Design Science , some extracts

The starting point for the Design Science approach, which builds on Herbert Simon's 1969 classic The Sciences of the Artificial, is the recognition that there are three different types of science. First, there are the Formal Sciences, Logic and Mathematics, which have no empirical content in themselves. Then come the Explanatory Sciences, whose purpose is to explain existing phenomena. In the physical sciences that includes Physics, Chemistry and Biology, and in the social sciences Economics, Sociology and Psychology. Then there are the Design Sciences, whose purpose is to design solutions to real world problems. These include Architecture, Engineering, Medicine, and Design itself, all of which are centrally concerned to produce artifacts which are new to the world and preferred to those currently in existence.

Improving the Relevance of Management Research: Evidence-Based Management:
Design Science or Both?
Howard Davies, Associate Dean, Faculty of Business, The Hong Kong Polytechnic University

http://www.mbaworld.com/blr-archive/scholarly/9/index.pdf

Writing from the perspective of two management disciplines – information systems and innovation respectively, Hevner and Bullinger offer the following definitions. Design science:

"creates and evaluates […] artefacts intended to solve identified organizational problems"
(Hevner, March, Park, & Ram, 2004, p.77)

"strive[s] to solve problems by an action-oriented approach, in order to find a viable artefact",
(Bullinger, 2008, p.216)

Design Science to the Rescue , Antony Upward, unpublished

At the core of the study of the artificial, Simon places the science of design. In his words, "everyone designs who devises courses of action aimed
at changing existing situations into desired ones" (Simon, 1969, p 129).

Simon's (1969) concept of design science entails more than a shift in the subject of study. It calls for a change in scientific agenda. Whereas natural science is concerned with what is, design science asks what ought to be.

Design approaches in technology enhanced learning

Yishay Mor and Niall Winters , London Knowledge Lab,

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A recent addition to this debate, which we consider particularly promising, is the growing discussion about management as a design science (see, for example, van Aken, 2004, 2005; Denyer, Tranfield and van Aken, 2008; Dunbar and Starbuck, 2006; Hatchuel, Starkey and Tempest, 2010; Hodgkinson and Healey, 2008; Romme, 2003). In general, a design science approach requires better translational skills on the part of researchers and a rich ecology of interactions between knowledge generators, knowledge intermediaries and knowledge end-users (Keleman and Bansal, 2002), in an attempt to generate design artifacts that communicate meaning and co-production across diverse stakeholder groups.

Not Simply Returning to the Same Answer Over and Over Again: Reframing Relevance
Gerard P. Hodgkinson and Ken Starkey

British Journal of Management, Vol. 22, 355–369 (2011)

Towards best or better practice in corporate leadership development: operational issues in mode 2 and design science research

John Burgoyne, Kim Turnbull James

British Journal of Management
Volume 17, Issue 4, pages 303–316, December 2006

Google doc
https://docs.google.com/document/d/1nV0v7Hb_9FPCNITvgAmsOLN2pMHgDvRRejYN5B3fcRg/edit?usp=sharing

Slides
https://docs.google.com/presentation/d/1vj82Bo_yvQgNqdmINhbehpbG9_3HN2z7HY-6ZOSsVgo/edit?usp=sharing