ACTL
Advanced CASE Technology & Language Systems

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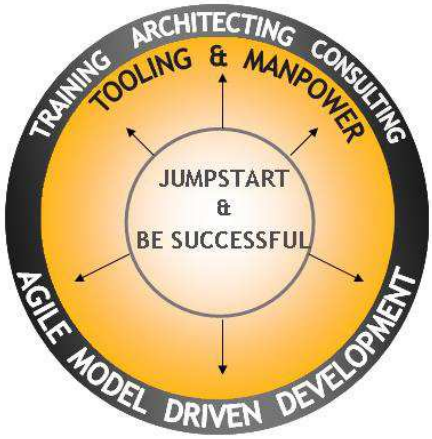
Mentoring

ACTL's mission is to help its customers become master craftsman and to develop state of the art the art, high quality systems within well defined time, quality and budget constraints.

Our knowledge transfer package builds on training, consulting and architecting.

ACTL's experts bring you their impressive technical know how and practical expertise together with a tested methodological approach into your project. In their work they can assume the roles of mentor or any of the various consultant roles such as architect, process expert, reviewer and the like. (See our Consultant flier for information).

This flyer focuses on the **mentor** role for agile model driven system and SW engineering.



In order to increase the effectiveness of technology transfer, ACTL applies a methodological mentoring model that helps project teams adopt new technologies, methods and practices more quickly. Because, we view mentoring as a natural extension of the training process, it is a vital component of our iterative, incremental and client driven Agile Model Driven Development (A-MDD) jumpstart process.

1. When is the mentor role suitable?

The use of an ACTL mentor pays of and is most suitable the first time you decide to apply new practices of any engineering discipline. Be it system or SW engineering, requirements engineering, test engineering, security engineering or any other engineering discipline. In such cases you often lack the required know-how or experience to effectively use the technology and you are afraid that the risks of:

- Prolonged development time.
- Reduced system quality.
- Loss of confidence in the technology, loss of motivation and complete reversal to non-OOT technologies

will have a negative influence on the project. Our experience shows, that you encounter this situation when

- Your team has just passed a training in one of the engineering skills.
- It's the first time that your team intends to consistently use for example Agile Model Driven Development (A-MDD).
- You have a running project and want to introduce new skills and practices in order to become more professional, increase productivity or quality.

An ACTL mentor is therefore suitable in either green field or brown field projects when ever you lack know-how or experience in using A-MDD practice effectively.

2. What does the mentor do?

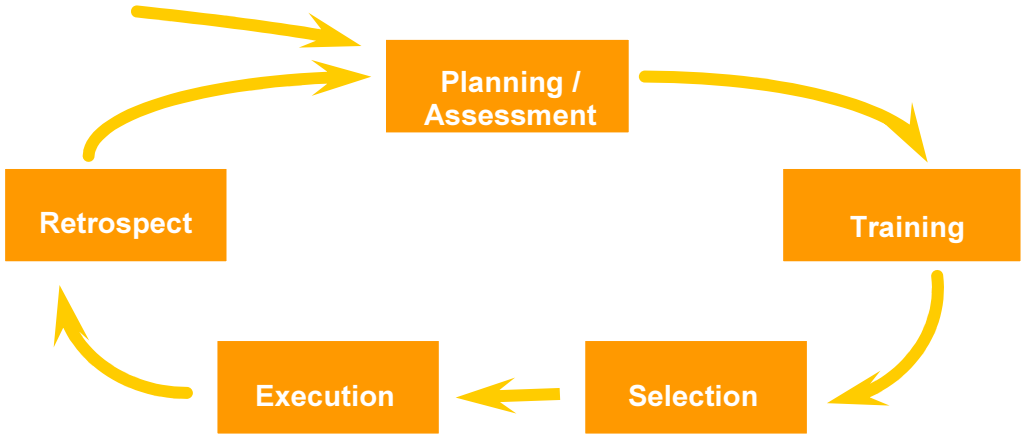
In a mentoring program, a dedicated ACTL mentor typically accompanies the project team during inception and elaboration (the first to phases of a project life cycle) helping the team to assimilate and adopt the new technology. During his work, the ACTL-Mentor assures that the methods and skills acquired during training are gradually, incrementally and efficiently adopted and practiced without affecting the project delivery date. Because our mentors have coached companies adopting A-MDD for more than ten years in many problem domain areas and projects, they also lend their talent and experience in systems design and architecture, which substantially decreases development time and effort, and reduces the risk of making painful errors in system design.

The ACTL mentor leads the team, provides guidance, ongoing support and technology transfer in:

- **Project management and staffing** where he helps in planning, staffing and enforcement of a time-boxed, incremental and iterative process.
- **Problem domain briefings, requirements capture and management** where he helps in setting priorities on what to model and which requirements to specify in each iteration.
- **Strategic analysis and architectural design** where he helps in establishing a sound conceptual solution as well as a flexible and resilient system architecture.
- **Communication with the customer** where as external facilitator he helps in reducing tensions between the team and the customer.
- **System implementation and documentation** where as experienced implementer he helps in building the system and adequate documentation of all artifacts.

3. How does the mentor work?

Using a time boxed, iterative and incremental process the mentor applies ACTL's proven and tested knowledge transfer methodology on both, the macro as well as the micro level.



1. **Macro Level**

The macro level covers the adoption and assimilation process in terms of several iterations during which the skills are gradually improved. At first the mentor assesses the situation and plans the adoption iterations in terms skills and focus to be allocated to each adoption iteration. In each iteration he then fills the gaps in theoretical know-how where ever required in order for the team to participate in selecting where to put priorities so that the action plan for the project can be finalized. Then activities on an iteration are initiated. At the end of an iteration, a retrospect is conducted in order to evaluate the results, benefits, difficulties and team performance. This evaluation, serves as input for the next adoption iteration of the technology transfer process as well as for the next iteration of system development.

A typical iteration plan is shown in the following table.

Week	Discipline	Activities
1	Requirements	▪ Iteration initialization & planning. ▪ Charter and initial use case model. ▪ The team describes the UCs.
2		▪ Review & structuring the UC model. ▪ Identification of the main NFR. ▪ The team continues on UCs and NFR.
3	Analysis	▪ Initialization of analysis model. ▪ The team works on the static model.
4		▪ Initialization of UC realization. ▪ The team works on dynamic model.
5	Design	▪ Initialization of packaging & componentization. ▪ Team refines architecture and UC realizations.
6	Design and Implementation	▪ Arch. Review & refinement if required. ▪ Initialization of implementation. ▪ The team implements key UCs.
7	Implementation	▪ Review of implementation. ▪ The team continues to implement.
8	Testing and Deployment	▪ The team completes the iteration by testing and deploying the implemented system parts. ▪ Retrospect.

2. **Micro Level**

The micro level covers the day to day activities of the mentor. Each mentoring session follows the same process. At first he checks what's the status, what has been done since the last meeting and then the session is planned. He then answers questions that have risen during the teams work, reviews its deliverables and provides constructive feedback. Then a decision is made regarding what needs to be corrected and an activity plan for the session is established upon which modeling activities are initiated. At the end of the session, the session is evaluated and roadmap for the teams activities till the next meeting is set.

4. How long does it take till the mentor becomes effective?

During the 10 years of ACTL's existence, its consultants have trained over 4000 SW engineers and consulted in over 100 projects of the top 100 Israeli Dun & Bradstreet companies. They have gathered experience and know how in domains and industries such as telecom, biotechnology, command and control, intelligence, aerospace industry.

This experience allows ACTL mentors to become effective already after ½ to 1 day!!

5. What are the benefits of using a mentor?

By giving your team an experienced ACTL mentor you gain the following advantages:

- Reduced risk of technology adoption.
- Efficient technology transfer.
- Enhanced team performance.
- Better system architecture and flexibility.
- Reduced maintenance costs.
- Better control on the development process.
- Better system documentation

For more information or a meeting with one of our mentors call us at +972-2-5376459

