**POSC Caesar**

# POSC Caesar

# Work Plan for 2006

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**POSC Caesar Work Plan for 2006**          **POSC Caesar**

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# POSC Caesar Work Plan for 2006

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## 1  Summary

In 2006, the following activities are planned.

Improve benefits for members as follows:

- Improving communication with existing members by making the reference data library available with an improved Reference Data System.
- Participating in an EU research project, DEPUIS, for developing course material and eLearning for ISO 15926.
- Arrange for a Members Meeting in Stavanger, Norway in March or April.
- Focusing more on implementations of the Reference Data Library.
- Other activities to identify, clarify and improve member relations.
- Improving the POSC Caesar web site.
- Placing attention on adding more members, including more focus on North America.
- Continuing the collaboration with the Petrotechnical Open Standards Consortium (POSC).
- Formalizing collaboration with FIATECH.

Support the finalization of ISO 15926 standards (in prioritized order):

- Resolve ballot issues and prepare ISO 15926 – 4 Initial reference data for a confirmation Technical Specification (TS) ballot. Following a successful ballot, the TS shall be published by ISO.
- Prepare a combined New Work Item (NWI) and a Technical Specification (TS) ballot for ISO 15926 Part 6 Methodology for additional reference data.
- Participate in the work to develop a Maintenance Agency for reference data in ISO. ISO 15926-Part 5 Registration and maintenance of reference data serves as a starting point for the work.
- Resolve ballot issues and prepare ISO 15926-3 Ontology for geometry and topology for publication as a Technical Specification (TS).
- Participate in the work to resolve ballot issues and prepare ISO 15926 Part 7 Implementation Methods for the integration of distributed systems for a confirmation Technical Specification (TS) ballot. Following a successful ballot the TS shall be published by ISO.

Develop new reference data and product models:

- Continuing with participation in the Integrated Information Platform (IIP) project which has added significant extensions to the Reference Data Library for subsea systems.
- Participate in the new Intelligent Data Sheet and Collaborative Work Process (IDS) project to continue focus on the Reference Data Library and Product Models.

# POSC Caesar Work Plan for 2006

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On the following page is the POSC Caesar Association budget for 2006. The budget is also shown for 2005, with comparison to the account for 2005. The budget figures are n Norwegian Kroner (Euro 1 = 8 Norwegian Kroner) so that comparison can be made to the cost account, which is in Norwegian Kroner. The 2006 budget is also shown in Euros.

| Costs  (in kNOK, with 1 Euro = 8 NOK) | | | | |
|---|---|---|---|---|
| | 2005 Budget | 2005 Account | 2006 Budget in kNOK | 2006 Budget in Euros |
| Administration (Sec. 1.1, 1.2, 1.4, 1.5, 1.7) | 400 | 592 | 400 | 50 000 |
| Courses, Seminars, Members Meeting (Sec. 1.8) | 80 | 10 | 40 | 5 000 |
| Web site (Sec. 1.3) | 0 | 53 | 80 | 10 000 |
| ISO 15926 (Sec. 2) | 320 | 182 | 160 | 20 000 |
| Project, IIP (Sec. 3.1) | 250 | 250 | 250 | 31 000 |
| Project, Intelligent Data Sheet (Sec. 3.2) | 0 | 0 | 100 | 12 500 |
| EU Project, DEPUIS (Sec. 3.3) | 0 | 0 | 1080 | 135 000 |
| Total Costs | 1050 | 1087 | 2110 | 263 500 |

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## 2  Administration

POSC Caesar's administration plans on improving communication with existing members and marketing activities to add more members. Collaboration with OLF and POSC shall be strengthened and collaboration with FIATECH shall be formalized and collaboration with other organizations may be explored. In addition, more attention shall be placed on developing practical implementations of ISO 15926.

POSC Caesar's Board has decided that a larger portion of the membership fees shall be used to fund the administration of POSC Caesar, some Reference Data Library (RDL) tasks, and necessary ISO processes related to ISO 15926. Most extensions of the RDL must therefore be funded directly by projects. This is in line with priorities over the last couple of years where POSC Caesar has initiated and participated in projects like IIP and IDS.

### 1.1  Housing and administrative functions

POSC Caesar plans to continue to rent offices, meeting rooms and IT facilities from DNV. POSC Caesar plans on contracting personnel from DNV for management, accounting, web site updating, supporting projects, meetings, member administration, organising courses / seminars and marketing.

### 1.2  New version of the Reference Data System

POSC Caesar's Reference Data System (RDS) is the Association's tool for administering reference data. A new tool is being developed, managed by DNV, with additional functionality to better manage the RDL in accordance with ISO 15926 Part 2 (IS). The new RDS is to be available on the POSC Caesar Association web site.

EPM Technologies has been selected to develop the RDS. A browser version of the RDL is planned to be available in January 2006. In 2006, an editor version of the same software is expected. This work is to be managed by DNV.

The development cost of RDS is in the order of €550 000 excluding the development of the RDS specification. OLF, The Norwegian Defence and DNV are the project sponsors. In 2006 a business model shall be developed for POSC Caesar members so that POSC Caesar members retain benefits for initiating this activity.

For POSC Caesar, the cost for this activity is included in the administrative function activity.

### 1.3  Web site

The web site shall include more new information. A clean up of the existing web site shall be performed. In addition, the web site shall be improved with more frequently updated news and information on courses and projects.

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POSC Caesar welcomes input from members to improve the web site or to add new information.

### 1.4 Existing and New Members

POSC Caesar shall improve communication with existing members by making the RDL available with an improved RDS and improving the web site.

In addition, POSC Caesar shall place attention on adding more active members through collaboration partners, oil and gas industry forums, and through direct meetings with leading operators and companies. More attention shall be placed on the North American market. In 2005, KAIST from Korea was added as a new member.

POSC Caesar shall also seek another pricing strategy and develop a business model for member benefits.

The costs for this activity are included in other the administrative function activity.

### 1.5 Collaborations

POSC Caesar's and the Petrotechnical Open Standards Consortium's (POSC) collaboration agreement shall be continued. POSC Caesar shall search for ways to gain more benefit from POSC's international network.

Collaboration with OLF continues to produce results. In particular, this cooperation has helped to initiate the Daily Production Report and the Daily Drilling Report. In addition, the work that OLF has done in the report, 'Quality Information Strategy for Integrated Operations on the Norwegian Continental Shelf' provides support for POSC Caesar's activities.

POSC Caesar shall attempt to formalize the collaboration with FIATECH.

POSC Caesar may attempt to seek other collaboration partners, as directed by the Board. This may include IFC and others. However, focus shall be placed on existing collaborations and FIATECH before adding additional administrative responsibility.

The costs for this activity are included in the administrative function activity.

### 1.6 Special Interest Groups

POSC Caesar has been planning to implement Special Interest Groups. Such groups allow for designated effort towards specific tasks that are of interest to POSC Caesar members. Four groups are planned:

- Subsea equipment

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- Production
- Drilling
- Implementation

POSC Caesar is open to initiating other Special Interest Groups dedicated to specific domains or to implement the ISO 15926 RDL. Such groups should fund their own work.

A business model for Special Interest Groups shall be developed.

The cost for this activity is included in the administrative function activity.

### 1.7 Managerial /Technical Courses, Conference / Seminars, Membership Meeting

POSC Caesar shall offer members discounted ISO 15926 executive and technical courses in 2006. Non members shall be charged a higher fee to cover the costs.

A half day executive course on information quality, semantics and integration could be added.

POSC Caesar shall offer the membership one meeting in 2006. The Annual Meeting will be decided by the Board.

A members meeting in cooperation with OLF and POSC is planned on 26 and 27 April 2006.

POSC Caesar plans on participating in conferences to promote ISO 15926. A presentation at Daratech is being explored.

The costs for these activities are included in the administrative activity.

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## 2   ISO 15926

POSC Caesar is heavily involved in the development of the international standard "ISO 15926 *Integration of life-cycle data for process plants including oil and gas production facilities"*. Significant standardization progress was made in 2005.

Today ISO 15926 consists of seven parts:

- ♦ *Part 1 Overview and fundamental principles*
- ♦ *Part 2 Data model*
- ♦ *Part 3 Ontology for geometry and topology*
- ♦ *Part 4 Initial reference data*
- ♦ *Part 5 Procedures for registration and maintenance of reference data*
- ♦ *Part 6 Methodology for the development and validation of reference data*
- ♦ *Part 7 Implementation methods for the integration of distributed systems*

In 2006, priority shall be placed on Part 4, Part 6, Part 5, Part 3, and Part 7 in that order. Focus shall be placed on preparing ISO Technical Specification's (TS) instead of International Standard's (IS).

### 2.1   *ISO 15926 Part 1:* Overview and fundamental principles
Part 1 is at IS level and is published by ISO.

### 2.2   *ISO 15926 Part 2: Data model*
Part 2 is at IS level and is published by ISO.

### 2.3   *ISO 15926 Part 3:  Ontology for geometry and topology*
ISO 15926 – 3 will make the concepts defined by ISO 10303-42 and ISO 10303-104, including concepts in Earth models and the GIS standards ISO 19107 and ISO 1911, available within the ISO 15926 environment. The ontology defined by ISO 15926-3 will be equally valid for CAD, GIS and Earth models.

Notable technical progress was made on this standard in 2005.

In 2005, a New Work Item was initiated at ISO for the development of a Technical Specification (TS). After a successful ballot, this is now being followed with a resolution of issues and publication as an ISO Technical Specification (TS).

This work for 2005 was funded by the Integrated Information Platform (IIP) project which is POSC Caesar is a member and is partially funding.

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### 2.4   ISO 15926 Part 4: Initial reference data

A combined NWI and CD/TS proposal for ISO 15926 Part 4 was sent for ballot in late 2004. The proposal was approved but a large number of comments were received from Norway, the UK and the USA.

In 2005, this CD/TS underwent partial issue resolution. In 2006, the plans are to complete the resolution of ballot comments, initiate a Confirmation Ballot and to prepare this as an ISO Technical Specification (TS) for the initial reference data. The entire POSC Caesar RDL is expected to be converted to the IS version of Part 2 in 2006.

Significant additions to the RDL are being developed in the IIP project, which POSC Caesar assisted in initiating and to which POSC Caesar is financially contributing. The IIP project is adding reference data to the POSC Caesar RDL. The resolution of ballot comments to the initial reference data is not a part of the IIP project, but is a POSC Caesar activity.

### 2.5   ISO 15926 Part 5: Registration and Maintenance of Reference Data

A combined NWI proposal and CD/TS proposal was planned for ISO 15926 Part 5 in 2005. However, in 2005 ISO TC184/SC4 started an initiative to develop an ISO Maintenance Agency for reference data. Standards and procedures developed by this initiative shall replace Part 5. POSC Caesar shall participate in the work using Part 5 as a starting point.

### 2.6   ISO 15926 Part 6: Methodology for Additional Reference Data

A combined NWI proposal and CD/TS proposal is to be issued for ISO 15926 Part 6. In 2006 the goal is to resolve issues and to prepare this for publication as an ISO Technical Standard (TS).

In 2005 the versioning and configuration management terminology of ISO 11179 - 6 is included in Part 6 and reflected in the RDS

This is a POSC Caesar activity.

### 2.7   ISO 15926 Part 7: Implementation methods for data exchange and integration

In 2005 TS/CD proposal was developed largely by USPI-NL in the Netherlands and reviewed by POSC Caesar. Independent reviews by POSC Caesar members concluded that the proposed Part 7 was complex and not easy to implement. In 2006, POSC Caesar plans to work with USPI-NL and others to develop a more easily implementable methodology.

This is a POSC Caesar activity. POSC Caesar is partially covering the costs for this activity.

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## 3   Ongoing and planned projects

Ongoing projects and projects planned for extending the reference data and/or developing data sheets are listed below:

### *3.1   Integrated Information Platform (IIP)*

#### 3.1.1   Objectives

The IIP project has the objective of identifying an optimal set of real time data from reservoirs, wells and subsea production facilities, partially improving and integrating this information to provide an open and standardised information platform using ISO 15926-2.

The project will be enabled by integrating reference data from several industrial data and technical standards and adding these reference data to ISO 15926. The project will integrate data and information for subsea seismic, equipment, drilling, production, operation and maintenance. In addition, safety requirements according to the Norwegian Petroleum Directorate (NPD) will be met. The number of information types and the broad scope of this integration in an open solution make this project unique.

The IIP project was initiated with significant support and some financial funding from POSC Caesar. The project was initiated in June 2004 and is anticipated to conclude in June 2007.

#### 3.1.2   Benefits

The ISO 15926 RDL is intended to be extended with the reference data from the IIP project. This is being supplemented with the Daily Production Report and the Daily Drilling Report.

In addition, the reference data defined by ISO 15926-3 will be equally valid for CAD, GIS and Earth systems. The use of the reference data will enable CAD, GIS and Earth data to be integrated within the same data repository.

#### 3.1.3   Organization

The project is a Norwegian Research Counsel project with CapGemini, DNV, FMC, Hydro, National Oilwell, NTNU, OilCamp, OLF, POSC, POSC Caesar, Poseidon and Statoil as participants. DNV is the project manager.

#### 3.1.4   Project Plan

The project plan for 2006 is to focus on demonstration of project results, and continue to develop Safety and Automation Systems (SAS) reference data, WITSML drilling reference data, maintenance and reliability reference data, reservoir ontology and production reference data as part of the ISO 15926 RDL.

These project results will be promoted as ISO and maintained by POSC Caesar.

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### 3.1.5  Deliverables

The project, in 2006, will deliver integrated reference data spanning several disciplines.

### 3.1.6  Costs

The project budget for 2006 are at Euros 1.1M, which is covered by the project participants. This is not a POSC Caesar activity. POSC Caesar is a sponsor of the project with a contribution in 2006 of about €30,000.

### *3.2  Intelligent data sheets and collaborative work processes*

This is a new project that is scheduled to start in January or February 2006. This project depends on funding from the Norwegian Research Council.

### 3.2.1  Objectives

The project shall develop product models that are independent of presentation formats and link these models to types of data sheets and Work to Work interactions. By expressing data and information from data sheets in a standardized manner, independent of the presentation format, the limitations with traditional data sheets where the meaning of data can only be fully understood in the context of the presentation format are removed. Such 'implicit information' has been a barrier to successful sharing and exchange of data since the start of data exchange. By standardizing terms and definitions in a product model information is defined in a neutral way for use also by other interested parties and applications. The implicit information originating from the data sheet formats will be made explicit and included in the model. Such product model representation of all the data related to a type of product allows user definable subsets of the data as well as the full set to be shared or exchanged and to be reused across applications, engineering disciplines, organizations, and information life cycle phases at the user's discretion. This concept is called "Intelligent Data Sheets". This concept supports the introduction of new work processes as data can be packaged on an 'as needed' basis as opposed to 'what is available' basis.

Existing data sheet are often a combination of process requirements, related to Tag numbers (Functional Locations) and product properties related to model/type numbers from manufacturers. The intelligent data sheets and associated product model will split these two parts of existing data sheets, making the product models more readily available for reuse and seamless communication between involved parties.

The project shall also develop a test facility. This facility shall be able to manage the ISO standardization process and manage the reference data developed for the product models. The test facility shall contain the product models and should be able to support an international working environment for reference data and these product models.

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### 3.2.2  Benefits

This project aims to improve the time, cost and errors in business processes as effective exchange based on standardised product models offers value to participants by facilitating the migration to more efficient collaborative work processes with a high level of data integrity.

The results of this project can be used by both existing and new oil&gas field development projects.

### 3.2.3  Organization

The project consists of funding from the Norwegian Research Council, Statoil, DNV, Intergraph, AVEVA, FMC, Innotec / iXIT, Oljeindustriens Landsforening (OLF), POSC Caesar Association and the University of Stavanger.

FIATECH is also working on a similar project. FIATECH shall be approached for possible collaboration.

### 3.2.4  Deliverables

The project shall deliver a methodology and product models with ISO 15926 reference data for selected NORSOK. The plan for the project is also to develop a test facility and interfaces to software to test the methodology, product models and associated reference data.

### 3.2.5  Costs and Funding

The total project cost for the Norwegian data sheets is estimated to approximately Euro 2.45 M over three years. The funding from POSC Caesar Association is planned at approximately 12,000 Euros for 2006 and 40,000 Euros for each of 2007 and 2008.


### *3.3  Design of Environmental Products Using Information Standards (DEPUIS)*

This is a new project. The project has been funded by the EU.

### 3.3.1  Objectives

The objective of DEPUIS is to extend the results of the CASCADE to improve the environmental design of new products and services through the innovative use of new information standards.

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The standards are applications of ISO 10303 Product data representation and exchange, ISO 13584 Parts Libraries and ISO 15926, in particular it's Reference Data Library. Each of these standards uses an information model to provide a computer-processable specification for product data that is independent from any proprietary software system.  These standards support the neutral exchange of data between different computer systems and are the basis for long-term data retention and archiving.  The main strategic objective of this project is to enable more companies, particularly SMEs, to use life cycle thinking on the environmental impact of their design of new products, in conformance with the Communication on Integrated Product Policy of the European Commission.

The project has two main actions:  provision of e-learning on the new technologies and opportunities created by the information standards and also ISO 14048; workshops to achieve interaction between users and developers of the standards to speed up the acceptance and dissemination of the new methods.

The outcome from the workshops will be used to prepare policy recommendations to ISO and CEN in the areas of standardisation and innovation for reducing environmental impact.

### 3.3.2  Benefits

The DEPUIS project has therefore two aims: to use e-Learning to overcome the lack of understanding of the principles of product data technology in the wider design community and among advisors of SMEs and to expand the number of people who can apply the use of these standards in the design of environmental friendly products.

The combination of the e-Learning and the workshops will enable a dialogue between the standards developers and the people for whose benefit the standards were developed.

### 3.3.3  Organization

ENEA (Italy), Ferroday Lmt. (UK), Envirolink North West (UK), Caesar Systems Limited (UK), POSC Caesar Association (Norway), USPI NL (The Netherlands), LKSoftware (Germany) and UAB LK Soft Baltic (Lithuania) are project participants.

### 3.3.4  Deliverables

POSC Caesar deliverables are:
- Update the reference data library with the new version of ISO 14040 and ISO 14044.

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- Establish product models that are tailored for guiding eLearning students in the use of the standard interface to the ISO 15926 RDL.
- Establish an on line interface to ISO 14048 documentation format.
- Develop course material
- Attend workshops and meetings

### 3.3.5  Costs and Funding

The POSC Caesar project cost is 135,000 Euros. This project cost is anticipated to be covered by EU research funds. POSC Caesar is not expected to pay for any of these costs. This project is expected to be completed in 2006.

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# 4  Appendix: Potential projects in year 2007+

A potential project that is of interest for 2006 is as follows.

## *4.1  Reference data library for piping and piping parts*

### 4.1.1  Objectives

There is an ongoing collaboration activity between suppliers, EPC and oil companies to standardise the classification of article codes for piping and piping parts. This work is primarily based on NORSOK standard for piping and valves, but includes proprietary views as well. The reference data of this work shall be included in the POSC Caesar-RDL and in due time become a part of ISO Register. POSC Caesar's RDS will be used to establish mapping options between different proprietary classification systems existing today.

The NORSOK's standards given on the web site: http://www.standard.no/imaker.exe?id=244 .

### 4.1.2  Benefits

This is an important step forward to make NORSOK's standard for piping and valves a part of the global process industry including oil and gas. Furthermore, establishing mapping possibilities between existing proprietary solutions today will make the piping information much more accessible for sharing and exchange across phases, organisations and geographical distances.

The solution providers will make these results available for the end-users. Suppliers, engineering and oil companies will benefit from improved work processes.

### 4.1.3  Organisation

The work will be organised as a project with a project manager and a steering committee. Discipline and POSC Caesar technology competence shall be available through out the entire project period. The staff will be located in the offices of POSC Caesar, Bærum.

A global Review Team will be established that consists of skilful engineers from the solution providers, suppliers and companies funding the project.

### 4.1.4  Project plan

The project will be divided into manageable and well-defined activities with deliverables. The priorities and deadlines will be defined according to the needs of the industry.

The project starts is planned to be in 2006 or later.

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### 4.1.5  Deliverables

The project shall deliver reference data in batches according to a defined schedule. Furthermore, the project shall deliver solution for handling the mapping between different existing classification systems today.

### 4.1.6  Maintenance and enhancement

This extension of the POSC Caesar-RDL will be available for all members of POSC Caesar for at least 12 months before some or all of it becomes publicly available through an ISO Register. POSC Caesar's membership fees will cover the costs of maintenance of this extension.

### 4.1.7  Costs

The costs of this reference data part of this project is estimated to €200 000, -.  In addition, there will be some additional costs for developing necessary software. VAT is not included.

### 4.1.8  Funding

Some of the major operators on the NCS will be the potential sponsors of this project.

## *4.2  Engineering Data Integration Across Cultures*

### 4.2.1  The business case

The process and energy industries are conservative industries. The oil companies are the major drivers in these industries for implementing new technology and improve work processes. Major global oil companies such as ExxonMobil, Shell, BP, ChevronTexaco, Total and Statoil are now using technology based on different version of ISO 15926. Major global engineering companies such as Bechtel, Flour, Halliburton (KBR) and Foster Wheeler are also using this technology and some of them claim that this is the future of engineering.  Furthermore, there are solution providers such as AVEVA, EPM Technology, Bentley and Intergraph that provide engineering software and content providers such as Pearson & Harper and Tektonisk that provide engineering equipment information based on ISO 15926. This standard is now proven technology.

The challenges of most industries are lack of effective information sharing across different professional groups within a corporation, between partners in projects, between suppliers and buyers and so on. Studies done in the 90-ies have shown that effective sharing of engineering information in developing and operating an asset can reduce the total costs with 20-30%.  So many corporations are now establishing engineering data warehouses to cope with this problem, but lack of common terms and lack of interoperability between engineering systems, ERP systems and B2B systems makes this process slow and very costly.

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Specifically, many B2B market places recognise today that the most difficult problem to solve is the establishment of product catalogues. Most vendors define their products and services in proprietary terms that generate confusion and misunderstanding when integrated into common catalogues. In some cases the vendors are "persuaded" to use existing classification systems, but none of them are consistent and rich enough to cover the needs. Furthermore, it is very costly for the vendors to accommodate to many different classification systems.

The purpose of this project is to address these business challenges by translating the technology to several official languages of the European Union and accommodating the solutions for communications to local (National) needs. Furthermore, the technology will be extended to cover all major engineering disciplines in the process and energy industries. In close collaboration with some major stakeholders among solution providers and end-users more interoperable life cycle engineering information from Europe will be on Internet.

Europe has spent many 100s of man-years in developing ISO 15926, but is now lagging behind in implementing and using this powerful technology.

### 4.2.2 Objectives
The EDIAC project shall:
1. Extend the RDL of ISO 15926 to include the most common engineering data sheets for handover (project to operation) and procurement in France, Germany, Italy and UK
2. Translate the ISO 15926 to French, German and Italian
3. Develop software for generic data sheets compliant with ISO 15926 for the data sheets in item 1 above
4. Involve major market drivers and some competent solution providers

By using Internet, this approach will extend the capabilities of this technology to integrate engineering data across disciplines, phases, geographical distances, linguistic communities and different cultures and thus:
1. Facilitate the implementation of "think global, act local" strategy
2. Enable products and services tailored to national and linguistic communities
3. Reduce cost and shorten time-to-market
4. Facilitate effectively re-use of information in engineering and in procurement
5. Facilitate extension of the methodology to other industries and cultures

### 4.2.3 Organisation
A Steering Committee with representatives from the Coordinator and the Contractors will be established. A Project Manager shall be appointed to report to the Steering Committee.

The project will be organised in 4 subprojects.

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- A Technical Advisory Network (TAN) will be established for each subproject except subproject 4, which consists of skilful discipline engineers from companies funding the program.

## 4.2.4   Project plan

The project will be divided into 4 subprojects each with activities/modules for every 3 months with concrete deliverables. Each subproject will define its activities in a Gantt diagram.

### 4.2.4.1  Subproject 1 Extension of the Reference Data Library for ISO 15926

For each equipment/function, the extension of the RDL will be based on at most three data sheet from three different cultures/participating countries.  The engineering disciplines to be covered are:

<div align="center">(#Data Sheets)</div>

- Field Instrumentation / Metering                    (35)     (Example:
  http://www.nts.no/norsok/ )
- Mechanical Equipment                                (30)
- Piping and Valves incl. Materials                  (1150)
- Process Systems                                     (25)
- Electrical Systems                                  ( 9)
- Telecommunication Systems                           ( 4)
- Lifting Equipment                                   (10)
- Safety Equipment                                    (18)
- Material Data                                       (38)
- Mechanical Completion and Commission               (38)

### 4.2.4.2  Subproject 2 Translating the ISO 15926 to German, French and Italian

This subproject will be run in close collaboration with National institutions in German, France and Italy. Modern technology for translating between languages will be used.

### 4.2.4.3  Subproject 3 Generation of generic data sheets compliant with ISO 15926

This subproject will generate generic data sheets to the Data Sheets Library (DSL) for each equipment/function covered in subproject 1 for 3 cultures in compliance with ISO 15926.  The methodology will be based on ISO 15926, ISO 18876 and the Epistles Templates.

### 4.2.4.4  Subproject 4 Implementation of the results in engineering software and content providers

This subproject will present plan for how and when the results of subproject 1, 2 and 3 can be implemented in commercial products and be general available for the European Communities. Some of the major market drivers and the solution providers will staff this project.

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## 4.2.5  Deliverables

Subproject 1 shall deliver reference data batches every 3 months and cover all reference data on the data sheets within the defined disciplines. Subproject 2 shall translate ISO 15926 to English, German, French and Italian. Subproject 3 shall generate generic data sheets compliant with ISO 15926 every 3 months and for each equipment/function in four languages and three cultures.

The deliverables of this project will be general available on http://www.posccaesar.com/. POSC Caesar shall have the Intellectual Property Rights to these deliverables (most of this material will in due time be the property of ISO as ISO 15926).

## 4.2.6  Maintenance and enhancement

This extension of PC-RDL will be available for all members of POSC Caesar for at least 12 months before some or all of it becomes publicly available through ISO 15926.  POSC Caesar's membership fees will cover the costs of maintenance of this extension.

Any further enhancement of the RDL, has to be funded separately based on POSC Caesar's not-for-profit pricing system.  Enhancement can be run as a timely on-demand service.

## 4.2.7  Costs

Based on experience from previous data sheet projects in POSC Caesar it requires approximately 30 minutes per reference data instance starting up a new discipline area. For a similar data sheet from another culture will require 15 minutes per reference data instance. Expected hourly rate of for a senior engineer is Euro 132, - so each instance will cost Euro 66, -. With a total of 150 non-piping data sheets with an average of 75 entities per data sheet total cost for generating the RDL for these data sheets in one culture will approximately be Euro 750 000, -.  There will be some overlapping between the data sheets from the different cultures so it is reasonable to estimate only 300 additional data sheets for the 3 other cultures and these costs are Euro 750 000, -.

The cost of translating ISO 15926 plus the RDL from this project to French, German and Italian are Euro 300 000, -.

The cost of generating 450 generic data sheets are estimated to Euro 700 000, -.

The 1100 piping data sheets are more similar in nature and can be handle more effectively. Generating the reference data and the generic data sheets will require a total of Euro 1100 000, - for all 4 cultures.

The total budget for the project is €1 900 000, -.

This cost estimate is based on the most effective way of organising the project. If some sponsors would like to build in ownership or educational aspects for its own employees, this can easily be dealt with, but any extra costs have to be paid directly by those sponsors.

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### 4.2.8  Funding

This project needs sponsors from Italy, German, and France to get 50% EU-funding. Furthermore, the sponsors should be a mixture of suppliers, EPC and oil companies, e-content providers and solution providers.

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