**Experiences of Performing Lightweight Software Process Assessments within Small-to-Medium Sized Enterprises (SMEs)**

Fergal Mc Caffery & Gerry Coleman

*Dundalk Institute of Technology, Ireland*

[*Fergal.mccaffery@dkit.ie*](mailto:Fergal.mccaffery@dkit.ie)*,* [*Gerry.coleman@dkit.ie*](mailto:Gerry.coleman@dkit.ie)

Software process assessments are typically the first step to commencing software process improvement (SPI). Software SMEs find that many of the existing assessment methods are linked to plan-driven improvement models and can be expensive in terms of the resources required. Our presentation will support these claims with statistics from the Irish software industry and present a ‘lightweight’ assessment method - Adept. Adept unifies an existing plan-driven assessment method and an adapted agility/discipline risk-based assessment method. Adept has a low resource overhead and does not dictate either a plan-driven or agile process improvement model, making it an attractive assessment method for software SMEs.

It is difficult for small Irish software companies to understand the global importance of software product and process quality. One of the main contributing factors to this problem is a lack of SPI education. There is an industry-wide need to educate software managers in a quality agenda. Adept’s has helped in several ways. Firstly, the marketing of Adept within the Irish software industry has raised awareness of SPI. Then, the application of the assessments has raised the level of education within the assessed organisations. Additionally, the results have provided a road map for SPI within each of the assessed organisations, with some now following a clear SPI path.

Recognising the need to provide companies with the widest impartial choice of SPI options, Adept enables a focused and tailored improvement path based on a company’s operational context and business goals. In this way, it is exclusively tailored to the company concerned. Crucially, Adept aims to create a SPI culture in small software companies which can be sustained and bring ongoing and lasting benefit to the companies concerned.

Prior to development we agreed the following requirements with Enterprise Ireland (an development agency for indigenous companies) for Adept:

* Improvement is more important than certification and a rating is not required;
* Assessment preparation time should be minimal;
* The assessment should be performed over a short period of time;
* The assessment method should enable companies to select process areas that are most relevant to their business goals.

Enterprise Ireland have developed a number of strategies and programmes to encourage software SMEs to engage in SPI. Adept has been incorporated within their industry support measures and we have performed a pilot scheme of Adept assessments within Irish software SMEs. We propose to present the cumulative results and findings from these assessments. To date, Adept has only been performed in Ireland but we believe that it is applicable to software SMEs within other regions.

The presentation will consist of the following:

* The development of the Adept method;
* The structure of the Adept assessment method;
* The findings from performing Adept in a number of Irish SMEs;
* The tailoring of Adept for specific industries (Automotive and Medical Device).

This research is supported by Science Foundation Ireland through the Stokes Lectureship Programme, grant number 07/SK/I1299 and the Global Software Development in Small to Medium Sized Enterprises project (GSD for SMEs) grant number 03/IN3/1408C within Lero - the Irish Software Engineering Research Centre.