

TotalFunction **FEAPA - METHOD™**

Front End Analysis Participation Acceptation

Our goal is always to achieve effectiveness and (cost) efficiency with a high degree of safety and availability. Projects are almost always unique and complex. In order to achieve a good, functional and usable final situation, attention must be paid to all aspects relevant to the project in an appropriate and timely manner. The Front End Analysis Participation Acceptance Method (FEAPA-Method) has been developed by us to allow all stakeholders to participate in a project at the right moment. Our experts and specialists make sure that all useful, relevant knowledge and experience is secured, interpreted and used.

Totally Integrated

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Multidisciplinary Approach!

1. Definition of project scope

Enterprise/project objectives
Problem definition
Basic project requirements
Project boundaries/limits

Focus on operations philosophy, final human machine interaction and Control Room

2. Situation Analysis

Orientation

Study and analysis of relevant experience and knowledge of stakeholders, in documentation and/or documentation concerning existing or similar situations (if available) and conversations with relevant experienced stakeholders and/or end users within project

Information collection and study

Technical environment and equipment, process automation systems/DCS/SCADA), specifications, characteristics, similarities and differences, alarm handling, process visualization and control, degree of automation, support systems, communication equipment

Defining use of equipment

General analysis of expected/planned frequency of control, urgency, synchronism of events, plant and process statuses, abnormalities, disturbances/incidents/calamities, equipment for visualization and control

Further analysis about operations and operational use

On-ste observations, analysis and conversations with (future, experienced and relevant) users with attention for future relevant aspects of knowledge, experience, flexibility, working methods, use of equipment, alarm handling, situation awareness, relation between Control Room and plant/field, working conditions and atmosphere, work load, culture and differences, communication and information exchange, contact with organization (maintenance, support), special features of control room.

Interpretation into design requirements

Interpretation of collected results and findings into design requirements, relevant conclusions and advices; all oriented towards the future work situation.

3. Functional concepts and specifications concerning operations, automation, HMI and equipment initiation of project scope

- Functional specification operations philosophy
- Functional specification of tasks and task allocation and organization of control room, control room area and relations with overall organization
- Specification of information, use and users (allocation)
- Detailing relation between high degree of automation and manual control
- Detailing relation between control room and field operators, including aspects of (tele)communications, information handling, local control, coordination of work and maintenance
- Specification of level of integration of secondary and support systems. One integrated and flexible user interface or different solution.
- Estimation of influence on operator of system failures and non-availability of infra-structure
- Functional design specification of Control Room including conclusions and aspects of use and integration of systems and/or User Interfaces (process automation/DCS/SCADA, secondary systems, office LAN, information and planning systems, simulation, verification, decision support, differences between systems, remote servicing/trouble shooting/support, integration of CCTV, safety and security systems and procedures).
- Specification of number of monitors, large screen displays (display walls), equipment and 'special' equipment
- Planning of implementation, consequences of total or modular implementation approach for operators, operations and equipment
- Production of manual for process visualization (e.g. graphics) and control, using information collected during prototyping sessions (to test visualization and control concepts)
- Meeting and discussion with project stakeholders and users groups. The user participation process will need guidance and control by the designer.
- Production of functional design and specification of Control Room and HMI concept

4. Control Room/Control Centre Concept

- Meetings and discussions with project stakeholders and users or user groups about design requirements and feedback of interpreted results
- Production of proposals in form of sketches and drawings of workplaces, Control Room layout, furniture, adjacent rooms, interior and work environment, working conditions (lighting, HVAC, etc.)
- Production of proposals for details, colors, materials and other interior, furniture, style and design items.
- Preparation of 3D visualizations and/or animations, simulations, prototyping or mock ups for presentation and evaluation use
- Presentation of proposals to project participants and users
- Feedback of results into proposals
- Detailing to final design and specifications, ready for tendering

5. Implementation/realization/building/ construction

Initiative

Project

Project-organisation

Situation (now and future)

Interpretation

Design and specifications

Tendering

Detailing (contractor)

Realisation (contractor)

Operations / productions

6. Operations/Production

Coordination and consultancy for
operational evaluation and feedback