

Final Thesis
Industrial Engineering

IMPLEMENTATION OF A WORKING GROUP IN SPAIN

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| Call: | Autumn 2014 |



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A. SCOPE STATEMENT

A.1 Work Breakdown Structure

The following figure contains the work breakdown structure of this project¹:

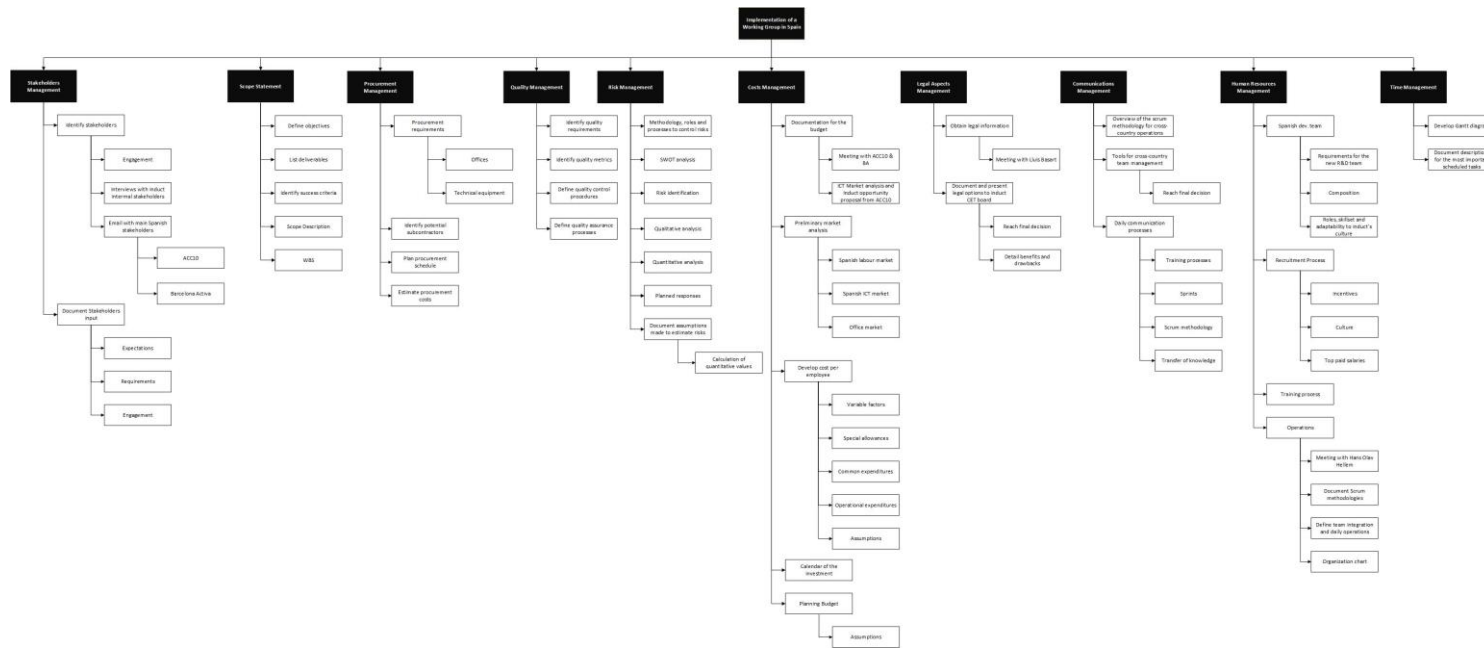


Figure A.1. Work Breakdown Structure

¹ Picture quality cannot be improved. A high resolution version is provided in the electronic support.

B. TIME MANAGEMENT

B.1 Initiating and Planning Calendar

Following captures contain the Gantt diagram for the whole planning stage process of this project²:

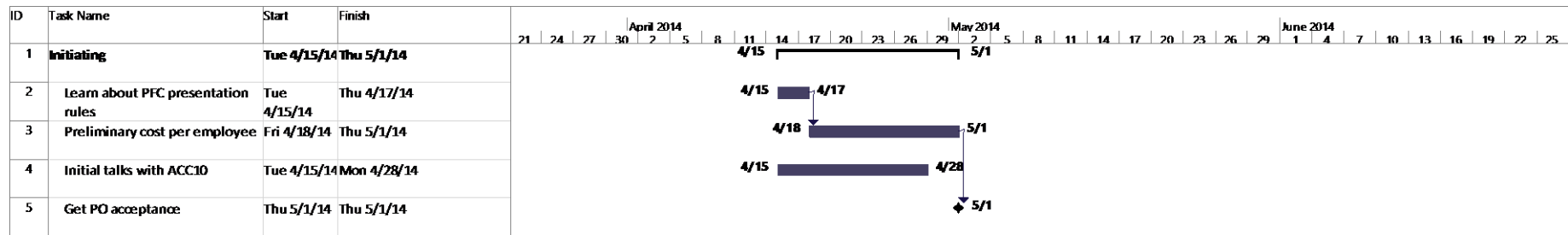


Figure B.1. Initiating stage

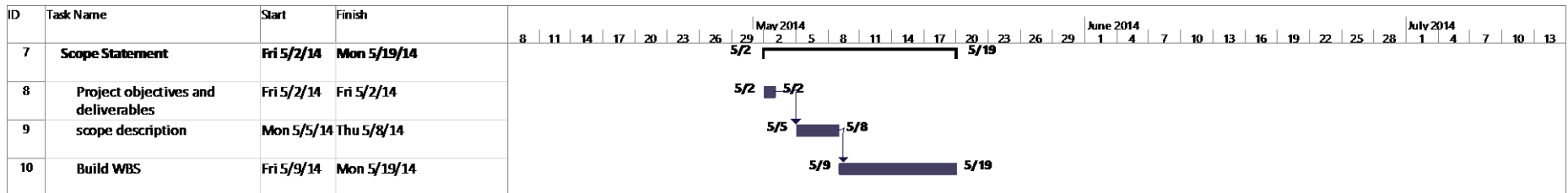


Figure B.2. Planning stage: Scope Statement

² A more detailed version of the whole Gantt diagram is provided in the electronic support.

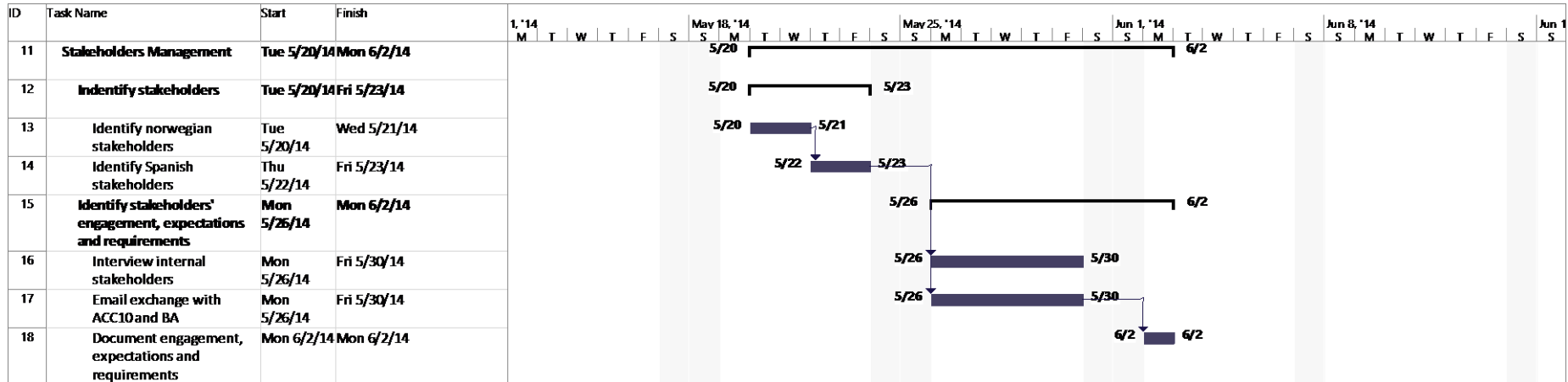


Figure B.3. Stakeholders Management

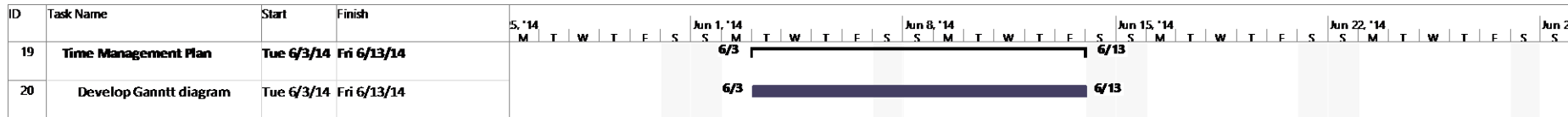


Figure B.4. Time Management

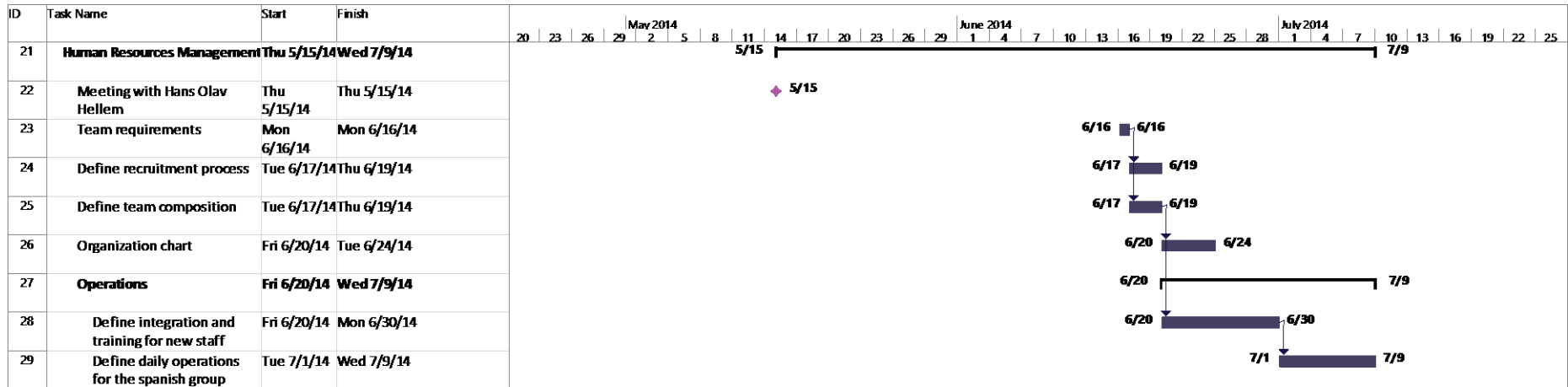


Figure B.5. Human Resources Management

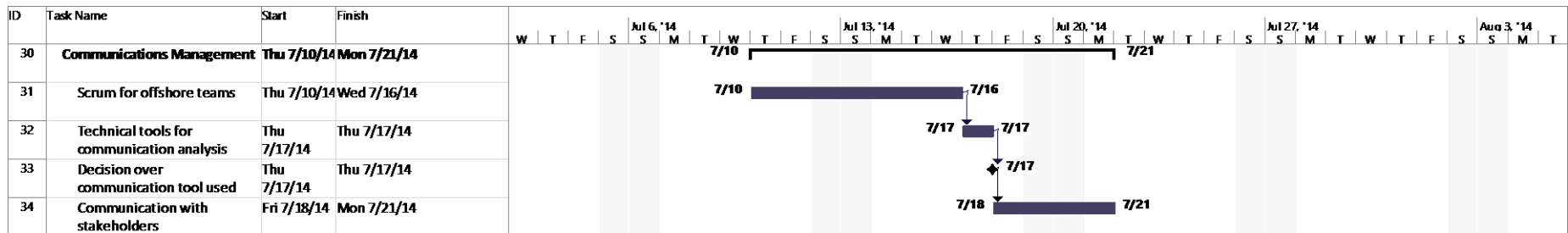


Figure B.6. Communications Management

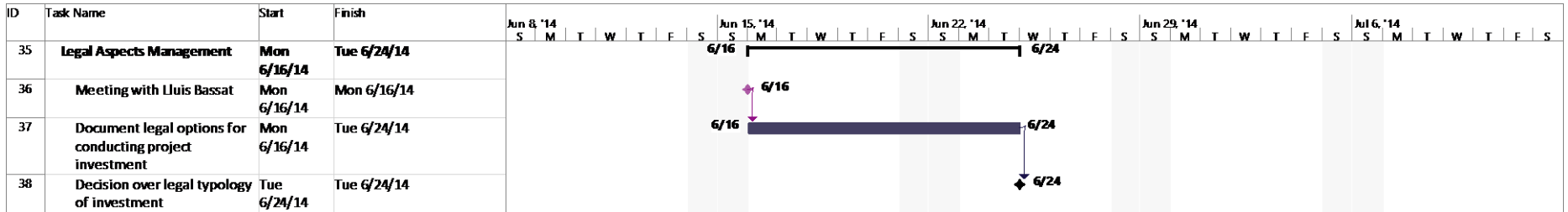


Figure B.7. Legal Aspects Management

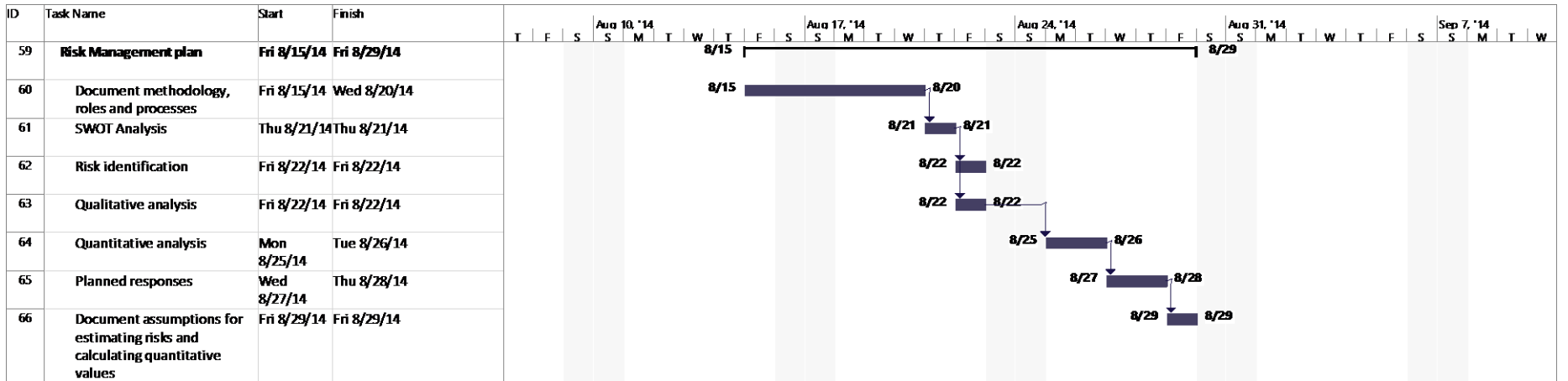


Figure B.8. Risks Management

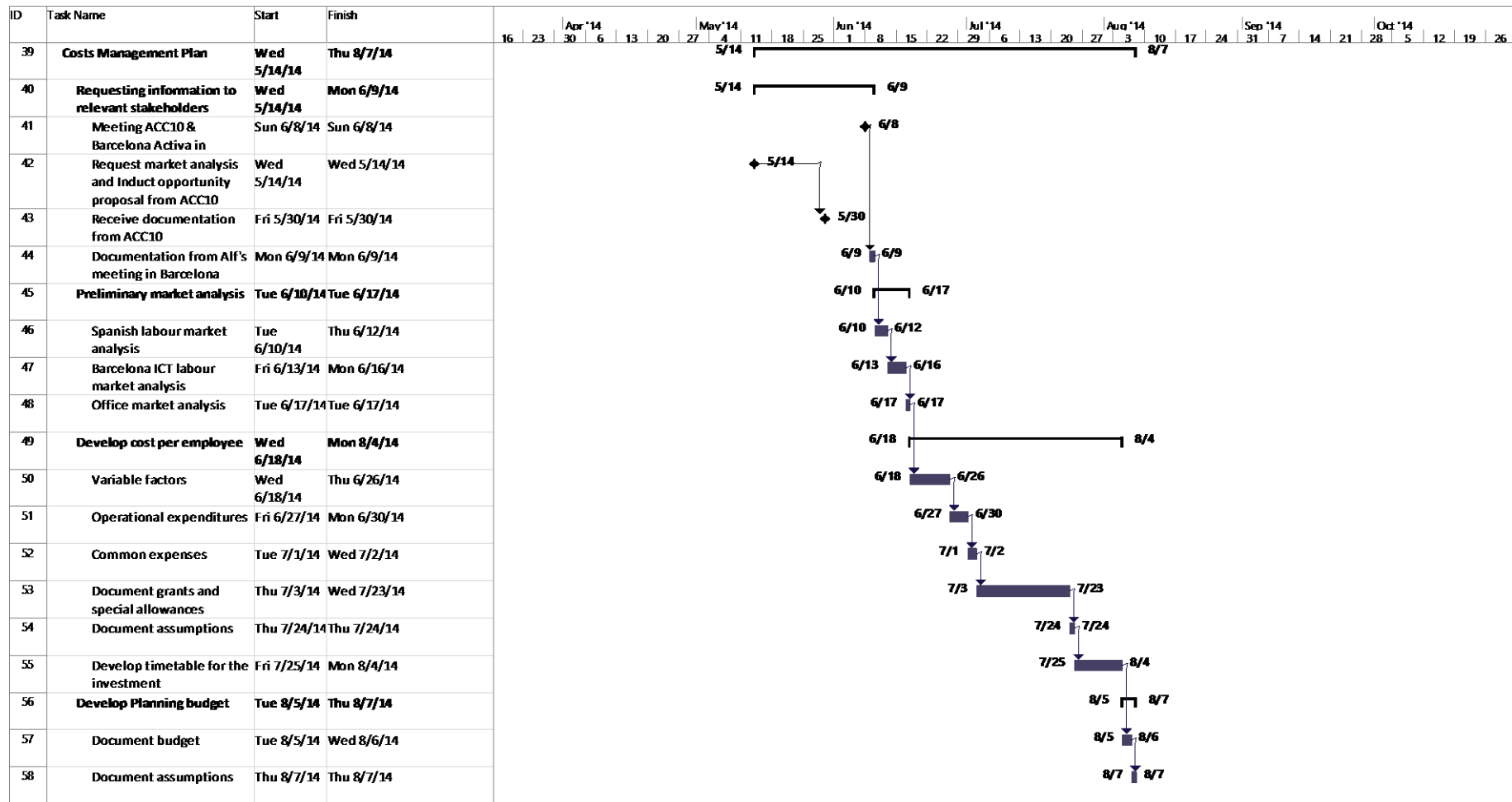


Figure B.9. Costs Management

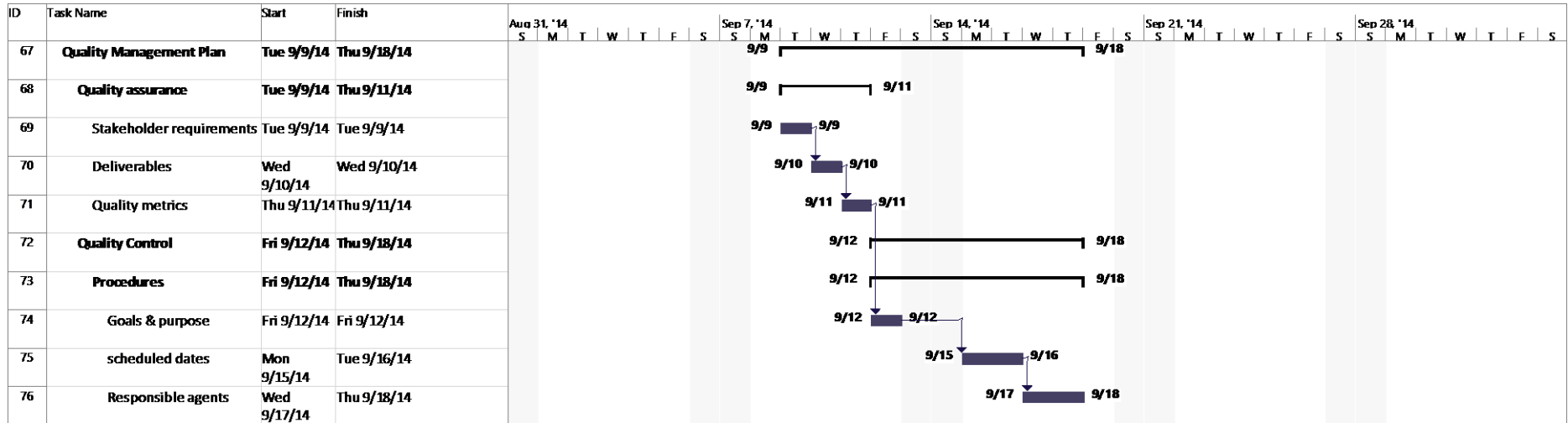


Figure B.10. Quality Management.

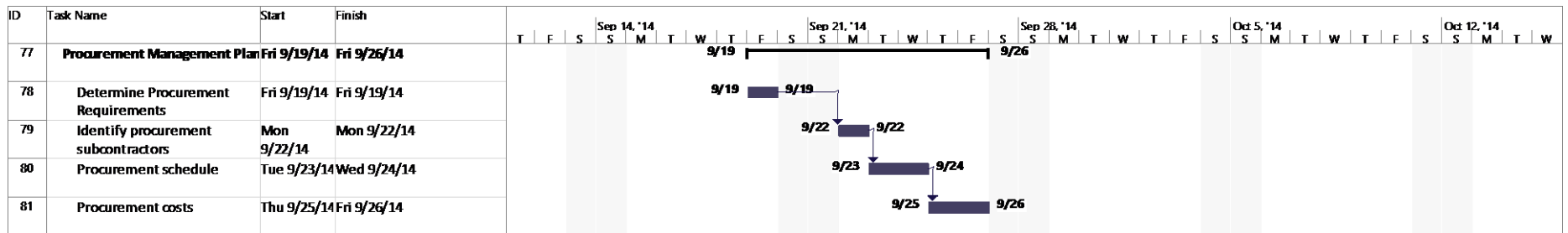


Figure B.11. Procurement Management

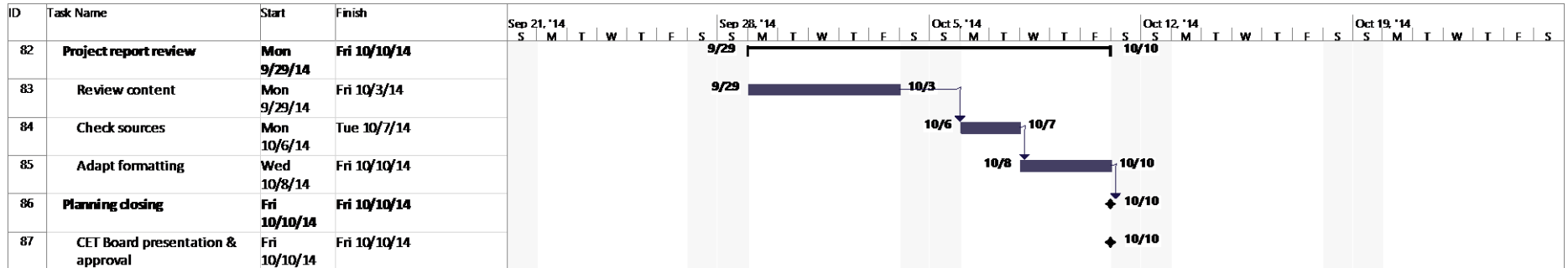


Figure B.12. Project Report Review & Project Closing

B.2 Execution Calendar

The following captures contain the Gantt diagram for the execution stage of this project:

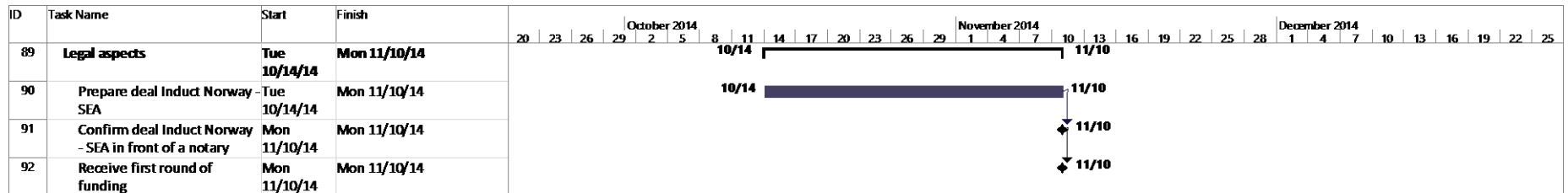


Figure B.13. Execution stage: Legal Aspects

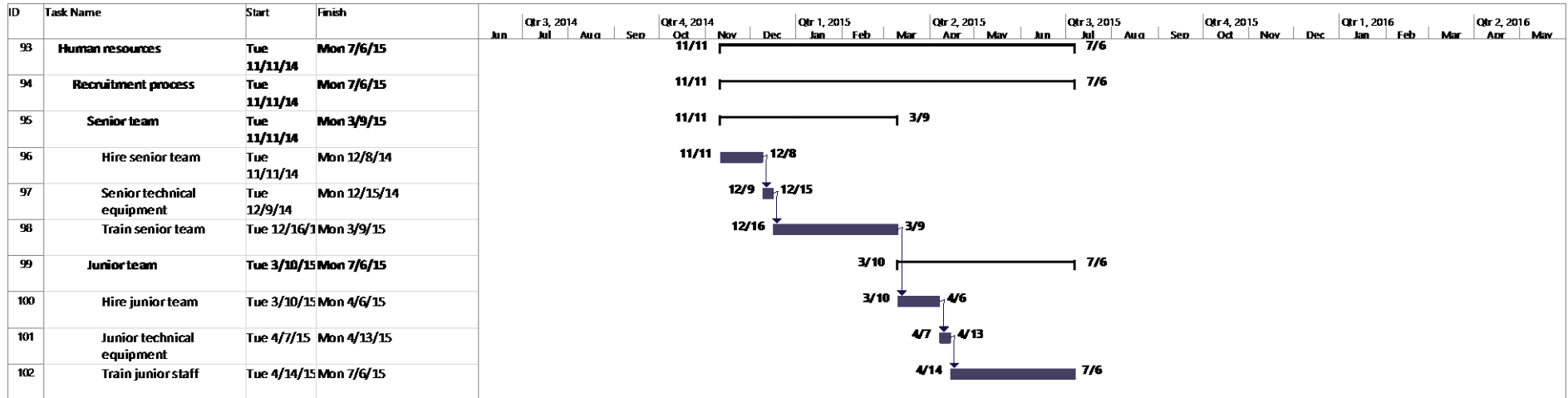


Figure B.14. Human Resources Management

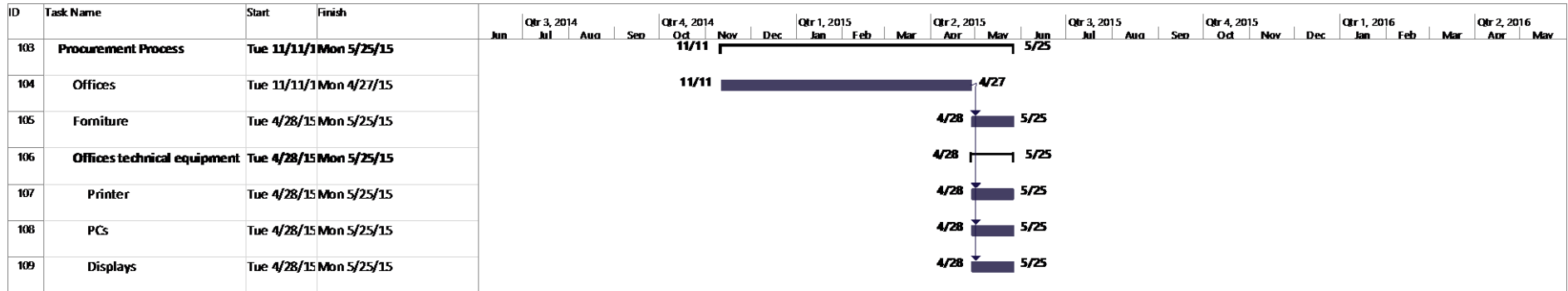


Figure B.15. Procurement Management

B.3 Monitoring and Controlling & Closing Calendar

The following diagram contains the Gantt diagram for the monitoring & controlling stage of this project:

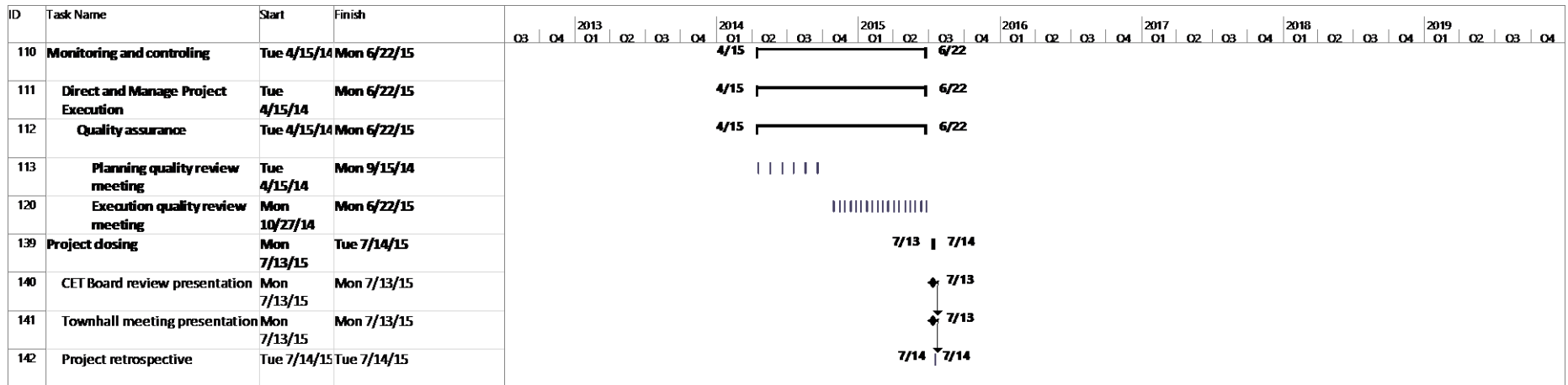


Figure B.16. Monitoring and controlling, and project closing stage

C. HUMAN RESOURCES MANAGEMENT

C.1 Operations

C.1.1 Integration and Training

C.1.1.1 List of Tasks the Spanish Team Could Do

The following lists contain a set of tasks the new senior development team could work on, during the training period:

- Email system improvements
- New language system
- Setting up and maintaining web tests/integrations tests (e.g. selenium)
- Native Mobile App
- Continuous integration server and deployment tool
- Monitoring system
- Data export tool (for churned customers)
- Release notes management system (integrated with solution and Induct Software site, export features, RSS feeds etc...)
- Inductsoftware.com website maintenance
- New search engine in Induct solution

Other work that could be outsourced:

- Manual testing
- Code/query optimizations (without re-architecting and DB changes)
- Profiling (suggesting code improvements)
- Develop HTML mock-ups for early usability testing and demoing
- Writing beautiful PDF user manual (if skilled writer/designer)

C.1.1.2 Daily Operations

The following diagram (p. 22) contains a description of Induct internal operations³:

³ A higher resolution version is provided in the electronic support.

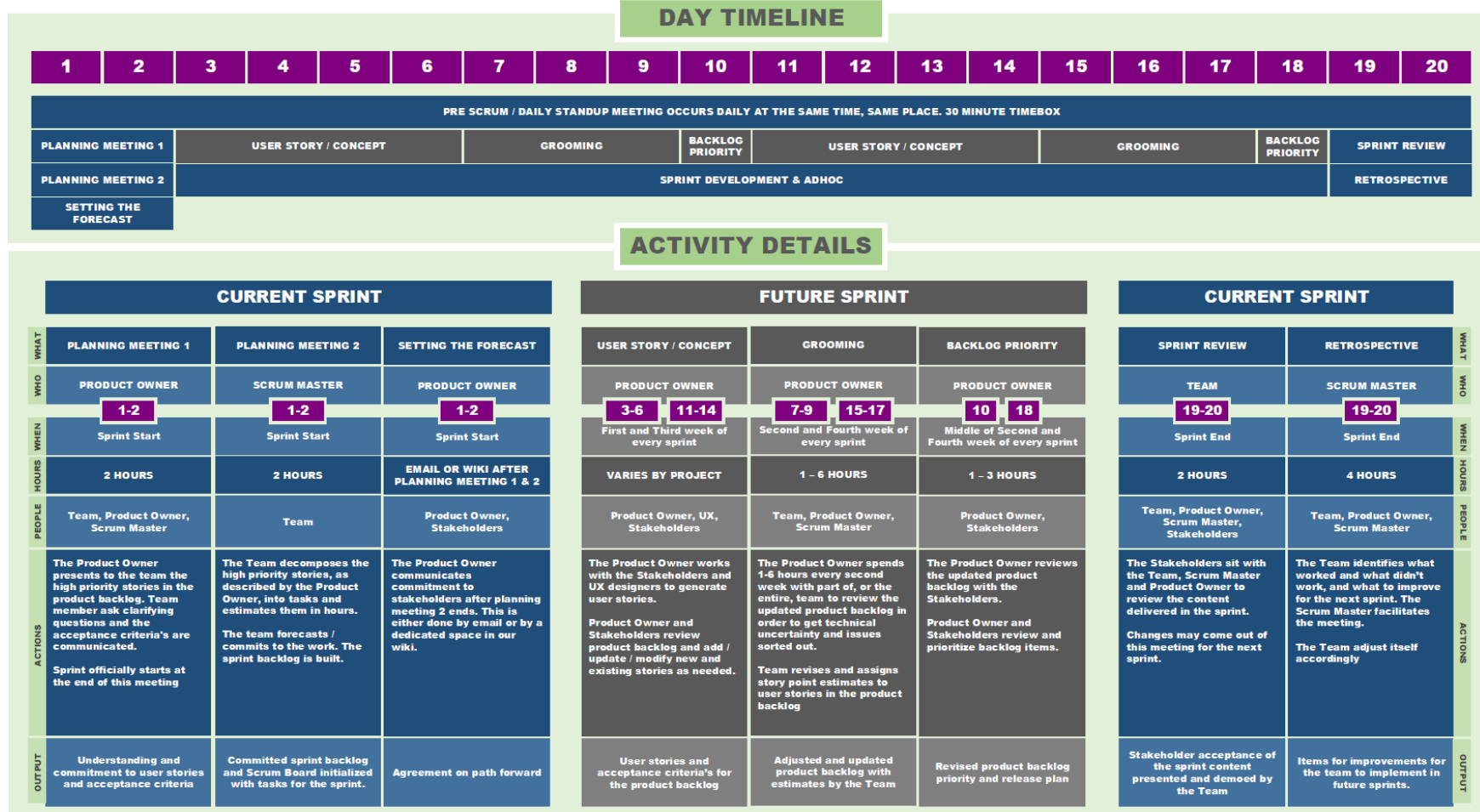


Figure C.1. Overview of the Scrum implementation at Induct

C.1.1.3 Pre-Scrum Meeting

The pre-Scrum meeting is a 15 minutes, Induct-specific event in which support staff goes through all support tickets received during the last 24 hours. Support staff is composed by the Scrum Master and Product Owner, as well as personnel from the implementation and sales units.

The Scrum Master and Product Owner, jointly, decide if any of the support tickets require attention from the development team. If so, the specific issue is brought to the daily Scrum meeting, which happens right after the pre-Scrum.

In Spain, this meeting will not happen. Instead, pre-Scrum attendees, in Norway, will decide which issues they hand over to the Spanish development team, based on criteria like the ticket typology or its language.

C.1.1.4 User Story / Concept

User story / concept meetings (simply called story workshops) are not an integral event of Scrum. The workshop is hosted every two weeks and is attended by the Product Owner, the UI/UX lead designer, and, occasionally, internal and/or external stakeholders having expressed requirements for the Induct platform.

During the meeting, attendees work in transforming stakeholders' requirements and demands into user stories that can be added to the product backlog. In this meeting, acceptance criteria for new user stories is also determined.

In the most pure version of Scrum, tasks done in this meeting are usually carried by the PO alone. The workshop was implemented at Induct due to the convenience of getting feedback from Induct's UI/UX lead designer in the creation of user stories. The story workshop meeting is not attended by the development team and, thus, it will not be attended by the Spanish workgroup either.

C.1.1.5 Backlog Grooming

Backlog grooming is an integral part of the Scrum canon. It consists of a 1-6 hour meeting, hosted every two weeks and attended by the whole development team. The meeting goal is to produce a collection of small, well-understood user stories at the top of the backlog, at all times.

User story refinement is based on technical and strategic principles like: priority, feasibility, time of implementation or resources required, among others.

A user story is considered complete, or ready for production stage, when:

1. It has been clearly defined and understood by all involved stakeholders.
2. It has been scoped in terms of resources and time required to complete it. The amount of work is often quantified with story points: a relative measure of work necessary to complete a user story.
3. It has been prioritized and correctly placed in the product backlog.

According to the Scrum theory, these tasks are completed in one single backlog grooming meeting. At Induct, however, the grooming meeting has been split in three separate meetings: the story workshop, the grooming meeting and the backlog priority; all necessary information regarding these meetings is provided in Figure C.1. Different techniques to promote participation and feedback from attendees are available (Johnson, 2012), although none is officially imposed at Induct.

The Spanish working group, as a general rule, will not be in charge of events related to user story refinement. This has been decided after meetings with the R&D Director and Induct's CTO. Reasons are multiple:

1. User story refinement meetings are often too long to be comfortably handled with videoconference tools.
2. User story refinement is mostly a strategic and technical task that requires input from both management staff and developers. Since both kind of stakeholders are only physically present in Norway, to keep backlog grooming in Norway makes more sense.
3. User story refinement is more comfortably performed by a small number of persons. Too many engineers would carry duplicity of opinions and excess of redundant thinking that would hinder productivity.

C.1.1.6 Product Development Workflow

The following diagram (p.25) contains a description of the product development workflow implemented at Induct NO⁴:

⁴ A higher resolution version is provided in the electronic support.

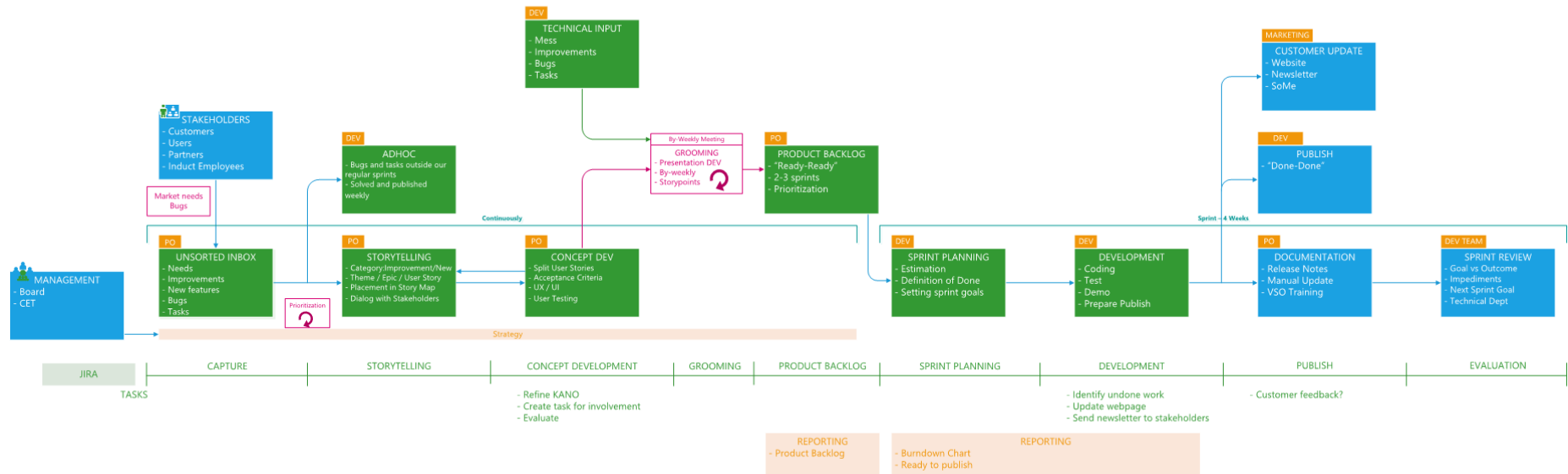


Figure C.2. Product development workflow at Induct

D. LEGAL ASPECTS MANAGEMENT

D.1 Investment Legal Framework Options

D.1.1 Capital Increase

Through an operation of capital increase, Induct SEA could issue more shares that would be bought by Induct Norway. This way the parent company would keep absolute control of the company in Spain and money would be transferred to the Spanish division. The operation would be signed by a notary, in conjunction with the previous agreement between Induct SEA and Induct NO.

Officialising both deals would have some implications. Induct SEA's Board of Directors would have to be reorganized so to accommodate the Norwegian representation, a decision that would effectively transfer all legal responsibilities from the Spanish subsidiary to the parent company, in Norway.

This operation is the cheapest, given that it is not taxed and only the notary should be paid. It is also an operation with permanent vocation: the investment would be allocated in Spain and Induct NO would have no way to reallocate it without incurring in heavy taxation. It is, thus, the best framework to transfer all legal responsibilities to the parent company, in Norway. Induct SEA is a strongly proponent of this model.

D.1.2 Loan

Induct Norway could transfer the money in the form of a loan to its Spanish representation, at a very reasonable interest rate.

The operation would keep all legal responsibilities in Induct Spain, since the private agreement would not have to be legally recognized and the actual company legal structure could be maintained. However, the operation carries some important costs for the Norwegian parent company, as profits from interests paid by Induct SEA should be recognized in the company accounts and subject to the Norwegian corporate tax regime. Although the legal responsible would be Induct SEA, the operation does not carry any cost for the Spanish division. Furthermore, this framework implies to some extent a permanent vocation, given that Norway and Spain will be tied together during the return period.

Induct SEA and Induct Software AS are, both, reluctant about this model for several reasons. Induct SEA sees it as not advantageous from the legal standpoint and without little permanent

vocation. Induct Norway does not want to be subject to the Norwegian corporate tax regime for an investment made in Spain, where taxation is more company-friendly.

D.1.3 Set Up a Legal Branch

Finally, a last option would be to set up a foreign company branch in Spain, independent from Induct SEA. Company branches have no legal personality and legal responsibilities belong to the parent company, i.e. Induct Software AS.

Costs tied to the operation are minimal: payment for the notary services.

The model has no permanent vocation as Norway could close the branch at any given point.

Induct SEA is an opponent to this framework as it does not meet its demand for more integration with the parent company. Induct Software AS is neutral, if not reluctant, to this possibility as it does not make much sense, given that Induct already has legal presence in Spain.

E. PROCUREMENT MANAGEMENT

E.1 Procurement Statements of Work

E.1.1 Offices Procurement

Offices will be procured through a rent contract agreement with an undefined contractor.

E.1.1.1 Period of Performance

Renting services will be provided through a basic rental agreement, which should commence on the 3rd of January, 2015; this date corresponds to the expected time when the senior team will join Induct SEA, in Barcelona. Tenancy period should be from 3 to 5 years.

Depending on availability of financial resources, the acquisition of new offices may be delayed until the whole Spanish development team is set up, in Q2 2015. If that were the case, the dev. senior team will be allocated in Induct SEA current offices, for a temporary period of time. The decision to delay the procurement of new offices will be taken by management staff in Norway, during Q4 2014, allowing sufficient time to prepare the current Spanish offices for the arrival of the senior team.

E.1.1.2 Scope of Work

Contractor shall provide services as follows:

- A minimum of 140 m² of furnished, office space:
 - Office equipment should cover the needs of 10 employees.
- Basic services, including:
 - Water
 - Electricity
 - Gas
 - Air conditioning
 - Cleaning services
- Insurance under the following precepts:
 - Damages to equipment and building caused by natural disasters, e.g.:
 - Fire
 - Water flood
 - Damages due to causes of *force majeure*, e.g. burglary.
 - Kitchen with included appliances.

E.1.1.3 Contractor Responsibilities

It is the contractor responsibility to:

- Comply with local regulations related to offices space such as, but not restricted to:
 - Security
 - Sanitary conditions
- Keep offices in optimal conditions for regular use.
- Provide and cover costs of technical support for all services specified in the scope of work (E.1.1.2).
- Substitute office equipment, specified in the scope of work (E.1.1.2), in case of degradation not caused by violation of precepts mentioned in the client responsibilities section (E.1.1.4).

E.1.1.4 Client Responsibilities

It is Induct SEA responsibility to:

- Do not intentionally degrade material and/or services provided by the contractor.
- Follow safety rules provided by the contractor.
- Do not violate office insurance clauses.

E.1.1.5 Payment

The total value for the services pursuant to this SOW shall not exceed 19,320.00 €/year, unless otherwise agreed by both parties⁵. Induct SEA is aware that services required in this SOW may result in an increase of costs; such a possibility is regarded as a calculated risk and covered within the contingency margin of the operational budget (project report, 9.3).

E.1.2 Offices Internet Service

Internet service will be procured through a services contract agreement with an unspecified contractor, in case it does not come included with the new offices. Two private agreements will be signed with different providers. One will act as the main service, whereas the other will be used as a backup, in case the Internet service from the main contractor went down.

⁵ Details of rent price calculations are provided in section F.3.3.2.1.

E.1.2.1 Period of Performance

Internet services shall commence the date of arrival of Induct SEA to the new offices and no termination date shall be specified.

E.1.2.2 Scope of Work

Internet services should include the following characteristics:

- Main service should provide, at least, 100 Mbits of fibre Internet service.
- Secondary service should provide 10 Mbits of SHDSL internet service.

E.1.2.3 Contractor Responsibilities

It is the responsibility of both contractors to:

- Provide free, technical assistance in case of system failure.

E.1.2.4 Payment

The total value of the main service should not exceed 60 €/month, unless otherwise agreed by both parties. Payment will take place in a monthly basis. The total value of the secondary service should not exceed 30 €/month, unless otherwise agreed by both parties. Payment will take place in a monthly basis.

E.1.3 Multifunctional Printer System

Offices in Barcelona will count with a main printer device available to all employees. This device will be procured through a leasing contract agreement with an unspecified provider. However, the most probable contractor will be Sharp, as it is the actual provider of technical equipment for Induct headquarters.

E.1.3.1 Period of Performance

The procurement process shall take place once Induct SEA is installed in the new offices, and it will not take more than a month. The contract shall not specify a termination date.

E.1.3.2 Scope of Work

Required specifications for the multifunctional system are in line with industry standards. As an example, specifications of the system currently used at Induct HQ is provided in the electronic support, within the procurement management folder.

E.1.3.3 Payment

Payment for the multifunctional system will follow a leasing contract model, according to which Induct will pay an agreed monthly fee of 100.00 €, totalling 1,200.00 € per year. The price has been estimated given current prices paid for a similar system at Induct NO. At the term of the leasing period, both parts will either renew or terminate the contract.

E.1.4 Technical Equipment for Employees

For each employee, a laptop, a 24 inch screen and a mouse/keyboard bundle will be purchased. Induct SEA will sign a FFP agreement with an unspecified contractor, who will provide the equipment at the ad hoc request of Induct SEA, as well as offering technical support services during the warranty extension.

E.1.4.1 Period of Performance

The FFP agreement shall be reached during the first month of the execution project phase.

E.1.4.2 Scope of Work

Contracted provider shall procure Induct with:

- Up-to-date Windows laptops from their preferred manufacturer. OS must be Windows 7 or higher.
- 24 inch LED monitors from their preferred manufacturer.
- Keyboard/mouse bundles with the requested language keyboard layout.
- Compatible dock stations featuring the following specifications
- LAN connection
- DVI and HDMI output ports
- At least two USB ports
- AC/DC charging.

This equipment will be procured at the request of Induct, in non-regular intervals.

E.1.4.3 Contractor Responsibilities

It is the contractor responsibility to:

- Provide technical support during the warranty extension for all equipment supplied.
- Not change the agreed price during the contract duration.

- Supply substitution equipment, in case needed, and under no violation of the terms of service agreement.

E.1.4.4 Payment

Prices for the equipment described above will be agreed in the FFP contract and the contractor shall not change them during the whole contract extent. From current prices paid at Induct NO, total estimated costs are of 950.00 € per employee.

E.1.5 Mobile Phone Service

Induct SEA will provide all regular employees with a corporate mobile phone and paid mobile broadband service. This provision will be purchased through a FFP-EPA agreement with an unidentified contractor, who will act as an intermediary between broadband providers and Induct SEA. The intermediary will provide last generation phones, for which it will receive a single, fixed payment. Also, it will charge Induct a monthly invoice per phone in order to cover mobile broadband service fees. Price charged in monthly invoices may vary according to user usage and in the event broadband providers change their standard rates. An annual variability limit will be specified in the contract.

E.1.5.1 Period of Performance

The FFP-EPA agreement will have an extension of, at least, one year. Signing the agreement for this particular service is no priority, as it is expected all employees can make use of their personal broadband lines, in case needed. However, it is the Induct's firm intention to provide such a service to its employees within the first year of the execution stage.

E.1.5.2 Scope of Work

The contractor shall:

- Provide Induct with last generation smartphones from multiple brands. The phone catalogue should include devices with up-to-date software versions of Google's Android and Apple's iOS.
- Compliment all smartphones with broadband service from the broadband provider that best suits the intermediary, including the following characteristics:
 - 2 GB/month data plan, at least.
 - Free national calls to landlines and free internal calls between Induct employees.
- Provide substitution services at no cost, in case of unrepairable damage and under no violation of the terms of service agreement.

E.1.5.3 Contractor Responsibilities

It is the contractor responsibility to:

- Provide technical support during the warranty extension.
- Not change the equipment agreed price during the contract duration. Only invoices charged in concept of broadband fees may be subject to variation.
- Supply substitution equipment in case needed.

E.1.5.4 Payment

Phones will be paid at the purchase moment, in a single instalment. Broadband services will be paid, monthly, in a unique invoice charged to Induct and covering broadband costs of all phones purchased to the contractor. Prices for different types of smartphones will be agreed in the contract. Broadband invoices will follow a fixed scheme: a fixed price will be charge regardless of user usage. In case a user exceeds usage limits, additional costs will be charged in proportion to the usage made and according to price rates agreed in the contract.

From previous experience at Induct NO, a fixed price of 200 € per phone and 50 € in concept of mobile broadband services can be estimated.

F. COSTS MANAGEMENT

F.1 Barcelona Economic Analysis

F.1.1 A Resourceful & Available Workforce

According to an economic survey issued by Barcelona Activa (Barcelona Activa, 2013, p. 4), the Catalan agency in charge of promoting professional activity and investment in the city, Barcelona is inhabited by more than 1.6M people in the city centre and by more than 4.8M in the metropolitan area, extending 2,500 km. Jobs are thriving in Barcelona, with an employment rate of 64.2% and an unemployment rate ten percentage points below the Spanish average.

Barcelona is a boiling producer of high-skilled workers. Thanks to a network made up of 12 public and private universities, Barcelona produces more ICT graduates (computer, telecommunications, electronics or audiovisuals) than the European average: around 13.8% of the total mass of graduates (Barcelona Activa, 2012, p. 9). Also, UPC: Barcelona's main engineering university, ranked as the best engineering school state-wide and among the top 20 best European engineering universities, according to the QS World University Ranking (Universitat Politècnica de Catalunya, 2013). All in all, Barcelona is the fifth best region in Europe when it comes to number of high and medium-high technology intensive workers, the sixth by number of workers in science and technology, and the ninth in the knowledge intensive services sector, according to a report published by the Catalan Chamber of Commerce (Chamber of Commerce, 2013, p. 33).

F.1.2 The Services Sector: Barcelona's Landmark

Results previously explained are the cause and consequence of Barcelona's primary focus on knowledge-intensive sectors: 53% of the total mass of employees work in this sector (Barcelona Activa, 2013, p. 17).

Furthermore, Barcelona is the first Mobile World Capital since 2013, with international institutions that attract foreign investment like the Mobile World Centre, and worldwide events like the Mobile World Congress.

F.1.2.1 An International Hub for ICT Companies

Barcelona was ranked the 9th best city in the world to invest in software development, the 1st southern European and 7th European city of the future – in a report from the consulting firm PwC

(PwC, 2013) – and it was designated the European Capital of Innovation by the EU commission (European Commission, 2014).

The ICT sector in the city hosts 3,349 companies and generates 20% of national turnovers in the sector: more than 14,5M €, yearly (Barcelona Activa, 2012, p. 12). Furthermore, Catalonia leads innovation at the state level with 80.8% of ICT companies having introduced some kind of innovation during the last two years (Barcelona Activa, 2012, p. 8), and 23.1% of the total investment in innovation allocated in Barcelona (Barcelona Activa, 2013, p. 12).

As a result, Barcelona hosts 38% of foreign investment projects in Spain, according to the European Attractiveness Survey made by Ernst & Young (Ernst & Young, 2014, p. 28), as well as some of the biggest ICT companies in the world like Yahoo Research, Intel, HP, IBM or Microsoft.

F.2 Cost per Employee

F.2.1 Grants and Special Tax Allowances

The following table contains a summary of grants and tax allowances Induct is eligible to:

| Program and incentives | Entity | Type of incentives and intensity | Applicable aid amount |
|---|------------------------|--|---|
| HIRING INCENTIVES | | | |
| Grants to promote the hiring of unemployed people living in Barcelona | Barcelona city council | Companies established in Barcelona since at least six months prior the first subsidized hiring. Companies must have less than 250 employees (or they will be beneficiaries until they reach 250 employees). Companies must hire on a permanent contract, and within 2014, unemployed people younger than 30 or long-term unemployed ⁶ . Under De minimis ⁷ regime. | Grant: 3,000€ per new job (up to 15,000€ per company) |

⁶ Long-term unemployed in Spain are those not having worked, at least, in the past six months.

⁷ The maximum grant or grant equivalent received by an enterprise from all schemes under the minimis regulation shall not exceed an aggregate of €200,000 over a rolling three fiscal year period.

| Program and incentives | Entity | Type of incentives and intensity | Applicable aid amount |
|---|---|--|--|
| Flat rate for Social Security contributions when hiring new employees on a permanent basis ⁸ | Spanish General Treasury of the Social Security System | Companies hiring new employees on a permanent basis | Flat rate of 100€ for Social Security contributions in common contingencies |
| Tax incentives to encourage permanent labour contracts | Spanish General Treasury of the Social Security System. | Companies hiring certain groups of unemployed on a permanent basis. The tax incentive is applicable to the first 49 hires. | Social Security discounts: 3,000 – 4,500€ per new job |
| Social Security Employer Contributions Discounts: Stimuli to the hiring of young people | Spanish Ministry of Economy and Competitiveness | Companies hiring people under 30 on a part-time basis with training, or on temporary contract or on practical contract. | Social Security discounts: 50-100% reduction in common contingencies with possibility of incentives to turn contract into a permanent contract. |
| Personal income tax for non-residents | Flat tax rates | Individuals under the non-resident special regime in Spain. | 6 years tax flat rate: 24.75 % flat rate |
| INNOVATION INCENTIVES | | | |
| CDTI: Innovation Program | Centre for Development of Industrial Technology (CDTI) | Companies carrying out technological innovation projects. Minimum eligible budget of €175.000. Loan up to 75% of the eligible budget. Repayment period: 3 years (including 1 year of grace period) at 2% interest rate or 5 years (including 1 year of grace period) at 2, 5% interest rate. | Loan up to 75% of the eligible budget |

⁸ Until December the 31st, 2014.

| Program and incentives | Entity | Type of incentives and intensity | Applicable aid amount |
|------------------------|-----------------------------------|--|-------------------------------------|
| | | Grant equivalent shall not be greater than €200.000 (minimis* regime). | |
| Loans I+I | ACCIÓ – Catalan Finance Institute | Aid in the form of guarantee for working capital and investments related to innovation, industrialization and internationalization activities. Loan conditions: Euribor + 5'75%; Maximum repayment period of 4 years (including 1 year of grace period) in case of working capital expenses and 7 years (including 2 years of grace period) in case of investment expenses; disbursement at the time of signature; commission of 0.5%. Formalized operations will have the guarantee of the Department of Business and Labour of 70% of the live risk of each operation. Under De minimis* regime. | Loan amount: 50,000 - 500,000 euros |

Table F.1. Overview of eligible grants and tax allowances (ACC10, 2014a)

F.2.1.1 Hiring Incentives

This section details tax exemptions listed in the previous table.

F.2.1.1.1 Grants To Promote the Hiring of Unemployed People Living in Barcelona

The Barcelona City Council offers, through Barcelona Activa, grants for companies contracting new employees under the age of 30, within the city.

Grant amount: 3,000 € per each new job created. Maximum of 15,000 € per company. Companies must apply during the application period, until the 31st of December, 2014.

Beneficiaries: Companies established in Barcelona since at least six months prior the first subsidized hiring. Companies must have less than 250 employees (or they are beneficiaries until they reach 250 employees). As it was explained in the Legal chapter of the project report, Induct Software AS will make use of its established presence in the Spanish market through its

subsidiary in the country: Induct SEA. The latter has been operating in Spain for more than a year. This will allow Induct to apply to hiring incentives in the first contract it signs related to this project.

Type of labour contract and groups of unemployed: Companies must hire, on a permanent basis, unemployed people younger than 30 or long-term unemployed. Induct will only sign full-time, permanent contracts with new employees.

F.2.1.1.2 Flat Rate for Social Security Contributions when Hiring New Employees on a Permanent Basis

Requirements of the companies:

1. It shall be a net increase in both the level of permanent employment as in the level of total employees of the company.
2. Companies must maintain the employment for at least 36 months.
3. Companies will not have carried out collective or individual redundancies that have been declared unlawful in the six months prior to the execution of the new contract(s).
4. Companies must be up-to-date with the payment of its taxes (Corporate Tax and Social Security Contributions).

These reductions are not compatible with any other Social Security contributions discount for the same contract.

F.2.1.1.3 Tax Incentives to Encourage Permanent Labour Contracts

The following table (Table F.2, p.40) contains tax allowances to encourage permanent labour, offered by the Spanish General Treasury of the Social Security:

| Beneficiaries ⁹ | Collectives of unemployed ¹⁰ | Additional characteristic | Total amount | Corporate tax | Social security |
|--|---|---|---|---------------|-----------------|
| Companies with less than 50 employees | Younger than 30 | First labour contract of the company | 3000€ | OK | |
| | | Men and Women | 1000€ (1th year), 1100€ (2nd year), 1200€ (3th year) | | OK |
| | | Women in industries where the collective is underrepresented | 1100€ (1th year), 1200€ (2nd year), 1300€ (3rd year) | | |
| | | Beneficiaries of unemployment benefit (minim 3 months received) | 50% of unemployment benefits that the person would have received in the event that he/she remained unemployed, for a maximum 12 months. | OK | |
| | Between 30 and 45 | Beneficiaries of unemployment benefit (minim 3 months received) | 50% of unemployment benefits that the person would have received in the event that he/she remained unemployed, for a maximum 12 months. | OK | |
| | Older than 45 | Men and women | 1.300€ per year during 3 years | | OK |
| | | Women in industries where the collective is underrepresented | 1.500€ per year during 3 ye | | |
| | | Beneficiaries of unemployment benefit (minim 3 months received) | 50% of unemployment benefits that the person would have received in the event that he/she remained unemployed, for a maximum 12 months. | OK | |

Table F.2. Tax incentives to encourage permanent labour contracts (ACC10, 2014a)

⁹ Companies that have made unfair dismissal in last 6 months are excluded.

¹⁰ Unemployed must be officially registered on the Catalan Employment Service (SOC). Employees shall remain in the company for a minimum of 3 years.

F.2.1.1.4 Corporate Tax Deductions

The Spanish ministry of treasury offers a fixed tax deduction of up to 59% of the R&D expenses to all companies performing R&D&i activities.

F.2.1.1.5 Stimuli to the Hiring of Young People

The following table (Table F.3) lists tax exemptions offered for part-time contracts and/or training programs offered to young employees, by the Spanish Ministry of Economy and Competitiveness:

| Other special contracts | Collectives of unemployed | Additional characteristics | Amount | Duration |
|--|--|--|---|---|
| Training and apprenticeships contracts | Younger than 30, without professional qualification. | Alternation between employment in a company and training in the framework of Spanish VET (Vocational Education and Training). | 75-100% reduction of Social Security Contributions in common contingencies. | Maximum of 3 years |
| Part-time contract with training | Younger than 30, with less than 3 months of work experience, or unemployed for more than 12 months in the last 18, or from another sector of activity. | Part-time contract with training related to ICT or languages, or official training or training promoted by public employment services. | 75-100% reduction of Social Security Contributions in common contingencies | 12 months |
| "First young job" contract | Younger than 30, with less than 3 months of work experience | Temporary contracts from 3 to 6 months of duration. | | |
| | Conversion of a "First young job" contract into permanent contract. | | | € 500 per year during 3 years (Man). €700 per year during 3 years (Woman). |
| Practical contracts for first jobs | Younger than 30 | | 50%-75% reduction of Social Security Contributions in common contingencies. | During the total duration of the contract |

Table F.3. Special allowances to training and/or part-time contracts for young employees (ACC10, 2014a)

F.2.1.1.6 Personal Income Tax for Non-Residents

Newly arrived foreigners can choose between the regular resident tax scheme (24-43%) and the non-resident tax scheme (24.75% flat rate) for a maximum of 6 years. Through the non-resident tax scheme, income earned in countries outside of Spain are not subject to personal income tax.

To apply to the non-resident tax scheme, the following conditions have to be met:

1. The relocation to Spain should be a consequence of an employment agreement to be carried out on Spanish territory.
2. Employees who have been legal residents in Spain in the previous 10 years are excluded.

This tax is managed by the Spanish Ministry of Economy and Treasury.

F.2.1.2 Innovation Incentives

There is a wide spectrum of state agencies offering loans in highly advantageous conditions to new foreign companies investing in Spain. The conditions, rates and sources for such loans vary depending on the typology of the investment carried. Concretely, for investments related to the development of activities related to innovation, there are two public agencies that offer financial services.

F.2.1.2.1 CDTI – Innovation Program

The Centre for the Development of Industrial Technologies (CDTI in Spanish nomenclature) offers loans in the following conditions to companies carrying innovation in the following areas:

- Incorporation and adaptation of innovative technologies for the company, as well as adaptation and improvement processes to new markets.
- Technological improvement through industrial design and product and process engineering.
- Application of new/improved production or supplying process.

Innovation projects shall finish in a maximum period of 18 months.

Eligible expenses:

- Acquisition of new fixed assets.
- Labour cost, materials and fungible goods, external collaborations, overheads, audit expenses.

Eligible expenses must be incurred after the date of submitting application.

Conditions:

- Minimum eligible budget of €175.000.
- Loan up to 75% of the eligible budget (in certain cases may be up to 85%).
- Repayment period and interest rate:
 - Option 1: 3 years (including 1 year of grace period) at 2% interest rate.
 - Option 2: 5 years (including 1 year of grace period) at 2.5% interest rate.
- Grant equivalent shall not be greater than €200.000 (minimis rule).

F.2.1.2.2 LOANS I+I – Aid in Form of Guarantees

Beneficiaries: Companies with headquarters or operating facilities in Catalonia

Type of incentives: Loans to finance working capital and investments for companies that carry out innovation, internationalization and industrialization projects.

Financial conditions:

1. Amount: The amount of the loan may range between EUR 50,000-500,000 in case of working capital expenses and EUR 50,000-1,000,000 in case on investment expenses.
2. Interest rate: Euribor + 5'75%
3. Repayment period: Maximum repayment period of 4 years (including 1 year of grace period) in case of working capital expenses and 7 years (including 2 years of grace period) in case of investment expenses.
4. Commission: 0.50% of the loan amount.
5. Guarantees: Guarantees shall be required. The Department of Business and Labour contributes 70% of required guarantees.

Eligible expenses: Working capital expenses and investment expenses of companies with innovation, industrialization and internationalization activity.

Period for carry out the investment project: From 1st January 2013 to 2 years after submitting the application form.

Period for submitting applications: Until 31st December 2014. Incentives program under the minimis regulation.

F.2.1.3 Criteria to Select Eligible Tax Allowances

All grants and tax allowances, Induct can apply to, are subject to a series of conditions and variables dependant of the following factors:

- Typology of the investment carried by the company.
- The company net profits.
- Current number of employees.
- Size of the company in financial and human capital terms.
- Tax allowances already perceived.
- Typology of the hired persons
 - Unemployment benefits
 - Demographic typology

Imputing all tax allowances and grants to the project budget would require a series of assumptions that can hardly be justified. For example, an average period of previous unemployment for new Induct senior employees could be estimated, so that allowances for hiring unemployment beneficiaries could be added to the current budget. However, this kind of assumptions would be based upon no solid evidence and, worst of all, they would produce misleading budgetary results.

To avoid this practice, only those grants and tax allowances depending on variables that can be fixed, at the moment of this report confection, have been added to the budget. This conservative methodology underestimates the tax allowances that Induct could receive during the project execution stage; probably, the operational budget will see increased the amount of special allowances granted.

F.2.2 Cost per Employee Budget

The next subsections contain cost per employee budgets in the different cost scenarios contemplated in the project scope. For presentation purposes, subsections have been moved to the next page (p. 45).

F.2.2.1 Low Cost Scenario

The following table (Table F.4) contains the cost per employee in the low cost scenario.

| Cost per employee (low cost) | €/year | |
|---|------------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 18,000.00 | 30,000.00 |
| <i>Income tax</i> | <i>4,455.00</i> | <i>8,070.37</i> |
| <i>Net salary</i> | <i>13,545.00</i> | <i>21,929.63</i> |
| Social security | 5,580.00 | 9,300.00 |
| Holidays contingency | 1,512.00 | 2,520.00 |
| Firing contingency | 3,420.00 | 5,700.00 |
| Common expenses | 1,730.00 | |
| <i>Insurance</i> | <i>100.00</i> | |
| <i>Medical assistance (EPI, medical checks)</i> | <i>80.00</i> | |
| <i>Technical Equipment</i> | <i>950.00</i> | |
| <i>Mobile Broadband Service</i> | <i>600.00</i> | |
| TOTAL (allowances not included) | 30,242.00 | 49,250.00 |
| Special allowances | 1,100.00 | 8,100.00 |
| <i>Flat rate for Social Security</i> | - | <i>8,100.00</i> |
| <i>Tax incentives to encourage permanent labour contracts</i> | <i>1,100.00</i> | - |
| TOTAL (allowances included) | 29,142.00 | 40,950.00 |

Table F.4. Cost per employee budget: low cost scenario

F.2.2.2 High Cost Scenario

The following table (Table F.5, p.46) contains the cost per employee in the high cost scenario:

| Cost per employee (High cost) | €/year | |
|---|------------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 25,000.00 | 36,000.00 |
| <i>Income tax</i> | <i>6,187.50</i> | <i>9,870.37</i> |
| <i>Net salary</i> | <i>18,812.50</i> | <i>26,129.63</i> |
| Social security | 7,750.00 | 11,160.00 |
| Holidays contingency | 2,100.00 | 3,024.00 |
| Firing contingency | 4,750.00 | 6,840.00 |
| Common expenses | 1,730.00 | |
| <i>Insurance</i> | <i>100.00</i> | |
| <i>Medical assistance (EPI, medical checks)</i> | <i>80.00</i> | |
| <i>Technical Equipment</i> | <i>950.00</i> | |
| <i>Mobile Broadband Service</i> | <i>600.00</i> | |
| TOTAL (allowances not included) | 41,330.00 | 58,754.00 |
| Special allowances | 1,100.00 | 9,960.00 |
| <i>Flat rate for Social Security</i> | - | <i>9,960.00</i> |
| <i>Tax incentives to encourage permanent labour contracts</i> | <i>1,100.00</i> | - |
| TOTAL (allowances included) | 40,230.00 | 48,594.00 |

Table F.5. Cost per employee budget: high cost scenario

F.2.2.3 Calculation Details & Considerations

F.2.2.3.1 Income Tax

F.2.2.3.1.1 Junior Employee.

24.75% corresponding to the lowest fiscal threshold.

F.2.2.3.1.2 Senior Employee.

24.75% from 0 to 17,707.2 €. 30% from 17,707.2 € to the gross salary (32,000 €, in the medium cost case scenario).

F.2.2.3.2 Social Security Contribution

Contributions to social security vary, depending on multiple factors (Sage, 2011). However, the total contribution, usually, oscillates between 31% and 35%, according to Sage (2010). A 31% rate has been chosen in this report budget case, given that the difference is small enough to be considered negligible.

F.2.2.3.3 Holidays Contingency

8.4% of gross salary, according to sage (2010).

F.2.2.3.4 Firing Contingency

Firing provisions vary depending on factors related to the worker, notably: the number of days worked and the gross salary paid to the employee.

A fair estimation, according to BBVA bank (2012), is a contingency equivalent to 5 working days per month or 19% of gross salary. For purposes of the budget presented in this report, a contingency equivalent to 19% of the gross salary has been chosen.

F.2.2.3.5 Flat Rate for Social Security

In the case of the flat rate for social security contributions, amounts presented in the budget account for the difference between 1,200 € and the regular social security compensation that Induct should pay, in each case scenario, if there was no allowance.

F.2.2.3.6 Tax Incentives to Encourage Permanent Labour Contracts

This discount is provided in a three year span (project report, 9.2.3.1.2), and the amount granted increases each year. To condense the grant in one single year budget, the average over the three years has been calculated:

$$\frac{1000 \text{ €} + 1100 \text{ €} + 1200 \text{ €}}{3 \text{ years}} = 1100 \frac{\text{€}}{\text{year}}$$

Eq. F.1

This provision is also available for men and women over the age of 30 but, given that these depend on the hired person's previous labour situation, the provision has been considered null for senior analysts.

F.2.2.3.7 Common Expenses

F.2.2.3.7.1 Insurance

By law, all workers must be covered against dead or major physical impediments. The cost of this insurance varies depending on the typology of the work carried, but it spans between 35 € and 100 €, according to the BBVA bank (BBVA, 2012). Although it has been decided to make a conservative estimation of the insurance's cost, it is expected that this provision will be reduced during the project implementation stage.

F.2.2.3.7.2 Medical Assistance

Besides the insurance, all employers are also required to conduct an annual medical check to every employee, as well as investing in implementing all the necessary elements of personal security (EPS). EPS are stated by law, depending on the typology of the work conducted, although the cost of implementing them is never lower than 80 € per worker, according to the Spanish consulting firm SAGE (SAGE, 2010).

F.2.2.3.7.3 Technical Equipment

The equipment & communications item accounts for the initial investment in equipping each employee, and for the monthly costs related to communication expenditures: i.e. phone broadband fees. Each worker will be provided with a laptop PC (500 €), a mobile phone (200 €), a 24inch display (200 €) and laptop dock station (50 €). PCs, mobile phones and monitors costs are a one-time investment, paid at the beginning of the contractual relationship with the employee.

F.2.2.3.7.4 Mobile Broadband Service

Mobile broadband service will be covered by the company, as it was detailed in the procurement chapter (E.1.5). Costs related to broadband invoices are of 50 € per month, or 600 € annually.

F.3 Operational Budget

F.3.1 Low Cost Scenario

The following table (p. 49) contains the operational budget in stationary conditions for the low cost scenario:

| Operational Budget (low cost) | €/year | |
|---|-------------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 18,000.00 | 30,000.00 |
| <i>Income tax</i> | <i>4,455.00</i> | <i>8,070.37</i> |
| <i>Net salary</i> | <i>13,545.00</i> | <i>21,929.63</i> |
| Social security | 5,580.00 | 9,300.00 |
| Holidays contingency | 1,512.00 | 2,520.00 |
| Firing contingency | 3,420.00 | 5,700.00 |
| Common expenses | 1,730.00 | |
| <i>Insurance</i> | <i>100.00</i> | |
| <i>Medical assistance (EPI, medical checks)</i> | <i>80.00</i> | |
| <i>Technical Equipment</i> | <i>950.00</i> | |
| <i>Mobile Broadband Service</i> | <i>600.00</i> | |
| Cost per employee | 30,242.00 | 49,250.00 |
| Operational expenses | 52,851.43 | |
| <i>Office rent</i> | <i>19,320.00</i> | |
| <i>Accommodation in Norway</i> | <i>26,571.43</i> | |
| <i>Travel</i> | <i>5,760.00</i> | |
| <i>Multifunctional Printer system</i> | <i>1,200.00</i> | |
| Total senior team | 147,750.00 | |
| Total junior team | 90,726.00 | |
| <i>Contingency margin (5%)</i> | <i>11,923.80</i> | |
| TOTAL | 303,251.23 | |

Table F.6. Operational budget: low cost scenario

F.3.2 High Cost Scenario

The following table (p. 50) contains the operational budget in stationary conditions for the high cost scenario:

| Operational Budget (High cost) | €/year | |
|---|-------------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 25,000.00 | 36,000.00 |
| <i>Income tax</i> | <i>6,187.50</i> | <i>9,870.37</i> |
| <i>Net salary</i> | <i>18,812.50</i> | <i>26,129.63</i> |
| Social security | 7,750.00 | 11,160.00 |
| Holidays contingency | 2,100.00 | 3,024.00 |
| Firing contingency | 4,750.00 | 6,840.00 |
| Common expenses | 1,730.00 | |
| <i>Insurance</i> | <i>100.00</i> | |
| <i>Medical assistance (EPI, medical checks)</i> | <i>80.00</i> | |
| <i>Technical Equipment</i> | <i>950.00</i> | |
| <i>Mobile Broadband Service</i> | <i>600.00</i> | |
| Cost per employee | 41,330.00 | 58,754.00 |
| Operational expenses | 52,851.43 | |
| <i>Office rent</i> | <i>19,320.00</i> | |
| <i>Accommodation in Norway</i> | <i>26,571.43</i> | |
| <i>Travel</i> | <i>5,760.00</i> | |
| <i>Multifunctional Printer system</i> | <i>1,200.00</i> | |
| Total senior team | 176,262.00 | |
| Total junior team | 123,990.00 | |
| <i>Contingency margin (5%)</i> | <i>15,012.60</i> | |
| TOTAL | 368,116.03 | |

Table F.7. Operational budget: high cost scenario

F.3.3 Calculation Details & Considerations

F.3.3.1 Common Expenses

Note that the acquisition of technical equipment is, in reality, a single payment. However, since it is a required expenditure tied to all new employees, it has been decided to include it in the operational budget.

F.3.3.2 Operational Expenses

F.3.3.2.1 Office Rent

Office rent costs have been calculated taking into account the average monthly rent paid per square meter, in Barcelona (BNP, 2014), and the average number of square meters occupied by an office employee: 14 sqm (Junco, 2014).

In equation 12.1, the annual office rent cost, as well as the proportional part assigned to a single employee, are displayed:

$$\begin{aligned} \text{Office rent price} &= 12 \frac{\text{months}}{\text{year}} \cdot 11.5 \frac{\text{€}}{\text{month} \cdot \text{sqm}} \cdot 14 \frac{\text{sqm}}{\text{employee}} \\ &= 1,932.00 \frac{\text{€}}{\text{year} \cdot \text{employee}} \cdot 10 \text{ employees} = 19,320.00 \frac{\text{€}}{\text{year}} \end{aligned}$$

Eq. F.2

The total rent price was calculated assuming Induct SEA will have 10 employees: 6 new employees hired, plus 4 more professionals already employed at Induct SEA.

F.3.3.2.2 Accommodation in Norway

This provision was estimated after a high-level survey of the real estate rent market in Oslo and from personal interviews with Norwegian Induct personnel. It was estimated that a cost of a 3-bedroom apartment in Oslo centre is of 18,452.4 NOK/month, or 2,214.3 €/month with an exchange rate of 0.12 € per NOK.

The price for a 3-bedroom apartment was chosen, given that Induct does not plan to have more than 3 Spanish employees in Norway, simultaneously.

F.3.3.2.3 Travelling

The Spanish team will, most probably, not have a permanent presence in Norway. However, uncertainty in this topic is considerable and the Board of Directors has expressed concerns regarding the amount of trips to Norway planned in this report. This is the reason an estimated average of 12 trips per year and worker have been considered in the budget; a provision well over requirements of the operational plan defined in the operations chapters (project report, 5.3).

Flight tickets for round trips to Norway have been estimated to cost around 80 €, and 6 employees have been assumed to calculate the total annual value, adding up to 5,760.00 €.

F.3.3.2.4 Multifunctional Printer System

The Multifunctional Printer System will be purchased through a contract of lease, under which Induct will pay the manufacturer – most probably Sharp – a fixed monthly instalment of 100.00 €, totalling 1,200.00 € per year. The price has been estimated given current prices paid for a similar system at Induct NO.

F.3.3.3 Cost per Employee and Hour

In order to calculate the cost per employee and hour, the average hours worked by a Spanish employee – according to the OECD (project report, 9.1.2) – have been considered.

F.3.3.4 Currency Exchange Rate

The currency exchange rate between NOK and € fluctuates, daily. However, this minor variations do not have a noticeable impact in the budget. The average conversion rate used is: 0.12 € for 1 NOK.

F.3.3.5 Contingency Margin

The total contingency margin item accounts for 5% of the sum between the total senior and junior team costs.

F.4 Planning Budget

F.4.1 Calculation Details & Considerations

F.4.1.1 Salaries

Salary items correspond to the compensations perceived by the most relevant project team members, in a per month basis.

F.4.1.2 Diets

Cost estimation of diets attributable to a single employee. This item varies monthly and, thus, it is not possible to assert an exact figure. Instead, an estimation of 1000 NOK (120 €) has been made by the Project Manager. It is worth noticing diets are not paid in full by Induct NO: part of the cost is discounted from employees' salaries.

F.4.1.3 Dedication Time Estimation

Dedication time during the planning stage has not been tracked; variations, throughout time, of employees' workload made it practically impossible. Instead, dedication times have been estimated by the Project Manager.

F.4.1.4 General Expenditures

General expenditures accounting for equipment and material amortizations, as well as for the proportional part of operational expenditures like the office rent. As a general rule, general expenditures value is calculated as the 13% of the total budget value.

F.5 Execution Budget

The following subsections contain the execution budgets for the different cost scenarios contemplated in this project scope. For presentation purposes, subsections have been moved to the next page (p.54).

F.5.1 Low Cost Scenario

The following table contains the execution budget for the low cost execution budget:

| Execution Budget (low cost) | € | |
|---|----------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 3,857.1 | 17,142.9 |
| Income tax | 954.6 | 4,213.2 |
| Net salary | 2,902.5 | 12,929.6 |
| Social security | 1,195.7 | 5,314.3 |
| Holidays contingency | 324.0 | 1,440.0 |
| Firing contingency | 732.9 | 3,257.1 |
| Common expenses | 1,280.0 | 1,530.0 |
| Insurance | 100.0 | 100.0 |
| Medical assistance (EPI, medical checks) | 80.0 | 80.0 |
| Technical Equipment | 950.0 | 950.0 |
| Mobile Broadband Service | 150.0 | 400.0 |
| Tax allowances | 250.0 | 4,514.3 |
| Flat rate for Social Security | - | 4,514.29 |
| Tax incentives to encourage permanent labor contracts | 250.0 | - |
| Cost per employee | 7,139.7 | 24,170.0 |
| Operational expenses | | 26,000.0 |
| Office rent | | 9,660.0 |
| Accommodation in Norway | | 15,500.0 |
| Travel | | 240.0 |
| Multifunctional Printer system | | 600.0 |
| Total senior team | | 72,510.0 |
| Total junior team | | 21,419.1 |
| R&D TEAM OPERATIONS SUBTOTAL | | 119,929.1 |
| Project Manager | | 1,020.0 |
| Dedication time per month | | 100.0% |
| Base net salary | | 1,020.0 |
| R&D Director | | 732.00 |
| Dedication time per month | | 10.0% |
| Base net salary | | 7,200.0 |
| Diets | | 120.0 |
| CTO (Project Owner) | | 1,464.0 |
| Dedication time per month | | 30.0% |
| Base net salary | | 7,200.0 |
| Diets | | 120.0 |
| CEO | | 486.0 |
| Dedication time per month | | 5.0% |
| Base net salary | | 9,600.0 |
| Diets | | 120.0 |
| Planning stage duration (months) | | 9.0 |
| Human capital subtotal | | 33,318.0 |
| SUBTOTAL | | 153,247.1 |
| Contingency margin (5%) | | 7,662.4 |
| TOTAL | | 160,909.5 |

Table F.8. Execution budget: low cost scenario

F.5.2 High Cost Scenario

The following table contains the execution budget for the high cost scenario:

| Execution Budget (high cost) | € | |
|---|----------------|------------------|
| | Junior analyst | Senior analyst |
| Gross salary | 5,357.1 | 20,571.4 |
| Income tax | 1,325.9 | 5,241.8 |
| Net salary | 4,031.3 | 15,329.6 |
| Social security | 1,660.7 | 6,377.1 |
| Holidays contingency | 450.0 | 1,728.0 |
| Firing contingency | 1,017.9 | 3,908.6 |
| Common expenses | 1,280.0 | 1,530.0 |
| Insurance | 100.0 | 100.0 |
| Medical assistance (EPI, medical checks) | 80.0 | 80.0 |
| Technical Equipment | 950.0 | 950.0 |
| Mobile Broadband Service | 150.0 | 400.0 |
| Tax allowances | 250.0 | 5,577.1 |
| Flat rate for Social Security | - | 5,577.14 |
| Tax incentives to encourage permanent labor contracts | 250.0 | - |
| Cost per employee | 8,765.7 | 28,538.0 |
| Operational expenses | | 26,000.0 |
| Office rent | | 9,660.0 |
| Accommodation in Norway | | 15,500.0 |
| Travel | | 240.0 |
| Multifunctional Printer system | | 600.0 |
| Total senior team | | 85,614.0 |
| Total junior team | | 28,547.1 |
| R&D TEAM OPERATIONS SUBTOTAL | | 140,161.1 |
| Project Manager | | 1,020.0 |
| Dedication time per month | | 100.0% |
| Base net salary | | 1,020.0 |
| R&D Director | | 732.00 |
| Dedication time per month | | 10.0% |
| Base net salary | | 7,200.0 |
| Diets | | 120.0 |
| CTO (Project Owner) | | 1,464.0 |
| Dedication time per month | | 30.0% |
| Base net salary | | 7,200.0 |
| Diets | | 120.0 |
| CEO | | 486.0 |
| Dedication time per month | | 5.0% |
| Base net salary | | 9,600.0 |
| Diets | | 120.0 |
| Planning stage duration (months) | | 9.0 |
| Human capital subtotal | | 33,318.0 |
| SUBTOTAL | | 173,479.1 |
| Contingency margin (5%) | | 8,674.0 |
| TOTAL | | 182,153.1 |

Table F.9. Execution budget: high cost scenario

F.5.3 Calculation Details & Considerations

F.5.3.1 Gross Salary

In the case of the junior team, figures correspond to the salaries perceived during a period of 3 months, from March to June. In the case of the senior team, figures correspond to salaries perceived from November, 2014, until June, 2015. Base salaries considered are those of the medium cost scenario. Periods of time are explained in the time management chapter.

F.5.3.2 Tax Allowances

F.5.3.2.1 Flat Rate for Social Security

Figures stated correspond the proportional part – depending on the months of employment – of the social security reduction caused by the flat rate contribution.

F.5.3.2.2 Tax Incentives to Encourage Permanent Labour Contracts

Figures in the table correspond to the amount granted in the first year: 1,000 €. This figure is spread through 12 social security contributions per year. Each new employee under the age of 30 years hired by Induct will be subject to this tax allowances.

F.5.3.3 Operational Expenses

It is assumed offices are procured at the beginning of the procurement stage, in January 2015. Accommodation in Norway is estimated to be acquired in December 2014. Travels only account for the round trips to Norway made by the senior development team. The multifunctional printer is estimated to be acquired at the same time than the new offices.

F.5.3.4 Human Capital

Human capital accounts for expenditures from the most relevant members of the project execution team. Dedication times per month have been estimated by the Project Manager, and the duration of the execution is in the time management chapter.

F.6 Distribution of Costs over Time

The following set of tables contain a description of the yearly and quarterly evolution of project expenditures. Detail of calculations are provided after the tables:

| | 2014 | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | - | - | - | - | - | - | - | 8,000.00 |
| Social security | - | - | - | - | - | - | - | 2,480.00 |
| Holidays contingency | - | - | - | - | - | - | - | 672.00 |
| Firing contingency | - | - | - | - | - | - | - | 1,520.00 |
| Common expenses | - | - | - | - | - | - | - | 1,145.00 |
| <i>Insurance</i> | - | - | - | - | - | - | - | 25.00 |
| <i>Medical assistance (EPI, medical checks)</i> | - | - | - | - | - | - | - | 20.00 |
| <i>Technical Equipment</i> | - | - | - | - | - | - | - | 950.00 |
| <i>Mobile Broadband Service</i> | - | - | - | - | - | - | - | 150.00 |
| Special allowances | - | - | - | - | - | - | - | 2,180.00 |
| <i>Flat rate for Social Security</i> | - | - | - | - | - | - | - | 2,180.00 |
| <i>Tax incentives to encourage permanent labour contracts</i> | - | - | - | - | - | - | - | - |
| Numb. Employees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| COST PER TEAM | - | - | - | - | - | - | - | 34,911.00 |
| Operational expenditures | - | - | - | - | - | - | - | 7,182.86 |
| <i>Office rent</i> | - | - | - | - | - | - | - | - |
| <i>Accommodation in Norway</i> | - | - | - | - | - | - | - | 6,642.86 |
| <i>Travel</i> | - | - | - | - | - | - | - | 240.00 |
| <i>Multifunctional Printer System</i> | - | - | - | - | - | - | - | 300.00 |
| QUARTERLY TOTAL | - | - | - | - | - | - | - | 42,093.86 |
| <i>Contingency margin (5%)</i> | | | | | | | | 2,104.69 |
| YEARLY TOTAL | | | | | | | | 44,198.55 |

Table F.10. Distribution of costs over time: 2014

| | 2015 | | | | | | | |
|--|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | - | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 |
| Social security | - | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 |
| Holidays contingency | - | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 |
| Firing contingency | - | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 |
| Common expenses | - | 195.00 | 1,145.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 |
| Insurance | - | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Medical assistance (EPI, medical checks) | - | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Technical Equipment | - | - | 950.00 | - | - | - | - | - |
| Mobile Broadband Service | - | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Special allowances | - | 2,180.00 | 250.00 | 2,180.00 | 250.00 | 2,180.00 | 250.00 | 2,180.00 |
| Flat rate for Social Security | | 2,180.00 | | 2,180.00 | | 2,180.00 | - | 2,180.00 |
| Tax incentives to encourage permanent labour contracts | - | - | 250.00 | - | 250.00 | - | 250.00 | - |
| Numb. Employees | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| COST PER TEAM | - | 32,061.00 | 29,771.40 | 32,061.00 | 26,921.40 | 32,061.00 | 26,921.40 | 32,061.00 |
| Operational expenditures | 11,772.86 | | 12,012.86 | | 11,772.86 | | 11,772.86 | |
| Office rent | 4,830.00 | | 4,830.00 | | 4,830.00 | | 4,830.00 | |
| Accommodation in Norway | 6,642.86 | | 6,642.86 | | 6,642.86 | | 6,642.86 | |
| Travel | - | | 240.00 | | - | | - | |
| Multifunctional Printer System | 300.00 | | 300.00 | | 300.00 | | 300.00 | |
| QUARTERLY TOTAL | 43,833.86 | | 73,845.26 | | 70,755.26 | | 70,755.26 | |
| Contingency margin (5%) | | | | | 12,959.48 | | | |
| YEARLY TOTAL | | | | | 272,149.11 | | | |

Table F.11. Distribution of costs over time: 2015

| | 2016 | | | | | | | |
|--|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 |
| Social security | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 |
| Holidays contingency | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 |
| Firing contingency | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 |
| Common expenses | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 |
| Insurance | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Medical assistance (EPI, medical checks) | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Technical Equipment | - | - | - | - | - | - | - | - |
| Mobile Broadband Service | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Special allowances | 250.00 | 2,180.00 | 275.00 | 2,180.00 | 275.00 | 2,180.00 | 275.00 | 2,280.00 |
| Flat rate for Social Security | - | 2,180.00 | - | 2,180.00 | - | 2,180.00 | - | 2,280.00 |
| Tax incentives to encourage permanent labour contracts | 250.00 | - | 275.00 | - | 275.00 | - | 275.00 | - |
| Numb. Employees | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| COST PER TEAM | 26,921.40 | 32,061.00 | 26,846.40 | 32,061.00 | 26,846.40 | 32,061.00 | 26,846.40 | 31,761.00 |
| Operational expenditures | 11,772.86 | | 11,772.86 | | 11,772.86 | | 11,772.86 | |
| Office rent | 4,830.00 | | 4,830.00 | | 4,830.00 | | 4,830.00 | |
| Accommodation in Norway | 6,642.86 | | 6,642.86 | | 6,642.86 | | 6,642.86 | |
| Travel | - | | - | | - | | - | |
| Multifunctional Printer System | 300.00 | | 300.00 | | 300.00 | | 300.00 | |
| QUARTERLY TOTAL | 70,755.26 | | 70,680.26 | | 70,680.26 | | 70,380.26 | |
| Contingency margin (5%) | | | | | 14,124.80 | | | |
| YEARLY TOTAL | | | | | 296,620.83 | | | |

Table F.12. Distribution of costs over time: 2016

| | 2017 | | | | | | | |
|--|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 |
| Social security | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 |
| Holidays contingency | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 |
| Firing contingency | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 |
| Common expenses | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 |
| Insurance | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Medical assistance (EPI, medical checks) | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Technical Equipment | - | - | - | - | - | - | - | - |
| Mobile Broadband Service | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Special allowances | 275.00 | 1,090.00 | 300.00 | 1,090.00 | 300.00 | 1,090.00 | 300.00 | 1,090.00 |
| Flat rate for Social Security | - | 1,090.00 | - | 1,090.00 | - | 1,090.00 | - | 1,090.00 |
| Tax incentives to encourage permanent labour contracts | 275.00 | - | 300.00 | - | 300.00 | - | 300.00 | - |
| Numb. Employees | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| COST PER TEAM | 26,846.40 | 35,331.00 | 26,771.40 | 35,331.00 | 26,771.40 | 35,331.00 | 26,771.40 | 35,331.00 |
| Operational expenditures | 11,772.86 | | 11,772.86 | | 11,772.86 | | 11,772.86 | |
| Office rent | 4,830.00 | | 4,830.00 | | 4,830.00 | | 4,830.00 | |
| Accommodation in Norway | 6,642.86 | | 6,642.86 | | 6,642.86 | | 6,642.86 | |
| Travel | - | | - | | - | | - | |
| Multifunctional Printer System | 300.00 | | 300.00 | | 300.00 | | 300.00 | |
| QUARTERLY TOTAL | 73,950.26 | | 73,875.26 | | 73,875.26 | | 73,875.26 | |
| Contingency margin (5%) | | | | | 14,778.80 | | | |
| YEARLY TOTAL | | | | | 310,354.83 | | | |

Table F.13. Distribution of costs over time: 2017

| | 2018 | | | | | | | |
|--|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 |
| Social security | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 |
| Holidays contingency | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 |
| Firing contingency | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 |
| Common expenses | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 |
| Insurance | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Medical assistance (EPI, medical checks) | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Technical Equipment | - | - | - | - | - | - | - | - |
| Mobile Broadband Service | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Special allowances | 300.00 | - | - | - | - | - | - | - |
| Flat rate for Social Security | - | - | - | - | - | - | - | - |
| Tax incentives to encourage permanent labour contracts | 300.00 | - | - | - | - | - | - | - |
| Numb. Employees | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| COST PER TEAM | 26,771.40 | 38,601.00 | 27,671.40 | 38,601.00 | 27,671.40 | 38,601.00 | 27,671.40 | 38,601.00 |
| Operational expenditures | 11,772.86 | | 11,772.86 | | 11,772.86 | | 11,772.86 | |
| Office rent | 4,830.00 | | 4,830.00 | | 4,830.00 | | 4,830.00 | |
| Accommodation in Norway | 6,642.86 | | 6,642.86 | | 6,642.86 | | 6,642.86 | |
| Travel | - | | - | | - | | - | |
| Multifunctional Printer System | 300.00 | | 300.00 | | 300.00 | | 300.00 | |
| QUARTERLY TOTAL | 77,145.26 | | 78,045.26 | | 78,045.26 | | 78,045.26 | |
| Contingency margin (5%) | | | | | 15,564.05 | | | |
| YEARLY TOTAL | | | | | 326,845.08 | | | |

Table F.14. Distribution of costs over time: 2018

| | 2019 | | | | | | | |
|--|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Q1 | | Q2 | | Q3 | | Q4 | |
| | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team | Junior team | Senior team |
| Gross salary | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 | 5,700.00 | 8,000.00 |
| Social security | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 | 1,767.00 | 2,480.00 |
| Holidays contingency | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 | 478.80 | 672.00 |
| Firing contingency | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 | 1,083.00 | 1,520.00 |
| Common expenses | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 | 195.00 |
| Insurance | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Medical assistance (EPI, medical checks) | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| Technical Equipment | - | - | - | - | - | - | - | - |
| Mobile Broadband Service | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 |
| Special allowances | - | - | - | - | - | - | - | - |
| Flat rate for Social Security | - | - | - | - | - | - | - | - |
| Tax incentives to encourage permanent labour contracts | - | - | - | - | - | - | - | - |
| Numb. Employees | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| COST PER TEAM | 27,671.40 | 38,601.00 | 27,671.40 | 38,601.00 | 27,671.40 | 38,601.00 | 27,671.40 | 38,601.00 |
| Operational expenditures | 11,772.86 | | 11,772.86 | | 11,772.86 | | 11,772.86 | |
| Office rent | 4,830.00 | | 4,830.00 | | 4,830.00 | | 4,830.00 | |
| Accommodation in Norway | 6,642.86 | | 6,642.86 | | 6,642.86 | | 6,642.86 | |
| Travel | - | | - | | - | | - | |
| Multifunctional Printer System | 300.00 | | 300.00 | | 300.00 | | 300.00 | |
| QUARTERLY TOTAL | 78,045.26 | | 78,045.26 | | 78,045.26 | | 78,045.26 | |
| Contingency margin (5%) | | | | | 15,609.05 | | | |
| YEARLY TOTAL | | | | | 327,790.08 | | | |

Table F.15. Distribution of costs over time: 2019

F.6.1 Calculation Details & Considerations

Unless otherwise stated, all figures depicted in the investment calendar correspond to the quarterly distribution of amounts presented in the medium cost scenario operational budget (project report, Table 9.6).

F.6.1.1 Special Allowances

Special allowances are the only provisions that do not follow the rule stated above. Their quarterly distribution is explained in the following subsections.

F.6.1.1.1 Flat Rate for Social Security

Flat rate for social security ensures a fixed contribution of 1,200.00 € per employee. For calculation purposes, this flat rate contribution has been changed for an equivalent annual discount of 8,720.00 € over an estimated contribution without allowances of 9,920.00 €. Figures presented in the investment calendar correspond to the quarterly distribution of these 8,720.00 €.

This incentive is valid for two years, period after which the discount gets reduced to 50% of social security contributions. This is the reason after Q4, 2016, the provision stated in the investment calendar gets lowered.

F.6.1.1.2 Tax Incentives to Encourage Permanent Labour Contracts

As it is explained in the project report (project report, 9.2.3.1.2), the Spanish general treasury of the social security offers a variety of deductions depending on the typology of person hired. Induct will apply to social security discounts for men and women under the age of 30.

This contribution grants 1,000 €, 1,100 € and 1,200 € per employee and year to those companies hiring men or women under the age of 30. Figures presented in the investment calendar correspond to the quarterly distribution of these grants.

F.6.1.2 Cost per Team

The cost per team is the difference between quarterly expenses and allowances attributed to a single developer, multiplied by the number of developers employed in each quarter. Value of items attributable to employees vary depending on whether they are junior or senior. Hence, the cost per team has been separated between senior team and junior teams.

G. RISKS MANAGEMENT

G.1 Risk Management Plan

G.1.1 Methodology

The risk management plan will consider risks from the following project areas:

- **Stakeholders/Organization.** Changes in the expectations / requirements of the stakeholders.
- **Time/Schedule risks.** Related to the calendar of the project. To control the risk, the execution calendar will be permanently compared to the calendar set out during the planning stage and available in this report, in the Time Management section.
- **Costs/Budget risks.** Related to deviations in the budget of the project. To control the risks, the executed budget will be compared with the planned budget, available in this report, and the estimated calendar of the investment.
- **Quality risks.** Related to deviations between quality performance indicators and the actual implementation of the project. To control the risks, an assessment of the key quality indicators will be conducted during the project execution stage.
- **Human resources risks.** Related to the recruitment process, the training process and the daily operations of the new development team, among others. To control the risks, an assessment of the working group in Spain will be conducted by senior staff at Induct. This assessment is common to all Induct employees.
- **Communications risks.** Related to the communications between the new working group in Spain and Induct Software AS, and between Project Manager and stakeholders. To control the risks, a continuous assessment of the operations of the new working group will be conducted by the Project Manager and the R&D director at Induct Software AS, in order to take the appropriate corrective measures.
- **Procurement risks.** Related to the procurement of physical capital needed during the execution of the project. To control the risks, the pace and cost of procurement during the execution stage will be compared to the planned calendar and budget of the project.

G.2 Risk Identification

G.2.1 SWOT Analysis

The analysis of internal strengths and weaknesses, comprised in the SWOT diagram, has been conducted taking into account the intrinsic strong and weak points of Induct, as an organization.

The external opportunities and threats have been, in their turn, identified from the company's strengths and weaknesses, and the situation of the market in Spain. Figure G.1 is the SWOT:

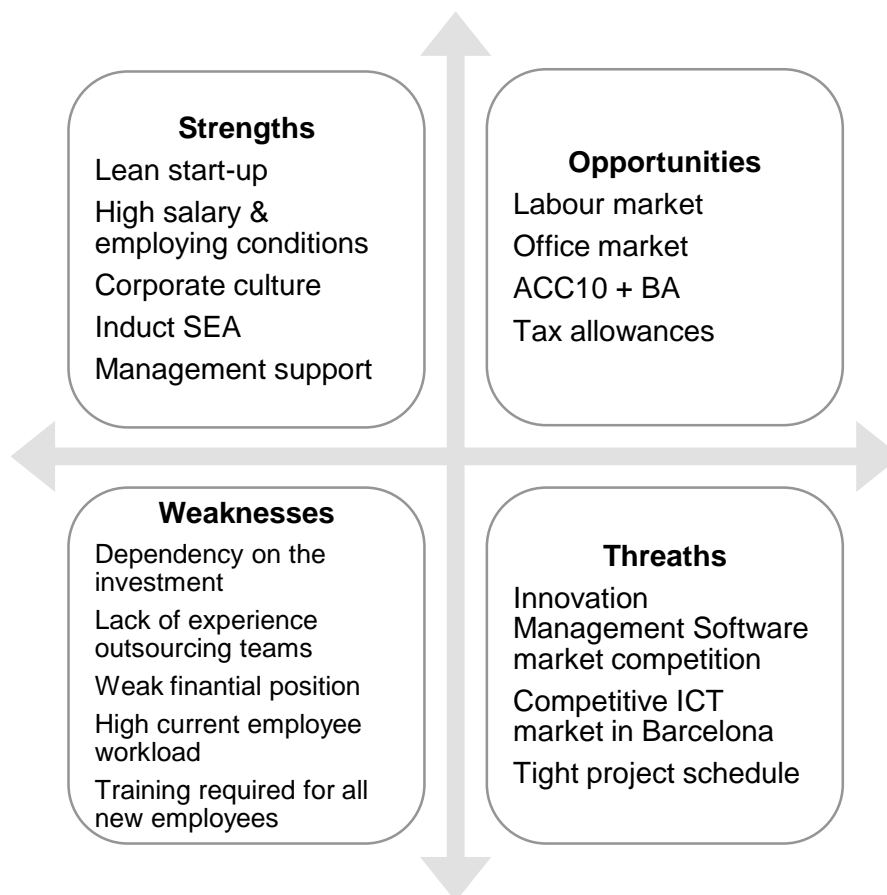


Figure G.1. Project and company SWOT analysis

Following, there is a thorough explanation of each aspect identified in the SWOT analysis:

➤ **Strengths**

- *Management support.* Senior staff has expressed his strong will to execute the project after preliminary assessment of this report.
- *Lean start-up.* The Company is focused in execution of projects, usually acting faster than bigger and more bureaucratized competitors. Furthermore, most of Induct's competitors regard innovation management (IM) as a secondary business while IM is the only business Induct is focused on.
- *High salary and conditions for workers.* Induct is an appealing company for the average Spanish worker thanks to advantageous conditions offered to employees and inherited from Norwegian living standards.
- *Induct culture.* Induct Software AS is a vibrant, successful software start-up that still preserves its original fun and engaging internal culture. Being small means

that Induct offers job positions with high levels of responsibility to all its employees, an engaging business project and the opportunity to help a company grow in a thriving, innovative market.

- *Induct SEA*. Induct is already present in the Spanish market. This fact will facilitate the project execution stage in multiple areas like legal regulations or procurement management.

➤ **Weaknesses**

- *Dependency on the investment*: The project execution depends on an investment that should have been obtained in June 2014. At the moment of this report confection, however, no agreement has been reached with the private investors.
- *Company lacks experience in outsourcing teams abroad*. It will make it more difficult to identify and plan responses to project risks.
- *High current workload for all Induct employees*. It means fewer resources will be available for the project.
- *Training required for all new employees*. All new employees, included the new Spanish staff, require training in the Induct platform and systems. This represents an increase in operational costs and resources.

➤ **Opportunities**

- *Appealing workforce in Spain*. Barcelona produces a lot of highly skilled, productive ICT professionals. More details are available in the market analysis included in the Costs Management chapter (F.1).
- *Appealing Office market*. The price per square meter bottomed at the beginning of 2014, according to multiple surveys (BNP, 2014) (Jones Lang LaSalle, 2014, p.1). Further details are presented in the office market analysis (project report, 9.1.3).
- *ACC10 + BA*. Both public agencies offer free consulting support in all areas of the project execution, as well as providing resources to locate new offices and hire Spanish personnel.
- *Tax allowances*. Spanish and Catalan governments offer an array of tax allowances to promote new employment, considerable reducing hiring costs.

➤ **Threats**

- *Fierce competition in the Innovation Management Software market*. Induct faces strong global market competition that forces the company to invest resources in short-term improvements instead of long-term strategic processes, like the one detailed in this report.

- *Competitive ICT market in Barcelona.* Multiple international ICT corporations are located in Spain and, thus, competing with Induct to hire the best professionals in the sector.
- *Tight schedule.* The labour market and office market have, both, bottomed at the beginning of 2014, and are now starting to recover. Therefore, the costs of labour and office renting prices are expected to rise in coming months. On top of that, and according to ACC10 and Barcelona Activa, only companies investing in 2014 are allegeable to receive most part of the tax incentives described in this PMP.

G.2.2 Risk Breakdown Structure

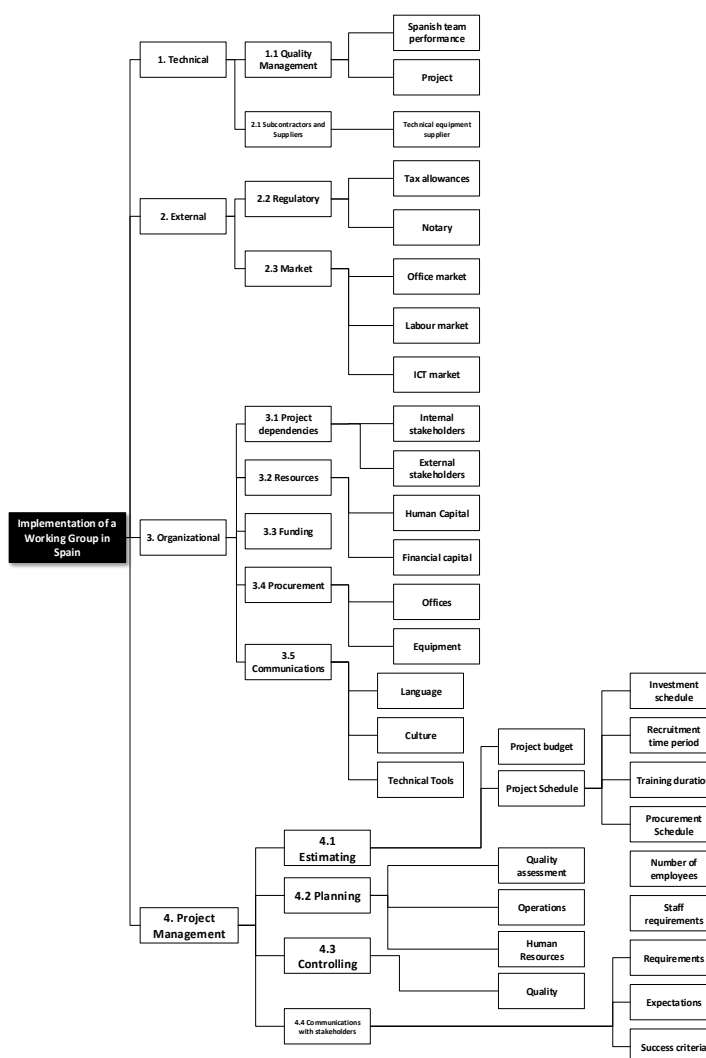


Figure G.2. Risk Breakdown Structure (RBS)¹¹

¹¹ A high resolution version is provided in the electronic support.

G.3 Probability-Impact Matrix

The following table contains de probability-impact matrix:

| | Probability | | | Threats | | |
|-----|-----------------|-----------|----------------|------------|-----------------|--|
| 0.9 | 0.045 | 0.09 | 0.18 | 0.36 | 0.72 | |
| 0.7 | 0.035 | 0.07 | 0.14 | 0.28 | 0.56 | |
| 0.5 | 0.025 | 0.05 | 0.1 | 0.2 | 0.4 | |
| 0.3 | 0.015 | 0.03 | 0.06 | 0.12 | 0.24 | |
| 0.1 | 0.005 | 0.01 | 0.02 | 0.04 | 0.08 | |
| | 0.05 / very low | 0.1 / low | 0.2 / moderate | 0.4 / high | 0.8 / very high | |

Table G.1. Probability - Impact matrix (Project Management Institute, 2013)

G.4 Quantitative Risk Analysis

G.4.1 Future Earnings Valuation Derived from the Spanish Team Activities

Expanding the R&D team to improve Induct's platform produces a chain effect: platform enhancements generate an increase in the product value, which boosts the number of sales contracts and produces an increase of future company earnings.

The exact increase of company earnings is difficult to forecast; it should be measured as an estimation in the increase of signed contracts due to the platform improvements developed by the Spanish development team. But, how do you attribute earnings to portions of working software, instead of attributing them to a whole software package? The difficulties associated to such a valuation system outreach the scope of this project.

A more fair valuation system could be to assume that the new Induct platform will be developed, entirely, by the new Spanish development team. This way, all future company earnings could be attributed to the work performed as a result of the project presented in this PMP. This assumption is sensible in the sense that it correctly assumes that the revamped platform could not be developed without the Spanish workgroup. However, two main drawbacks have to be taken into account. First, this methodology underestimates the work performed by the Norwegian team and, second, it assumes that all new sales are derived from improvements to the platform, which is

wrong; sales estimates, at Induct, rely mainly on public tenures that will be resolved way before the new platform is operative.

G.4.1.1 Estimating Risks' Costs Associated to Future Earning Valuations

As it was explained in the previous section, estimating losses derived from future earning valuations is complicated. Instead, it has been assumed that, in case of an unexpected project cancelation, incurred losses would total the costs of planning and executing the project up to the cancelation point.

Executing costs, up to the cancelation point, cannot be estimated beforehand given that it is not possible to predict when the project could get cancelled. This is the reason executing costs have been considered negligible. However, were the case the project had to be cancelled, a complete assessment of incurred costs, during the execution stage, would be performed.

