SYNESA
SOLUTIONS

Knowledge-based development and management of processes and operations

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Course introduction

Nowadays, a lot of data is collected about customers, services, manufacturing and other operations. Data can be used in many ways in the development and management of service and business processes. However, it is important to understand that accumulating data alone is not a shortcut to success. Data is only raw material and only by processing and refining it in the right way makes it useful.

Data can be processed in many different ways, and the methods and solutions used depend on what it is going to be used for. In addition, many factors affect the utilization of data, such as data availability, coverage and validity. For example, artificial intelligence is not automatically intelligent, but it learns from data. How intelligent the solutions turn out to be depends entirely on these factors. From the point of view of service development and management, it is first necessary to form a comprehensive understanding of what kind of data is available, and what the realities are for its utilization. Only after this can we start thinking about refining and utilizing it in development and management.

In comprehensive operational development and management, it is also important to understand the entire analytics cycle from the current state, through problem identification, predictions and assessment of development needs all the way to monitoring operations. This is the only way to change operations into truly proactive and effective, instead of reactive management. Having achieved this goal, the organization can be said to be truly knowledge-led.

This course offers a basic understanding to those doing practical work, those working in expert and development roles, and those in a supervisory position about

1. knowledge-based management
2. data structure and data utilization opportunities and limitations
3. principles of continuous develoment and different analytics methods
4. different methods and analytics utilization through practical examples

The course aims to provide skills the participants need to identify the possibilities and effects of data in one's own work environment and tasks. In addition to the course material (video lectures and lecture slides, practical examples and demo data), the participants receive one month personal license for **eDromos®** software to be used in their own operating environment.

Course contents

1. **Knowlegde-based management?**
   - Knowledge-based management – what it is and what it isn't
   - Data-based decision-making – what does it mean

2. **Premises and principles of data utilization**
   - Data sources and data availability
   - Data structure, coverage and validity
   - Levels of knowledge (data, information, knowledge, wisdom)

3. **Continuous development and analytics cycle**
   - Descriptive analytics *(what is happening?)*
   - Diagnostive analytics *(why it happened?)*
   - Predictive analytics *(what is most likely going to happen?)*
   - Prescriptive analytics *(what should I do about it?)*

4. **Data utilization methods**
   - BI analytics
   - Process mining and modeling
   - Simulation
   - Machine learning and artificial intelligence

5. **Enabling and introducing new methods of operation**
   - Data strategy
   - Data-based operational change and and change implementation

6. **Continuous development and management of operations**
   - From reactive activity monitoring to proactive management
   - Performance indicators and metrics

Course implementation

1. Self-study online course in English, possible to complete along work or studies
2. Course material includes
   - Video lectures
   - Lecture slide presentations
   - Example data sets and demos
3. Personal one hour 1-to-1 online coaching concentrating on specialities of the participant's working environment
4. Participants get one month personal license for Synesa Solutions **eDromos**® process mining solution