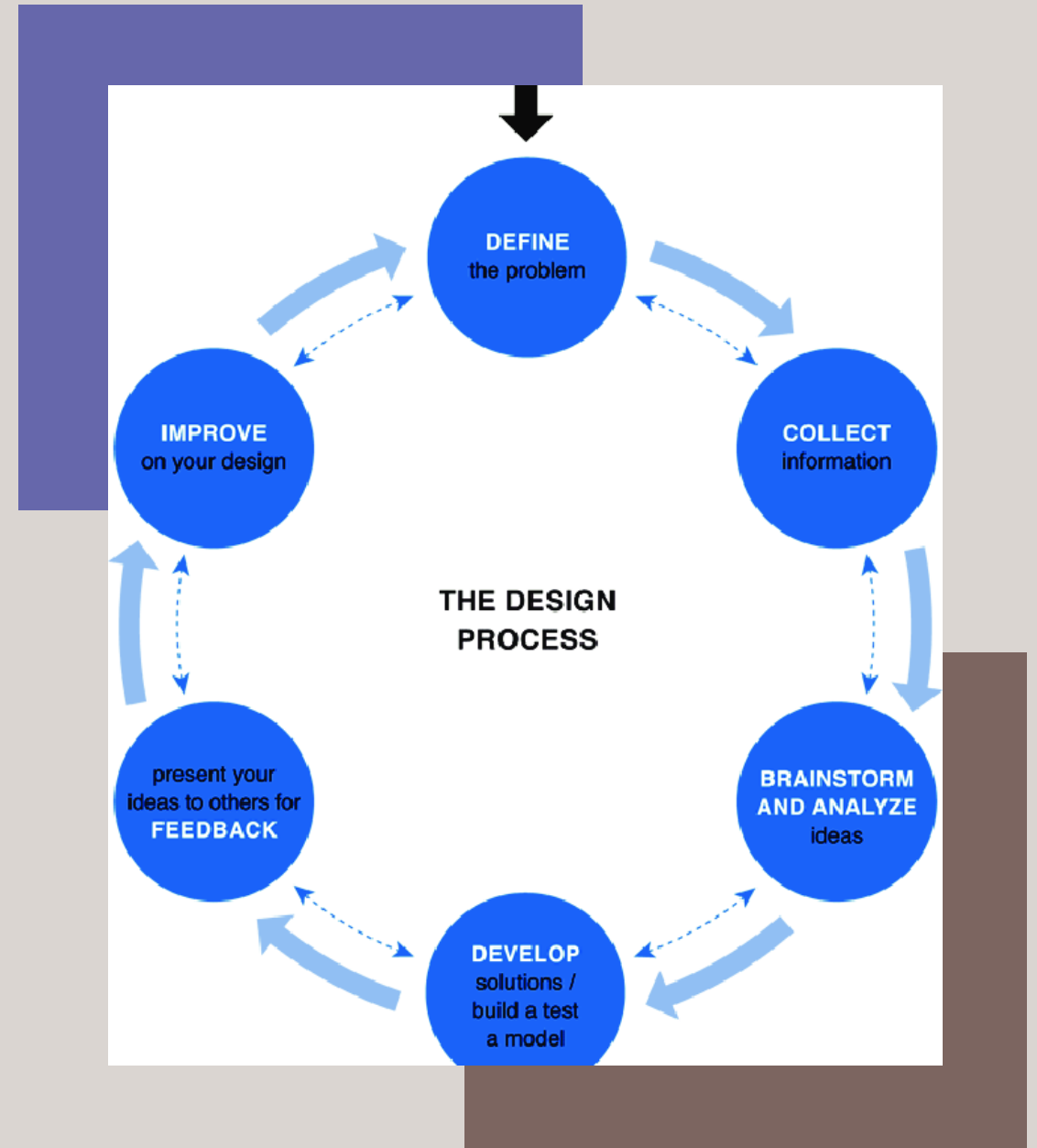# SYSTEM THINKING

NINA MIGUEL

DES 284 RESIDENTIAL DESIGN

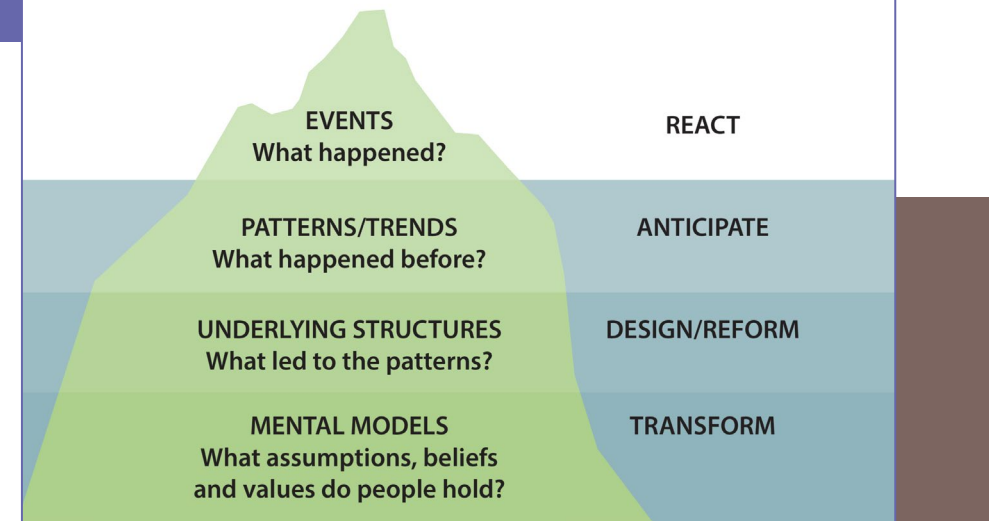JEROME GOMEZ

SYSTEM THINKING

- Systems thinking is an application of General Systems Theory (GST) that uses a formal procedure of analysis to review various parts of a real-world problem and, in turn, understand how these parts are integrated in order to facilitate a desired performance or outcome (Skyttner, 2001, p. 40).

- Systems thinking is a holistic way to investigate factors and interactions that could contribute to a possible outcome. A mindset more than a prescribed practice, systems thinking provides an understanding of how individuals can work together in different types of teams and through that understanding, create the best possible processes to accomplish just about anything.

THE DESIGN PROCESS

DEFINE the problem

COLLECT information

BRAINSTORM AND ANALYZE ideas

DEVELOP solutions / build a test a model

present your ideas to others for FEEDBACK

IMPROVE on your design

SYSTEM THINKING

- Systems thinking expands the range of choices available for solving a problem by broadening our thinking and helping us articulate problems in new and different ways. At the same time, the principles of systems thinking make us aware that there are no perfect solutions; the choices we make will have an impact on other parts of the system. By anticipating the impact of each trade-off, we can minimize its severity or even use it to our own advantage. Systems thinking, therefore, allows us to make informed choices.

SYSTEMS THINKING MODEL
(GOODMAN, 2002)

EVENTS
What happened?

REACT

PATTERNS/TRENDS
What happened before?

ANTICIPATE

UNDERLYING STRUCTURES
What led to the patterns?

DESIGN/REFORM

MENTAL MODELS
What assumptions, beliefs and values do people hold?

TRANSFORM

WORKS CITED

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