/03/17 22/03/17 24 day € 0 15.3 Debugging following Beta testing 29 CTR 1 day 22/03/17 22/03/17 24 day € 0 15.4 CONTENT CREATION & INTEGRATION 28 CTR 28 24/01/17 31/01/17 24 day € 0 15.4 CONTENT CREATION & INTEGRATION 28 PREPORTIPERPERPE 3 days 30/01/17 01/02/17 64 day € 1,500 15.4 Integration of content subset 18SS+4 days PREPORTIPERPERPE 3 days 24/02/17 06/02/17 3 day € 1,200 15.4 Integration of complementary content 28 EDTRILEDTR2;EDTR3;EDTR4 6 days 15/02/17 22/02/17 24 day € 0 15.4 Integration of complementary content 28 EDTR3;EDTR4 6 days 21/02/17 23/02/17 24 day € 0 15.5 Creation of complementary content 24 day EDTR3;EDTR4 6 days 21/02/17 23/02/17 24 day € 0 15.5 TESTING & ACCEPTANCE EDTR3;EDTR4 4 day 11/02/17 3 day € 1,200 15.5 ETESTING & ACCEPTANCE 18 EDTR3;EDTR4 4 day 11/02/17 10/02/17 4 da	7 1.2.2	Meet with contractor to discuss & agree on design	6	OPM[50%];CTR;TRAVEL[€ 400.00]	2 days	20/01/17	23/01/17	3 day	€ 850.00
9 1.2 Delivery of Alpha version by contractor 21 CTR 1 day 10/02/17 10/02/17 1 day € 0 1 day 2 day € 0 2 day 1 day 2 day 6 day 1 d	8 1.3	□ SOFTWARE IMPLEMENTATION			46 days	24/01/17	28/03/17	35 day	€ 0.00
1.3.3 Debugging following Alpha testing & Define State 2 days 15/02/17 16/02/17 2 day €.0	9 1.3.1	Coding, internal testing & bug fixing - Alpha version	7	CTR	12 days	24/01/17	08/02/17	12 day	€ 0.00
13 1.3.4 Coding, internal testing & bug fixing - Beta version 11	10 1.3.2	Delivery of Alpha version by contractor	21	CTR	1 day	10/02/17	10/02/17	1 da	€ 0.00
3 3.5 Delivery of Beta version by contractor 25;12 CTR 1 day 09/03/17 09/03/17 1 da € 0	11 1.3.3	Debugging following Alpha testing	28	CTR	2 days	15/02/17	16/02/17	2 day	€ 0.00
1.3.6 Debugging following Beta testing 29 CTR 4 days 16/03/17 21/03/17 4 day 6 0 0	12 1.3.4	Coding, internal testing & bug fixing - Beta version	11	CTR	12 days	17/02/17	06/03/17	12 day	€ 0.00
1.3.7 Delivery of Final version by contractor 14	13 1.3.5	Delivery of Beta version by contractor	25;12	CTR	1 day	09/03/17	09/03/17	1 da	€ 0.00
1.3.8 Debugging following Final testing & delivery for acceptance 30	14 1.3.6	Debugging following Beta testing	29	CTR	4 days	16/03/17	21/03/17	4 day	€ 0.00
1.4 GONTENT CREATION & INTEGRATION 32 days 24/01/17 08/03/17 69 day 61,800	15 1.3.7	Delivery of Final version by contractor	14	CTR	1 day	22/03/17	22/03/17	1 da	€ 0.00
14.1 Creation of content subset 7	16 1.3.8	Debugging following Final testing & delivery for acceptance	30	CTR	2 days	27/03/17	28/03/17	2 day	€ 0.00
14.2 Proofreading of content subset 18SS+4 days PRERDR1; PRERDR2 3 days 30/01/17 01/02/17 6 day € 1,500	17 1.4	☐ CONTENT CREATION & INTEGRATION			32 days	24/01/17	08/03/17	69 day	€ 19,800.00
20 1.4.3 Preparation of content subset & delivery to contractor 9FF-2 days; 19 DATENG 3 days 02/02/17 06/02/17 3 day € 1,200 22 1.4.4 Integration of content subset 20; 9 CTR 1 day 09/02/17 09/02/17 1 da € 0 22 1.4.5 Creation of complementary content 28 EDTR1;EDTR2;EDTR3;EDTR4 6 days 15/02/17 22/02/17 24 day € 7,200 23 1.4.6 Propfreading of complementary content 22SS+4 days PRFRDR1;PRFRDR2 3 days 21/02/17 22/02/17 24 day € 1,500 25 1.4.8 Integration of complementary content & delivery to contractor 12FF-2 days; 23 DATENG 3 days 28/02/17 02/03/17 3 day € 1,200 25 1.4.8 Integration of complementary content 24; 12 CTR 2 days 07/03/17 08/03/17 2 day € 1.200 25 1.4.8 Integration of complementary content 24; 12 CTR 2 days 07/03/17 08/03/17 2 day € 1.200 25 1.5.1 Prepare test plan and test cases 18 EDTR1;EDTR2 4 days 01/02/17 29/03/17 33.5 day € 2,400 25 1.5.2 Alpha testing 10;27 EDTR3;EDTR4 2 days 10/02/17 06/02/17 4 day € 2,400 25 1.5.3 Beta testing 13 EDTR3;EDTR4 2 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 30 day € 1,425 31 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 03/04/17 03/04/17 03/04/17 05 day € 2.050 05 05 05 05 05 05 05 05 05 05 05 05	18 1.4.1	Creation of content subset	7	EDTR1;EDTR2;EDTR3;EDTR4	6 days	24/01/17	31/01/17	24 day	€ 7,200.00
2	19 1.4.2	Proofreading of content subset	18SS+4 days	PRFRDR1;PRFRDR2	3 days	30/01/17	01/02/17	6 day	€ 1,500.00
22 1.4.5 Creation of complementary content 28 EDTR1;EDTR2;EDTR3;EDTR4 6 days 15/02/17 22/02/17 24 day € 7,200 23 1.4.6 Proofreading of complementary content 22SS+4 days PRFRDR1;PRFRDR2 3 days 21/02/17 23/02/17 6 day € 1,500 24 1.4.7 Preparation of complementary content & delivery to contractor 12FF-2 days;23 DATENG 3 days 28/02/17 02/03/17 3 day € 1,200 25 1.4.8 Integration of complementary content 24;12 CTR 2 days 07/03/17 08/03/17 2 day € 0 1.5 □TESTING & ACCEPTANCE 41 days 01/02/17 29/03/17 33.5 day € 1,200 26 1.5.1 Prepare test plan and test cases 18 EDTR1;EDTR2 4 days 01/02/17 06/02/17 8 day € 1,200 28 1.5.2 Alpha testing 10;27 EDTR3;EDTR4;TSTSP 4 days 13/02/17 14/02/17 4 day € 1,200 29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP 5 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 29/03/17 4.5 day € 1,425 31 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 25.0.0] 1 day 09/01/17 31/03/17 30 day € 13,560 45 1.9 OVERALL PROJECT CLOSURE 31 OPM[50%];CTR;TRAVEL[€ 25.0.0] 1 day 03/04/17 03/04/17 1.5 day € 2.950 45 1.0 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 28 1.5.5 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 29 1.5.6 DATENGATION CTR_COST[€ 89,684.00] 20 1.5 DATENGATION CTR_COST[€ 89,684.00] 20 1.5 DATENGATION CTR_COST[€ 89,684.00] 20 1.5 DATENGATION CTR_COST[€ 89,684.00] 21 1.0 COST OF WORK DONE BY CONTRACTOR	20 1.4.3	Preparation of content subset & delivery to contractor	9FF-2 days; 19	DATENG	3 days	02/02/17	06/02/17	3 day	€ 1,200.00
23 1.4.6 Proofreading of complementary content 22SS+4 days PRFRDR1;PRFRDR2 3 days 21/02/17 23/02/17 6 day € 1,500 24 1.4.7 Preparation of complementary content & delivery to contractor 12FF-2 days;23 DATENG 3 days 28/02/17 02/03/17 3 day € 1,200 25 1.4.8 Integration of complementary content 24;12 CTR 2 days 07/03/17 08/03/17 2 day € 0 2 days 07/03/17 08/03/17 2 day € 0 2 days 07/03/17 08/03/17 2 day € 0 07/03/17 08/03/17 08/03/17 2 day € 0 07/03/17 08/03/17 08/03/17 2 day € 0 07/03/17 08	21 1.4.4	Integration of content subset	20;9	CTR	1 day	09/02/17	09/02/17	1 da	€ 0.00
24 1.4.7 Preparation of complementary content & delivery to contractor 12FF-2 days;23 DATENG 3 days 28/02/17 02/03/17 3 day € 1,200 25 1.4.8 Integration of complementary content 24;12 CTR 2 days 07/03/17 08/03/17 2 day € 0 26 1.5 □ TESTING & ACCEPTANCE 41 days 01/02/17 29/03/17 33.5 day € 1,302 27 1.5.1 Prepare test plan and test cases 18 EDTR1;EDTR2 4 days 01/02/17 06/02/17 8 day € 2,400 28 1.5.2 Alpha testing 10;27 EDTR3;EDTR4 2 days 13/02/17 14/02/17 4 day € 1,200 29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 2 day € 1,425 2 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 1,425 2 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.0 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475.0 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00]	22 1.4.5	Creation of complementary content	28	EDTR1;EDTR2;EDTR3;EDTR4	6 days	15/02/17	22/02/17	24 day	€ 7,200.00
25 1.4.8 Integration of complementary content 24;12 CTR 2 days 07/03/17 08/03/17 2 day € 0 26 1.5 ☐ TESTING & ACCEPTANCE 41 days 01/02/17 29/03/17 33.5 day € 10,375. 27 1.5.1 Prepare test plan and test cases 18 EDTR1;EDTR2 4 days 01/02/17 06/02/17 8 day € 2,400 28 1.5.2 Alpha testing 10;27 EDTR3;EDTR4 2 days 13/02/17 14/02/17 4 day € 1,200 29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 2 day € 0. 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%] 60 days 09/01/17 31/03/17 30 day € 13,500. 34 1.8 CONTRACTOR'S PROJECT CLOSURE 34 DATENG;EDTR1;EDTR2;EDTR3;OPM;EDTR2;EDTR4 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00]	23 1.4.6	Proofreading of complementary content	22SS+4 days	PRFRDR1;PRFRDR2	3 days	21/02/17	23/02/17	6 day	€ 1,500.00
26 1.5 ☐ TESTING & ACCEPTANCE 18 ☐ EDTR1;EDTR2	24 1.4.7	Preparation of complementary content & delivery to contractor	12FF-2 days;23	DATENG	3 days	28/02/17	02/03/17	3 day	€ 1,200.00
27 1.5.1 Prepare test plan and test cases 18 EDTR1;EDTR2 4 days 01/02/17 06/02/17 8 day € 2,400 28 1.5.2 Alpha testing 10;27 EDTR3;EDTR4 2 days 13/02/17 14/02/17 4 day € 1,200 29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.3 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475. 36 1.10 COST OF WORK DONE BY CONTRACTOR 5 CTR_COST[€ 89,684.00] CTR_COST[€ 89,684.00] 0 day € 89,684.00	²⁵ 1.4.8	Integration of complementary content	24; 12	CTR	2 days	07/03/17	08/03/17	2 day	€ 0.00
28 1.5.2 Alpha testing 10;27 EDTR3;EDTR4 2 days 13/02/17 14/02/17 4 day € 1,200 29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0. 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475. 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2.050. 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] CTR_COST[€ 89,684.00]	26 1.5	☐ TESTING & ACCEPTANCE			41 days	01/02/17	29/03/17	33.5 day	€ 10,375.00
29 1.5.3 Beta testing 13 EDTR3;EDTR4;TSTSP 4 days 10/03/17 15/03/17 12 day € 3,800 30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.0 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475. 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2.050 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 37 1.5.4 days 10/03/17 12 day € 3,800 38 1.5.5 Acceptance 23/03/17 24/03/17 5 day € 1,550 4.5 day € 3,800 4.5 days 10/03/17 24/03/17 5 day € 1,425 4.5 days 10/03/17 2 days 10/03/17 31/03/17 30 days 10/03/17 31/03/17	27 1.5.1	Prepare test plan and test cases	18	EDTR1;EDTR2	4 days	01/02/17	06/02/17	8 day	€ 2,400.00
30 1.5.4 Final testing 15 EDTR3;EDTR4;TSTSP[50%] 2 days 23/03/17 24/03/17 5 day € 1,550 31 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.0 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475. 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2.050 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 37 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28 1.5.2	Alpha testing	10;27	EDTR3;EDTR4	2 days	13/02/17	14/02/17	4 day	€ 1,200.00
37 1.5.5 Acceptance 16 OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4 1 day 29/03/17 29/03/17 4.5 day € 1,425 day 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.0 days 31.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%] 60 days 09/01/17 31/03/17 30 day € 13,500.0 day 1.8 CONTRACTOR'S PROJECT CLOSURE 33 OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475.0 day 1.0 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day 6 2.0 day 6 3.0 day 6	29 1.5.3	Beta testing	13	EDTR3;EDTR4;TSTSP	4 days	10/03/17	15/03/17	12 day	€ 3,800.00
32 1.6 DEPLOYMENT 31 CTR 2 days 30/03/17 31/03/17 2 day € 0.0 33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32FF OPM[50%] 60 days 09/01/17 31/03/17 30 day € 13,500.0 34 1.8 CONTRACTOR'S PROJECT CLOSURE 33 OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475.0 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2.050.0 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 1.5.4	Final testing	15	EDTR3; EDTR4; TSTSP[50%]	2 days	23/03/17	24/03/17	5 day	€ 1,550.00
33 1.7 PROJECT MANAGEMENT (After Req'ts WP & before Closure) 2;32F OPM[50%] 60 days 09/01/17 31/03/17 30 day € 13,500. 34 1.8 CONTRACTOR'S PROJECT CLOSURE 33 OPM[50%];CTR;TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 03/04/17 1.5 day € 475. 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2 050. 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	31 1.5.5	Acceptance	16	OPM[50%];EDTR1;EDTR2;EDTR3;EDTR4	1 day	29/03/17	29/03/17	4.5 day	€ 1,425.00
34 1.8 CONTRACTOR'S PROJECT CLOSURE 33 OPM[50%]; CTR; TRAVEL[€ 250.00] 1 day 03/04/17 03/04/17 1.5 day € 475.0 35 1.9 OVERALL PROJECT CLOSURE 34 DATENG; EDTR1; EDTR3; OPM; EDTR2; EDTR4 1 day 04/04/17 04/04/17 6 day € 2 050.0 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 0 day € 89,684.00	32 1.6	DEPLOYMENT	31	CTR	2 days	30/03/17	31/03/17	2 day	€ 0.00
35 1.9 OVERALL PROJECT CLOSURE 34 DATENG;EDTR1;EDTR3;OPM;EDTR2;EDTR4 1 day 04/04/17 04/04/17 6 day € 2 050. 36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 0 day € 89,684	33 1.7	PROJECT MANAGEMENT (After Req'ts WP & before Closure)	2;32FF	OPM[50%]	60 days	09/01/17	31/03/17	30 day	€ 13,500.00
36 1.10 COST OF WORK DONE BY CONTRACTOR CTR_COST[€ 89,684.00] 0 da y € 89,684	34 1.8	CONTRACTOR'S PROJECT CLOSURE	33	OPM[50%];CTR;TRAVEL[€ 250.00]	1 day	03/04/17	03/04/17	1.5 day	€ 475.00
	35 1.9	OVERALL PROJECT CLOSURE	34	DATENG; EDTR1; EDTR3; OPM; EDTR2; EDTR4	1 day	04/04/17	04/04/17	6 day	€ 2 050 00
37 1 11 OTHER MONLI AROUR COSTS	36 1.10	COST OF WORK DONE BY CONTRACTOR		CTR_COST[€ 89,684.00]				0 da y	€ 89,684.00
MILIT OTHER NON-LABOUR COSTS HW[1];MMLIC[1]	37 1.11	OTHER NON-LABOUR COSTS		HW[1];MMLIC[1]	5			0 day	€ 3,000.00

Project EXONE Client's costs (XLS)

PROJECT EXONE	RESOURCES	DUR'NS	COSTS			
CLIENT'S RESOURCES & COSTS	RESOURCES	66	€ 145,734			
REQUIREMENTS		4	€ 4,000			
Review and complete requirements & plan with contractor	OPM;DATENG;CTR;TRAVEL1	3	€ 3,550			
Final discussion and agreement with contractor on req'ts & plan	OPM;CTR	1	€ 450		III	
SOFTWARE DESIGN		11	€ 850			
Write and check design specifications	CTR	9	€0			
Meet with contractor to discuss & agree on design	OPM[50%];CTR;TRAVEL2	2	€ 850			
SOFTWARE IMPLEMENTATION		46	€ 0	HUMAN		
Coding, internal testing & bug fixing - Alpha version	CTR	12	€0	RSRCs	Costs/day	
Delivery of Alpha version by contractor	CTR	1	€ 0	OPM	€ 450	
Debugging following Alpha testing	CTR	2	€0	EDTRs	€ 300	
Coding, internal testing & bug fixing - Beta version	CTR	12	€ 0	DATENG	€ 400	
Delivery of Beta version by contractor	CTR	1	€0	PRFRDRs	€ 250	
Debugging following Beta testing	CTR	4	€ 0	TSTSP	€ 350	
Delivery of Final version by contractor	Market State of	1	€ 0	CTR	€0	
Debugging following Final testing & delivery for acceptance	CTR	2	€0			
CONTENT CREATION & INTEGRATION		43	€ 19,800	OTHER COST	Costs	
Creation of content subset	EDTR1;EDTR2;EDTR3;EDTR4	6	€ 7,200	ITEMAC		
Proofreading of content subset	PRFRDR1;PRFRDR2	3	€ 1,500	CTR_COST	€ 89,684	
Preparation of content subset & delivery to contractor	DATENG	3	€ 1,200	HW	€3,000	
Integration of content subset	CTR	1	€ 0	MMLIC	€ 2,000	
Creation of complementary content	EDTR1;EDTR2;EDTR3;EDTR4	6	€ 7,200	TRAVEL1	€1,000	
Proofreading of complementary content		3	€ 1,500	TRAVEL2	€ 400	
Preparation of complementary content & delivery to contractor	DATENG	3	€ 1,200	TRAVEL3	€ 250	
Integration of complementary content	CTR	2	€0		(5) (3)	
TESTING & ACCEPTANCE		38	€ 10,375			
Prepare test plan and test cases	EDTR1;EDTR2	4	€ 2,400			
Alpha testing	EDTR3;EDTR4	2	€ 1,200			
Beta testing	EDTR3;EDTR4;TSTSP	4	€ 3,800			
Final testing	EDTR3;EDTR4;TSTSP[50%]	2	€ 1,550			
Acceptance	EDTR1;EDTR2;EDTR3;EDTR4;OPM[50%]	1	€ 1,425	1		
DEPLOYMENT	CTR	2	€0			
PROJECT MGMNT (After Reg'ts WP & before Closure)	OPM[50%]	60	€ 13,500			
CONTRACTOR'S PROJECT CLOSURE	OPM[50%];CTR;TRAVEL3	1	€ 475	1		
OVERALL PROJECT CLOSURE	OPM;DATENG;EDTR1;EDTR2;EDTR3;EDTR4	1	€ 2,050			
	CTR_COST;HW;MMLIC		€ 94,684			

EXONE: summary budget - Client

	Project EXONE: client's budget			
	Internal costs			
€ 4,500	Pre-3/1/17: Req'ts writing + Contractor selection			
€ 44,650	3/1/17 through to 4/4/17			
€ 49,150	Total Internal costs			
	External & other costs			
€ 89,684	Software development			
€ 3,000	Content proofreading			
€ 1,750	Product testing (beta & final)			
€ 3,000	Server and software			
€ 2,000	Multimedia asset licences Travel Total External & other costs			
€ 1,650				
€ 101,084				
€ 150,234	TOTAL Cost			
€ 15,023	Management reserve (10% of total cost)			
€ 165,257	BUDGET			

Questions?

Planning processes: where do we stand?

