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## Aligning Product Line Strategy, Requirements and Features

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Successful software product line organizations evolve to respond to a wide variety of customer, sociological, cultural, technological, economic, political, and environmental changes. They do this by ensuring their business strategy continually addresses customers' requirements and ensuring these requirements are realized by features developed through an engineering strategy that is aligned with the business strategy. Without careful management over time, if the business strategy and engineering strategy are misaligned a product line approach becomes far less effective. Drawing on many years' product line experience at Danfoss and Nokia we will use a business-engineering strategy alignment framework to explore and discuss some key issues for effective product line management. At the end of this tutorial participants will be able to:

- i. Present an overview of product line business and engineering strategies and how strategy affects the deployment and implementation of a range of requirement and feature variability management techniques
- ii. Recognise and explain requirement and feature distinctiveness from customer and supplier perspectives
- iii. Set out a feature development decision framework to aid decisions to make, buy or reuse features
- iv. Describe how planned and unplanned organizational factors can affect business-engineering strategy alignment.

This tutorial is aimed at requirements engineers, software engineers, project managers, faculty staff, and PhD students who want to learn about effective modern requirements reuse. You should have an intermediate knowledge of requirements engineering and the problems of developing medium to large computer-based systems. You will not need to know the detail of domains used for the case studies. Sufficient introduction will be provided.



**Professor Mike Mannion is Vice-Principal (Research) at Glasgow Caledonian University, Glasgow, Scotland, UK.** His research interests include product-line engineering, software engineering and engineering education. He is a Chartered Engineer, a Chartered Information Practitioner and a member of the British Computer Society, IEEE and ACM, published more than 50 papers and run more than 20 tutorials.



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