



Operating Plant and Systems Professionals

Inc. 'Your Increased Profitability is Our Bottom Line'

FOLKERT J. HERLYN **SENIOR PROCESS INDUSTRY CONSULTANT**

CAREER PROFILE

Folkert Herlyn is a Senior HPI Consultant at Facilitated Integration Technology (F.I.T.), where he specializes in facilitation of business process, organization, and infrastructure changes, and project management assistance in infrastructure systems change implementations. Folkert draws on his many years of experience to assist organizations in business process and organizational redesign and in I/T master planning. He has over thirty-three years experience, serving in many different capacities for Exxon /Esso's refining and chemical organizations.

EXXON

In the plant environment, he had professional and managerial functions related to process engineering and operations, maintenance as well as the planning, design and implementation of integrated control and information systems. Work locations were Koeln, Germany; Rozenburg, Netherlands; Exxon R&E, USA. In addition to control and information systems functions he was Process designer, Operations Supervisor of a set of chemical plants or a steam cracker and became later the Technical Manager of the Olefins Plant for Exxon Chemical, Koeln, Germany. Thereafter, in 1981, he moved to the international organization of EXXON Chemical, located in Brussels and assumed in 1984 the position of Information Systems Manager (CIO) responsible for Europe and Asia/Pacific. Duties included planning, design and management of manufacturing and enterprise systems. During an assignment in Singapore, 1990-1992, he directed and consulted Asian refineries and chemical organizations in the development of master plans and projects.

Specialist, Consulting and Employment

Since 1993 he has been working as a free specialist (Principal Consultant), primarily with other major consulting organization such as IBM (up to IBM's purchase of PWC), FIT, Honeywell and PWC or directly with clients. He has been responsible for developing benchmarking, economic and planning methodology for multiple organizations. This methodology is based on a structure of business processes, and it includes the best practices of the manufacturing and refining businesses. He developed also an IT benchmarking methodology that has been applied in 20 plus refineries and chemical plants. He worked at or supported 51 different sites worldwide in his career.

On this basis, he led several benchmarking assessments and master planning activities in the chemical and petroleum industry between 1993 and today in Europe, Americas, Asia and Africa. In addition he developed strategic plans, assisted in change management design, design of reporting applications (KPIs) which include needs for such as Solomon reporting, specific studies using this and other methodologies to improve the profitability at the clients. He acted as a mentor during implementations and trained personnel in the application of methodologies he and others developed. He led operations and maintenance management improvement studies.

He has used his strength in business process modeling to develop the business reference model of petroleum downstream and of chemicals entities. These models are of two types: a best practices model by industry as well as an industry generic nature model to be applied for re-engineering. He has offices in Brussels, Belgium and Koeln, Germany, is a frequent public speaker at conferences worldwide including Europe, US, China, Russia, Africa and he published several papers on his state-of-the-art-methodologies. Since June 2003 he is listed in Marquis's Who is Who of Science and Engineering.

Directorships, key Publications

Folkert holds several directorships:

- Director of the 'European Institute for Industrial Leaders' (www.eiil.net), located in Brussels. His responsibilities include lecturing within the module of 'Knowledge Management'. These part time activities are very complementary to the specialist services with clients in the hydrocarbon industry.
- Director of Technology for FIT (www.FIT-Consulting.com)
- Speaker of the board of the Belgian-Bavarian Association located in Brussels (www.b-b-g.info).
- Herlyn F.J. *Refinery ASME Handbook*, Section on Refinery management, Publication in January 2012. This section addresses on 60 pages refinery management challenges and provides a suite of proven practices for successful refinery management.
- Herlyn F.J., *A roadmap to best Performance Indicators, Hydrocarbon Engineering*, July 2000. It discusses the appropriate selection and use of performance indicators (PIs) for refineries and chemical plants

PROFESSIONAL EMPLOYMENT

Facilitated Integration Technology, Inc. (September 1998 - Present) Senior HPI Consultant

At F.I.T., Folkert serves as a specialist in business process redesign, organizational redesign, information systems planning. He can draw on his diverse background to assist in all aspects of information management, from production systems to the corporate boardroom. He sees in FIT a chance to develop new methodologies and concepts as he has been done before successfully.

Prior to FIT employment, he has been actively involved in projects of this type with companies such as EXXON, IBM, Honeywell, Shell, Statoil, Saudi Aramco, ERG, Allied Signal, Aden Refinery Complex, Eastern European Chemical plants, Middle east petroleum companies.

RECENT MAJOR PROJECTS

Development of a business case for Automation of the Solomon (KPI) Reporting for a large Petroleum Company with several refineries in the Middle East (5/2011-9/2011). This includes concept, benefits, cost, some data modelling, project risk assessment, value management, transition/ roadmap definition

Design specification of a KPI monitoring programme for an Algerian Gas plant (12/2010-1/2011)

Planning responsibility for the implementation of a European Regulation (REACH) in a European Oil company with 5 refineries and 6 marketing sites 6/2010-11/2010). This included development of communication papers for management.

Development of an KPI management workshop for a German Oil-Refinery such that the organization is trained to develop their new reporting system (6/2009-7/2009).

Development of the RFQ for an Inspection Management System for Petroleum Company with two refineries in the United Arabian Emirates (2/2009-ongoing).

This RFQ defines rather detailed the application requirement including risk based inspection and other reliability centered functions.

Development of the IT Strategy including Roadmap for a Petroleum Company with HQ and two refineries in the United Arabian Emirates (5/2007-2008)

Development of a comprehensive strategy that covers all aspects of IT with strong focus on the governance and manufacturing applications and less on networks.

Production material balance accounting system specification for a refinery in the United Arabian Emirates (4/2006-4/2007)

Development of a tender document on behalf of the refinery that defines short and long term needs for production accounting and for next steps information management.

Development of KPI Reporting Pilot specification for a large refinery in Hungary and one in Czech Republic (2/2006-4/2006)

This includes the definition of functionality and the KPIs covering business functions such as unit operations to a detail that a vendor for hardware and software can produce a pilot system to client needs.

Development of workshops for Information and Knowledge management (2004-continuing)

This includes the development and lecturing of courses and workshops for the European Institute for Industrial Leadership as can be viewed in www.eiil.net. This work is very complementary to the consulting activities in the refining and chemical industry.

Information management enhancements in a refinery of the United Arabian Emirates (4/2005-7/2005)

The project team, led by Folkert, developed a tender document for application and systems enhancements to meet new business requirements. The highly integrated environment required an in depth analysis of as-is and to-be scenarios within a short period of time.

Information management masterplan for 3 refineries in Hungary (7/2004-1/2005)

He led (technically and commercially) a comprehensive information management masterplan development for 2 refineries and 1 chemical site. The planning included the inventory of IT and the proposal to improve business process and IT supporting technology. A detailed benefit / cost analysis was conducted to ensure the prioritization of actions is built on margin improvements. The team included Honeywell members, EIIL and local site members. The study required close relationship with a large local consulting contractor on ERP integration aspects.

Maintenance study at ChemoPetrol near Prag (6/2003-7/2003)

He analyzed the effectiveness and efficiency of the maintenance function and provided a roadmap for improvements on reliability of processes. He used his BITE methodology (best practice gap analysis).

Business Modeling Development and Benchmarking of a Large Synfuel and Refining Plant in South Africa (Sasol) from 2/2001 to 1/2002)

Senior HPI Specialist, technical project leader. Supplier of licenses jointly with FIT. The project included the development of as-is and to-be business models. Benchmarking was performed using the FIT-Herlyn consulting best practices and KPIs. The comprehensive project covered the development of business and IT opportunities based on the gaps

identified. Prioritization and roadmap development was based on comprehensive work on benefit / costs analysis

Performance Indicators, Petrozuata Refinery Project, Venezuela, 3/00-4/00

The specification of refinery and headquarter key performance indicators and executive reporting functions. Definition and development of the production, maintenance and technical detailed reporting requirements for functions and content. This included definition of requirements for daily mass balancing and yield accounting in order to provide the correct data for performance indicators.

Training Program, Petrozuata Refinery Project, Venezuela, 5/99-6/99

The specification and optimization of the refinery's application and systems training program including the major content definition, participants proposal and sequence of events in order to guaranty successful start-up and operations.

Business Modeling, ATOFINA Refinery, 12/98-2/99

Folkert modeled the business functions at the refinery and defined business improvement opportunities with cost and benefits. The study results led to a series of projects with and without investments.

Production Planning Improvement Roadmap, Statoil Refineries, Norway, 4/98-6/98

Folkert conducted the study to improve the planning. It covered the definition of work practice changes, IT requirements, and the estimates of benefits of change and the implementation roadmap proposal.

Information Technology Master Plan, Aden Refinery Complex, Yemen, 1/98-4/98

Folkert performed benchmarking by using the BITE methodology he developed and established on this basis a comprehensive IT master plan with estimated benefits, cost and the functional criteria of a series of projects.

Plant Performance Indicators Database Development, Large IT Company, 6/98-11/98

Mr. Herlyn contributed to a large database on performance indicators for the refining and chemical industry. He reviewed the available generic industry database and provided input to enhance it for the refining and chemical plants.

Manufacturing Industry Process Models, Large IT Company, 10/97-6/98

Mr. Herlyn provided and enhanced business models to reflect the petroleum downstream sector functions and later the chemical industry business processes. It is now used as the generic reference models for global services in consulting and for the training of their specialist people worldwide (IBM Global Services). The modeling has been performed in SAP compatible tools and technology.

Manufacturing Industry Best Practices, Large IT Company, 10/97-6/98

Mr. Herlyn provided business best practices for the petroleum downstream and chemical plants. It is now used as the generic reference for global services in consulting and for the training of their specialist people worldwide.

IT Master Plans and Benchmarking, AlliedSignal, USA, 1/97-6/97

Folkert developed master plans for the Hopewell and the Columbia chemical plants based on his BITE benchmarking methodology. The comprehensive master plan includes best practice definition of business functions, IT application and systems opportunities, their

benefits and cost and a roadmap for the implementation program. (See also published papers, below).

IT Master plans and Benchmarking, Poland, Romania 1995

Folkert conducted the development of plans for information technology. The plan of the Chemical Company, Zaklady Azotowe, is based on his BITE benchmark methodology. This fast path master plan includes IT application and systems opportunities and a roadmap for the implementation program. The Nozaky Company, Romania chemical used his capabilities to develop the specification for an Operations Information system.

IT Master Plans and Benchmarking, Shell, USA and Netherlands 3/94-7/94

Folkert led and conducted the development of the master plan for Shell refinery, Norco, Louisiana, and performed IT Benchmarking for the Moerdijk Steam cracker plant in the Netherlands based on his BITE benchmark methodology. The comprehensive master plan includes best practice definition of business functions, IT application and systems opportunities, their benefits and cost and a roadmap for the implementation program.

EDUCATION

BS in Electrical Engineering, Wolfenbuettel, Germany

EXXON training courses for managerial and professional advancement in Europe and US.

LANGUAGES

Speaks German, English, Dutch, some French

PUBLICATIONS AND PRESENTATIONS

Latest Business Publications:

Keese G.I, Apple J.E, Herlyn F.J., *Benchmarking Information Systems, Chemical Engineering*, June 1998

Herlyn F.J., *Making the most of I.T., Hydrocarbon Engineering*, September 1999

Herlyn F.J., *A roadmap to best Performance Indicators, Hydrocarbon Engineering*, July 2000

Herlyn F.J., Susan C. Starr, ASME, proceedings 2001, *Roadmap leading to a step change in profitability improvements*

Herlyn F.J., Susan C. Starr, NPRA , Plant Automation & Decision Support Proceedings 2003, San Antonio, *The Six Significant Steps in Moving Towards a More Profitable Operating Environment*

Herlyn F.J. Refinery ASME Handbook, Section on Refinery management, Publication in 1/2012

Some key Public Speeches and Presentations:

- Utrecht, NL, 1994, CIMTRADE: *IT Master planning*
- Dhahran, Saudi Arabia: AICE Conference 1994, *Management Information Systems Planning*
- New York, USA, IBM Oil and Gas Forum 1995, *Measurement of Information Technology Effectiveness, MITE*
- London, UK: Prima Conference 1996, *Business Modeling Solution Approach*

- Moscow, Russia: IT Conference 1997, *Integrated Refinery Information Systems*
- Singapore: Petroleum and Chemical Industry Conference on Jurong Terminal, 1997: *IT Vision and Strategies for the Jurong Terminal*
- Bahrain, PETROTECH Conf. 1998, *Measurement of Information Technology Effectiveness*, MITE presented at IBM booth
- Beijing: Sinopec Conference 1998, *Computerization Benefits for Refineries*
- Houston, Texas, 02/ 2002, ASME Engineering Technology Conference on Energy, *Roadmap leading to a step change in profitability improvements*
- San Antonio, NPRA San Antonio, Plant Automation & Decision Support 2003, *The Six Significant Steps in Moving Towards a More Profitable Operating Environment*
- Berlin, *ENCOS2004, Understanding Sustainability...can it be taught?*
- Zurich: University, *Industrial Leadership education*, 2005
- Brussels, *Environmental management and the Sustainable Company*, perspectives from the oil and chemical industry, at the Corporate Social Responsibility Society 2005 in Brussels
- Berlin, Success criteria for large projects, 2008
- Development of several workshops on strategic planning, sustainability for the European Institute for Industrial Leadership between 2004-2008