



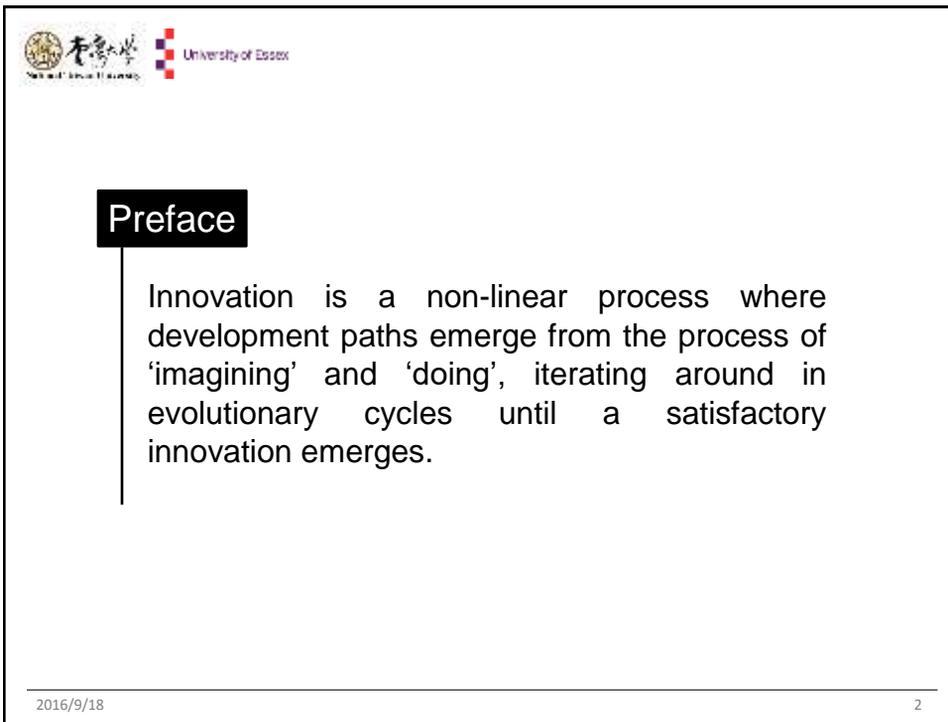



# From Imagination to Innovation: A Creative Development Process

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## Preface

Innovation is a non-linear process where development paths emerge from the process of 'imagining' and 'doing', iterating around in evolutionary cycles until a satisfactory innovation emerges.

2016/9/18

2

## Agenda

- 1 Models of the innovation process
- 2 Creative Innovation Development (CID)
- 3 Case study: LivingPattern Technology Inc.
- 4 Future directions

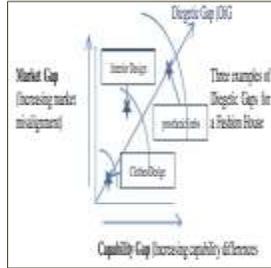
Businesses are all about stories.



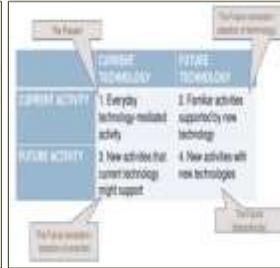
## Ways of creating future stories: fiction and ideation



Science Fiction Prototyping (SFP)



Diegetic Innovation Templating (DiT)



Future Technology Workshop (FTW)

## Innovation Lab

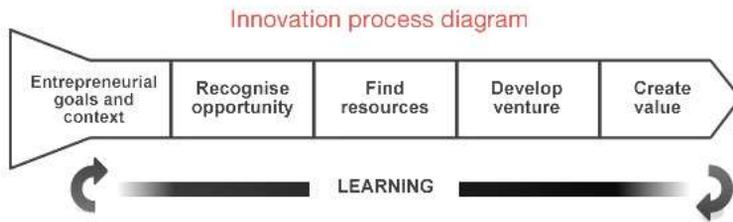
*OurHEX* - An online ideation and prototyping environment



Productive brainstorming depends on having a diversity of people, good social interaction and an environment that promotes a sense of creativity

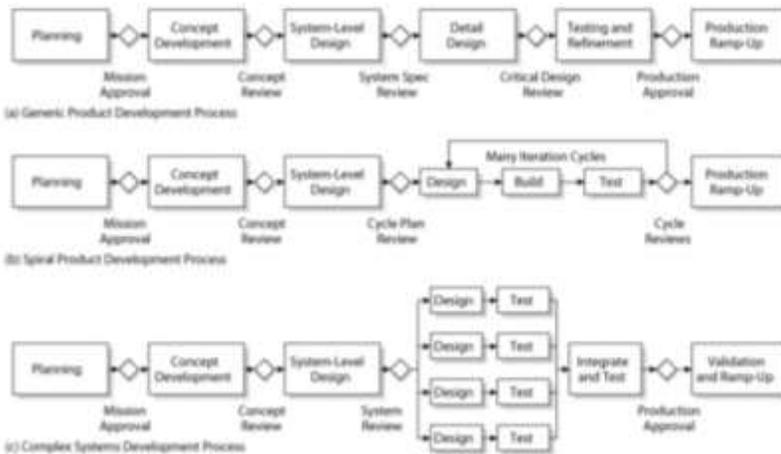
# Managing Innovation

Innovation is a learning process, not a single event and needs to be managed with building and developing routines across the core process.



Tidd and Bessant (2013)

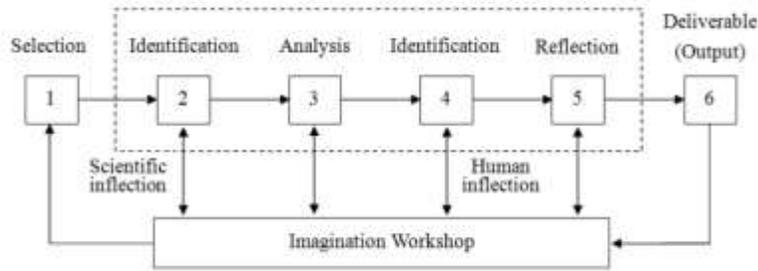
# Product development process flows



From Product Design and Development by Karl Ulrich and Steven Eppinger (McGraw-Hill/Irwin)

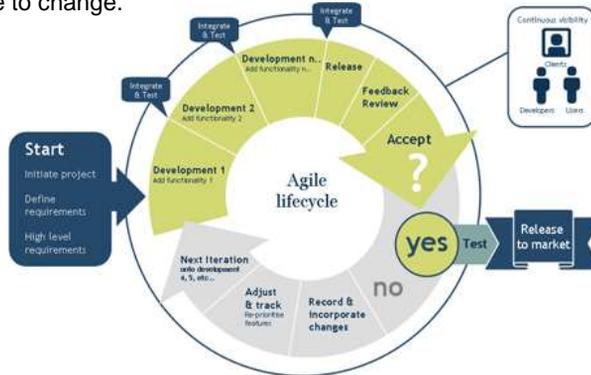
## Cyclic-SFP Process

This model consists of a series of processes containing feedback loops and forms evolutionary process to that leads to delivering a scenario and associated product specifications or business models. "Imagination Workshop" functions by mediating the steps in the process of scenario creation and thereby reinforces the generation of new SFPs.

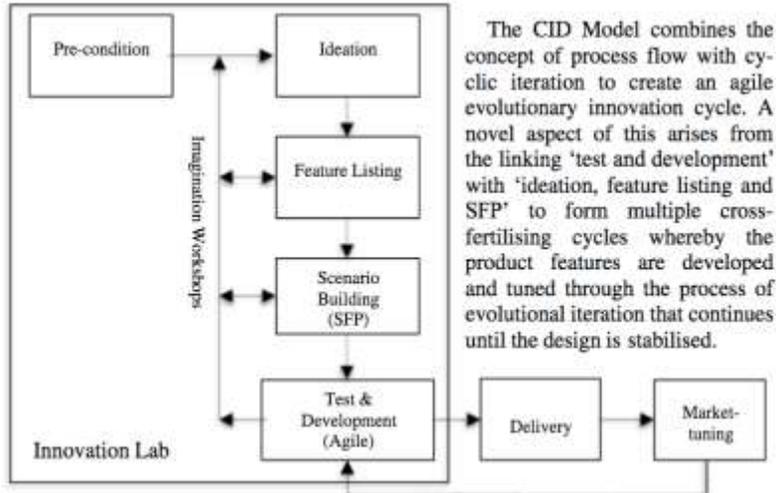


## Agile Development Process

Agile Development provides flexibility as its core principle allowing requirements and solutions to evolve through self-organizing collaboration between cross-functional teams. In this way it achieves enormous flexibility and promotes adaptive planning that enables continuous improvement or response to change.



## Creative Innovation Development Process



2016/9/18

11

## Creative Innovation Development Activities

it can be seen that 'agile development' forms a bridge between the technical and conceptual development teams since both work in a cyclic and reflective way where the work of one influences the work of the other. The model is independent of the environment but it may be seen as being compatible with the innovation-lab concept since it can be set inside either a physical i-Lab environment (as described earlier in the paper) or a virtual one (eg someone's office).

CID PHASES	CID ACTIVITIES
1. Pre-condition	Set the scope of the ideation to match the firms needs
2. Ideation	Brainstorming that conforms to the Imagination Workshop methodology
3. Feature Listing	Scenarios & the innovation are mapped into features. Features are assigned values; 0 if the feature is undesirable, 1 if the feature is nice but optional to have, 2 if the feature is essential. Points from an assessment panel are aggregated which prioritise the features and help select best option.
4. SFP building	Scenario building that conforms to the Imagination Workshop methodology
5. Test & Development	Start development and assess difficulty in realising features (and feedback relative difficulties to earlier phases for options to be revisited)
6. Delivery	Refine the product to deliver to customers.
7. Market-tuning	Use feedback from customers to make small improvements

2016/9/18

12

The image shows the LivingPattern app interface. On the left, a hand holds a smartphone displaying the app's main screen. The screen features a header with the LivingPattern logo and a navigation bar with five icons: a green leaf, a red person, a yellow person, a blue gear, and a blue person. Below the navigation bar are four large, colorful buttons: '21°C' (green), 'Dim' (blue), 'Bright' (yellow), and 'Open' (orange). On the right, a desktop background displays the text 'WELCOME TO LIVINGPATTERN' and 'WHERE YOU CAN ENJOY A SECURED LIFESTYLE'. Below this text are three buttons: 'LivingPattern Web App', 'Available on the App Store', and 'ANDROID APP ON Google play'. At the top of the desktop background, there are several icons representing different smart home features: 'Smart Security', 'Fire Alarm', 'EISecure', 'Home Automation', and 'Mobile Control'. The University of Essex logo is visible in the top left corner of the desktop background.

2016/9/18 13

Example of practice:

- Pre-conditions were defined as setting the scope to Smart Home Technology that was implementable in the next 6-12 months.
- A brainstorming session identified a vision (concept) where 'the smart home is a container of memories'. In this, living patterns (behaviours) become analogous to picture images creating a framework where the two can be intertwined to create new, attractive and useful service.
- To provide an insight to what is involved, before adopting CID, the ideation and feature listing process consumed (intermittently) a period of some 4 weeks and the team found it difficult to narrow down the scope.
- However, with CID, the team took only 2 hours to run the Imagination Workshop from ideation to the discussion of scenario building, and eventually successfully prioritised the top 6 features to be developed from a list of 23 features.
- The practice has helped the team shorten the time from ideation to development.

2016/9/18 14

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## Future directions

- Conduction online trials in China, Mexico, the USA and UK for introducing students to creative thinking, product innovation and language learning.
- Deploying it with in Taiwan with a start up, Living Patterns for service innovation
- Refining the concept and implementation through a masters and PhD project

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