

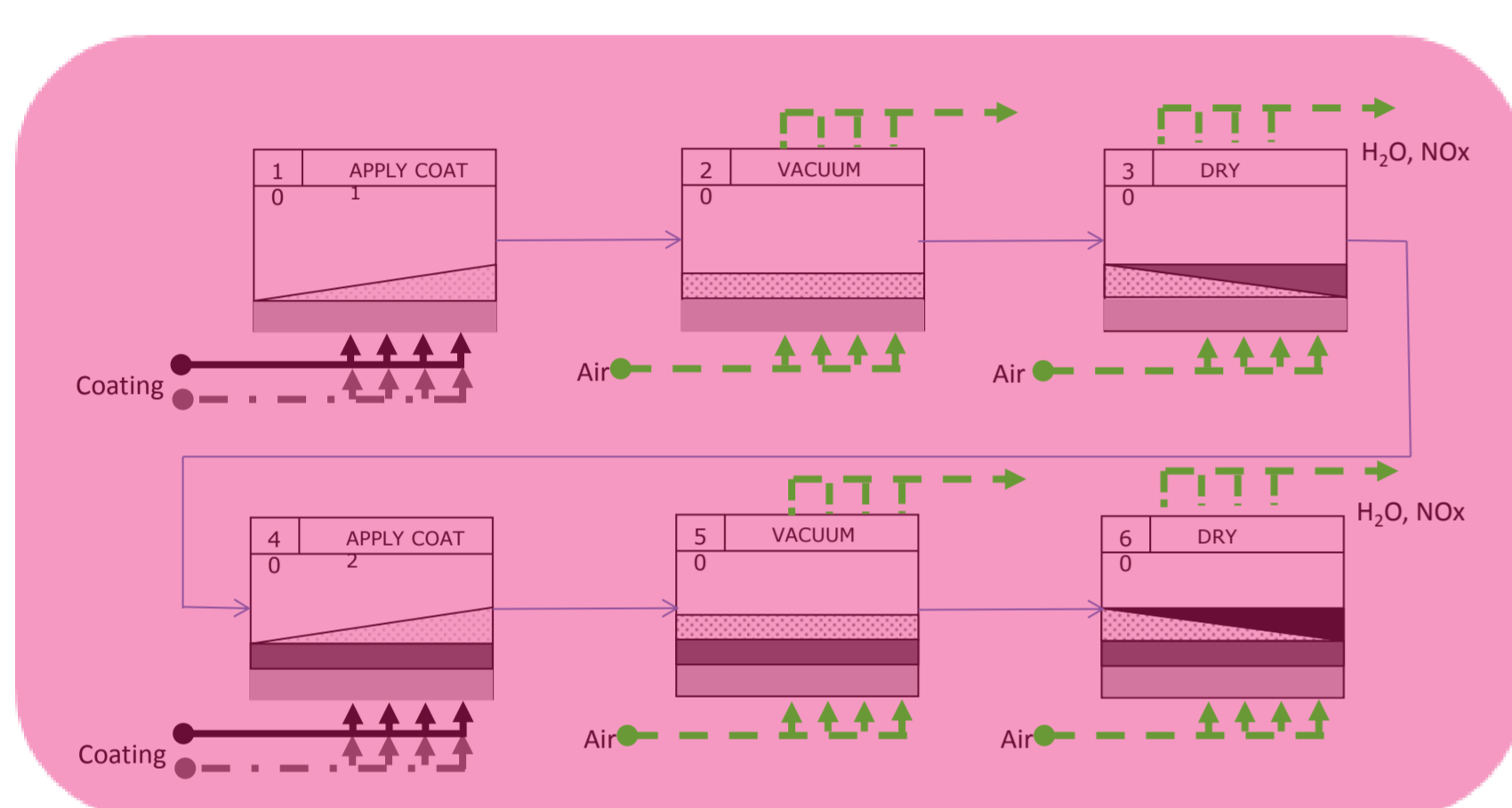
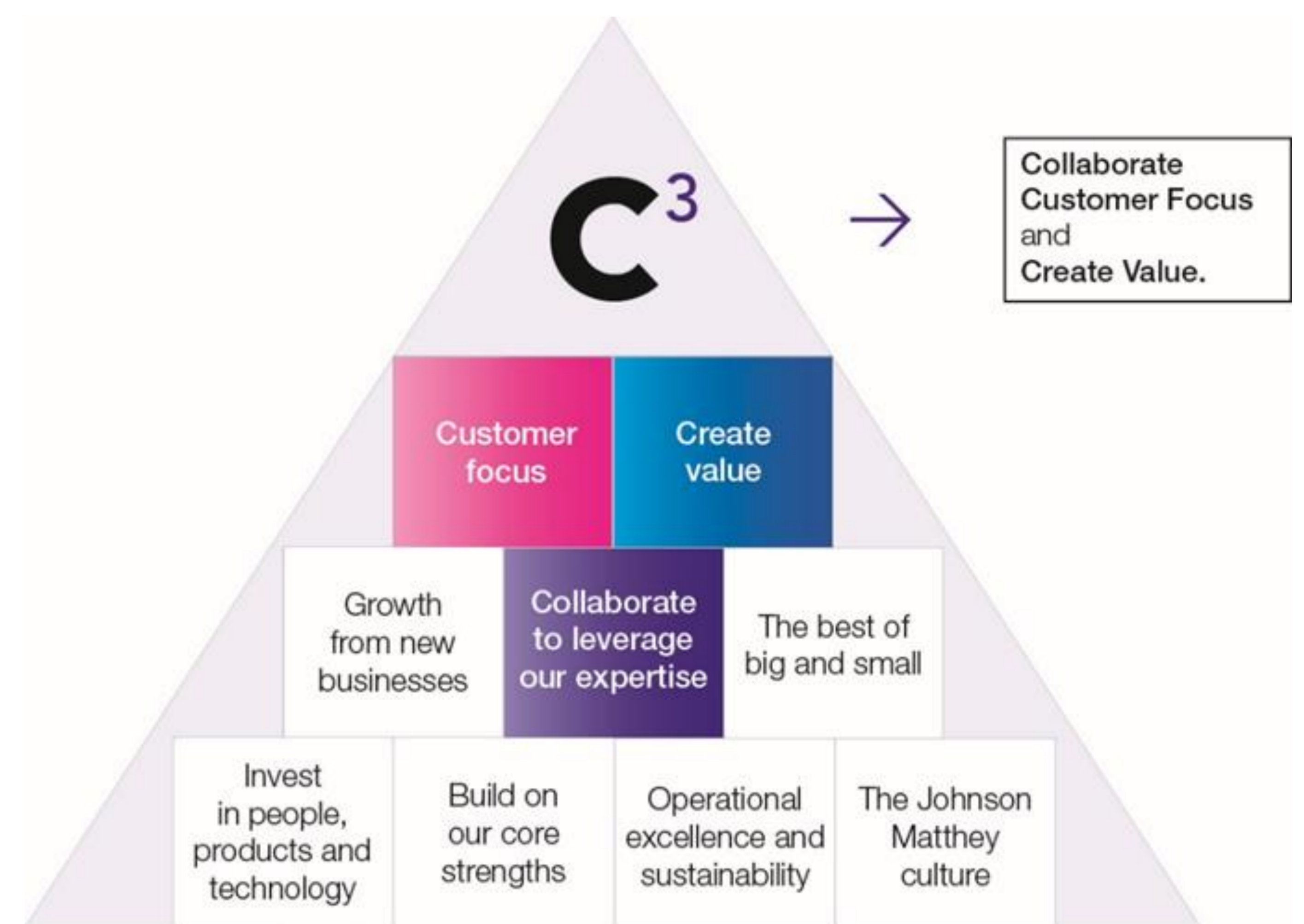
Johnson Matthey was founded almost 200 years ago in 1817. As we approach our 3rd century, it is our vision to build our 3rd Century through value adding sustainable technologies. To achieve this we have developed our 3C strategy which is made up of nine building blocks but focuses on three specifically: collaboration, customer focus and create value.

The project

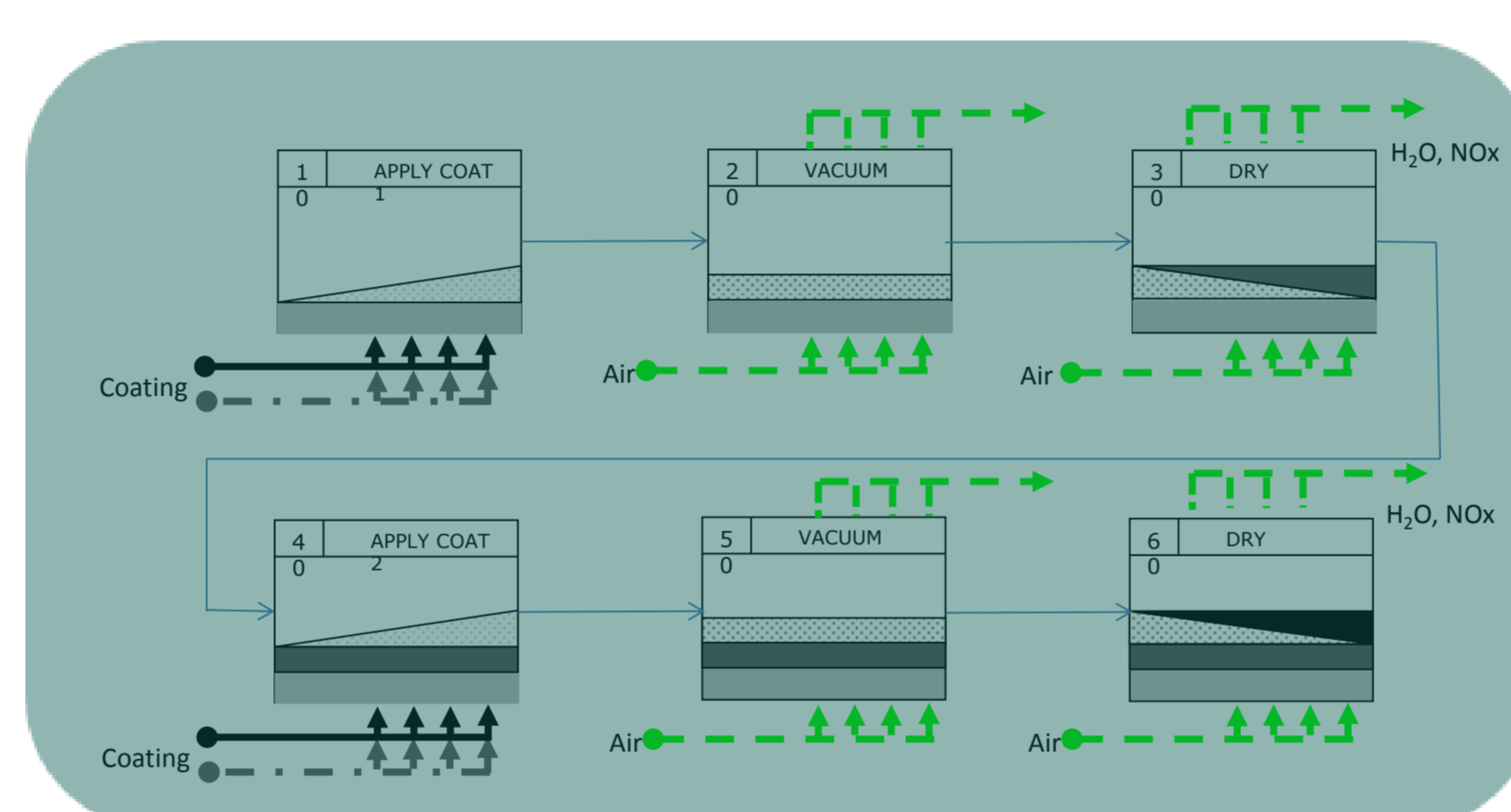
- Johnson Matthey Emission Control Technologies develops and manufactures coated catalyst systems for automotive applications
- A number of manufacturing routes are available, depending on the substrate and catalyst type
- The customer in this case specified the use of a novel metal monolith support with enhanced flow properties
- A multi-disciplinary project team was formed to define pilot and full-scale process routes

Pilot phase

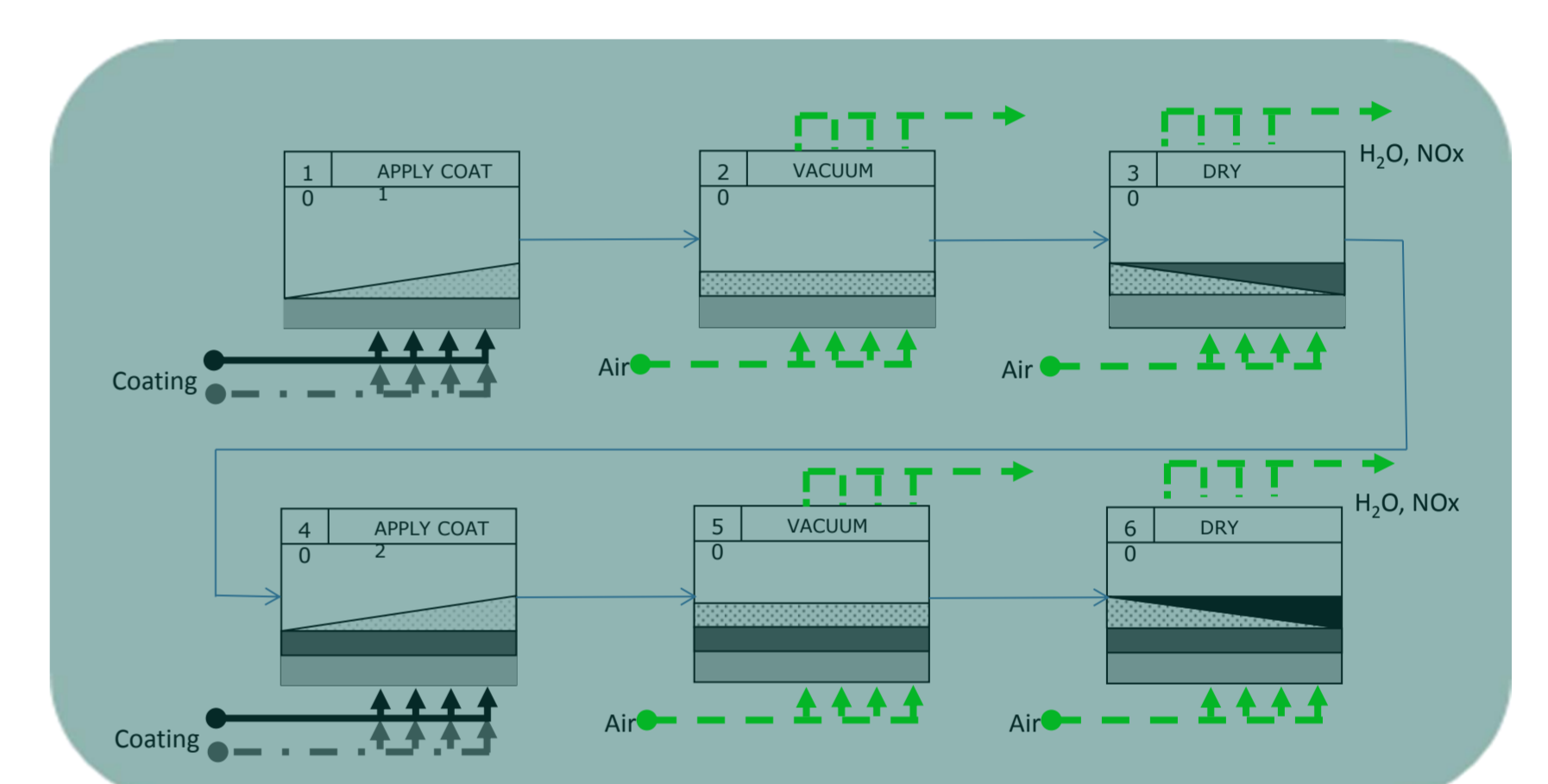
- Initial Screening Analysis identified that the value to be chased was in the coating process
- Three alternative coating processes were considered for which Process Definition Diagrams were developed



Process A



Process B

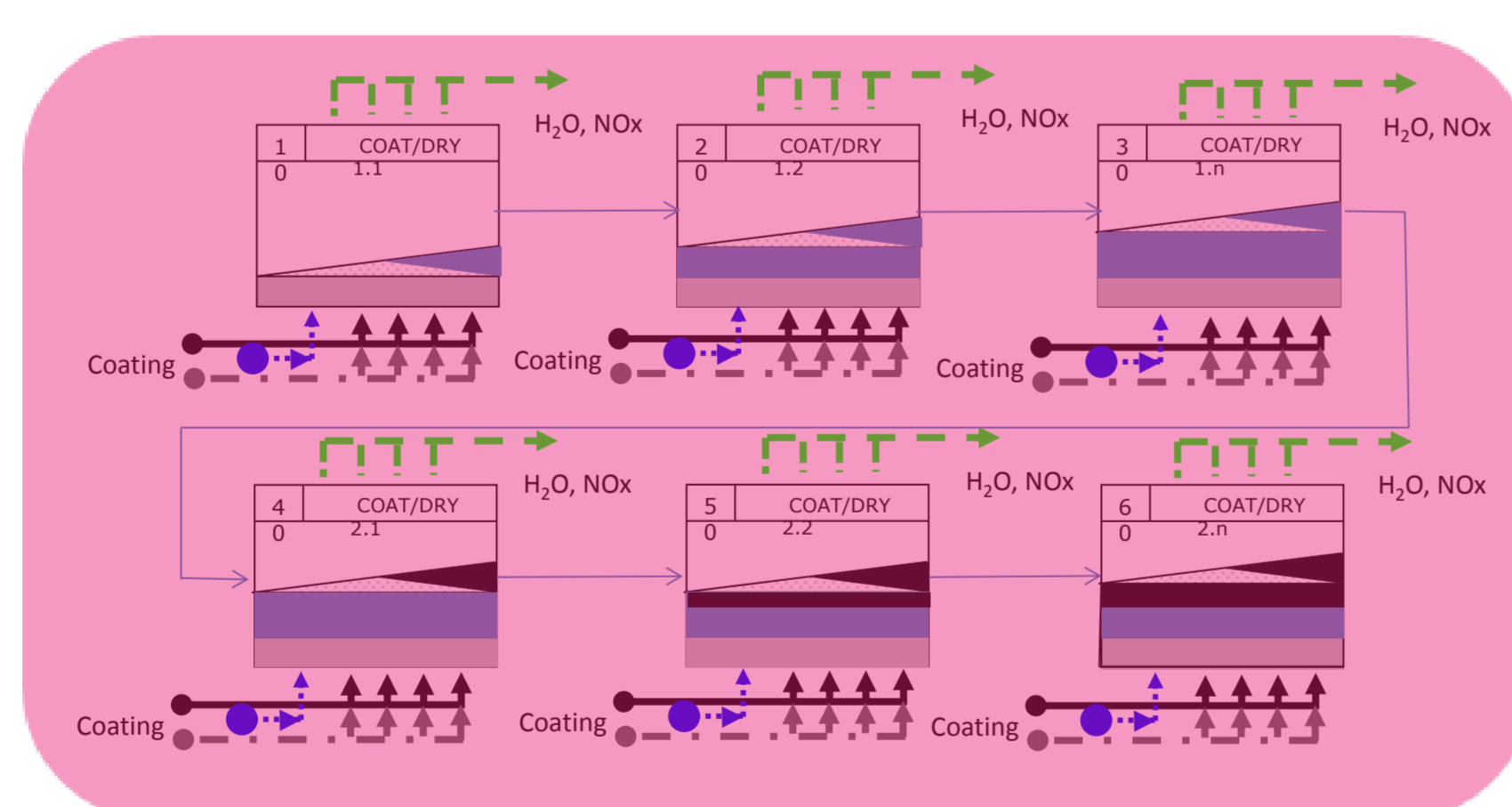


Process C

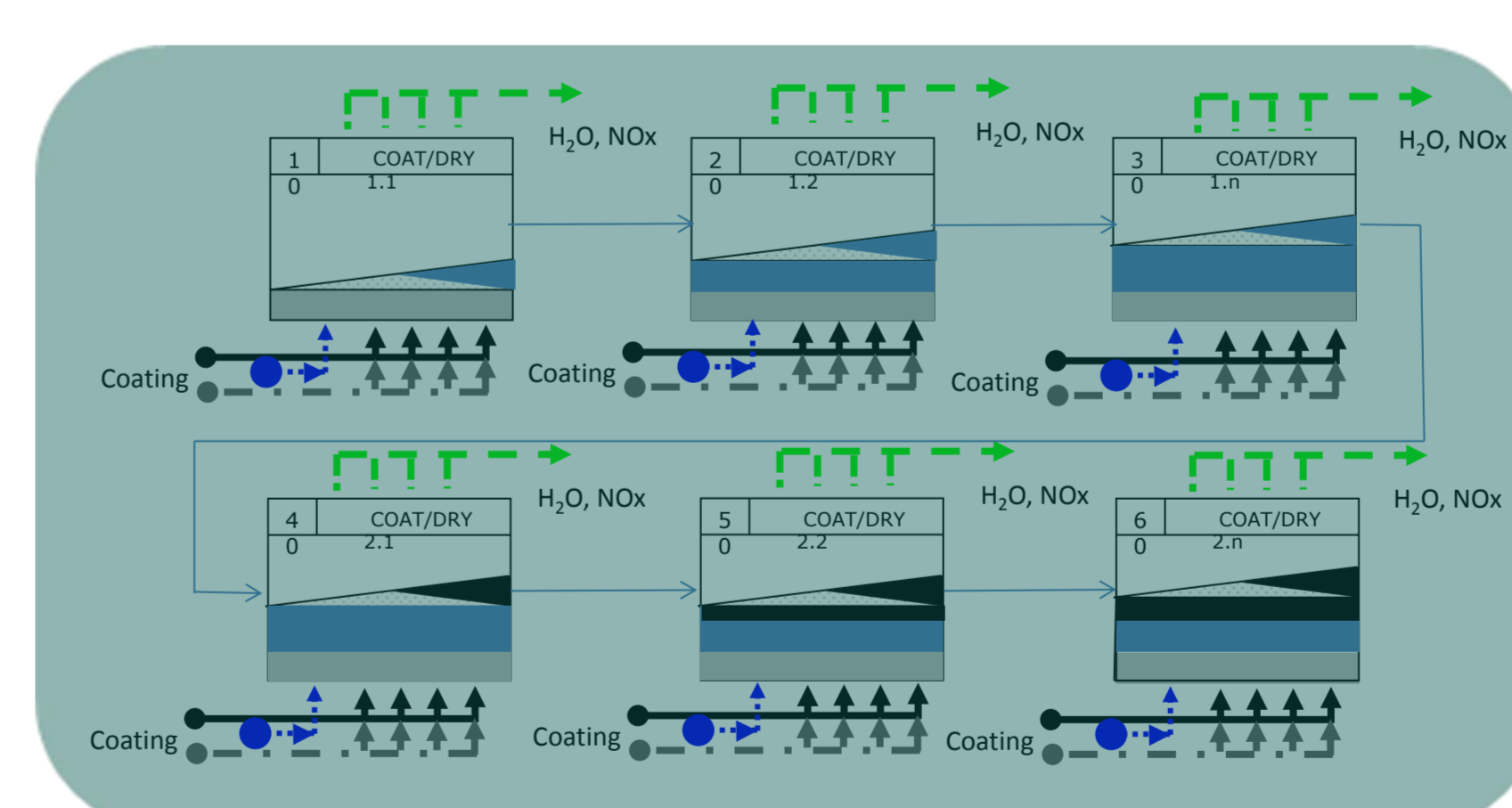
- PDDs were used to define pros/cons and knowns/unknowns for each option
 - Process A was discounted and Process B chosen for the manufacture of pilot batches
 - Experimental plans were developed to further understand scope of Processes B and C for full scale manufacture

Production phase

- Updated PDDs were then produced, incorporating the results from the experimental programmes



Process B



Process C

- PDDs were used as a basis to evaluate the remaining options - Process C was chosen for full scale manufacture and a number of open issues to be addressed in the scale-up programme identified

Overview

- This study is typical of many in JM, using ISA and PDD to develop existing process options and scale-up plans
- Britest tools act as a focus to bring together different disciplines and business locations in collaborative programmes
- The use of the Britest tools in this way allows JM to deliver its core values of

