

HAN UNIVERSITY OF APPLIED SCIENCES

**KNOWLEDGE GOALS AND PRODUCTS**  
**AT DOCTORAL LEVEL IN UAS:**  
***INTERFACING BETWEEN SCIENCE AND PRACTICE***

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PPDD 2025, LONDON  
APRIL 7, 2025

## DRIVERS BEHIND THIS CONTRIBUTION

- We're not methodologists as such!
- Though Stijn works a lot in/with, in particular, Design Science Research at Master's and PhD level at both regular universities (in particular Radboud University Nijmegen) and UAS (in particular HAN)
- It is also a product of our personal quests for understanding 'Practice Oriented Research' and *how it (fundamentally) differs from 'classic' applied research.* (Does it?)

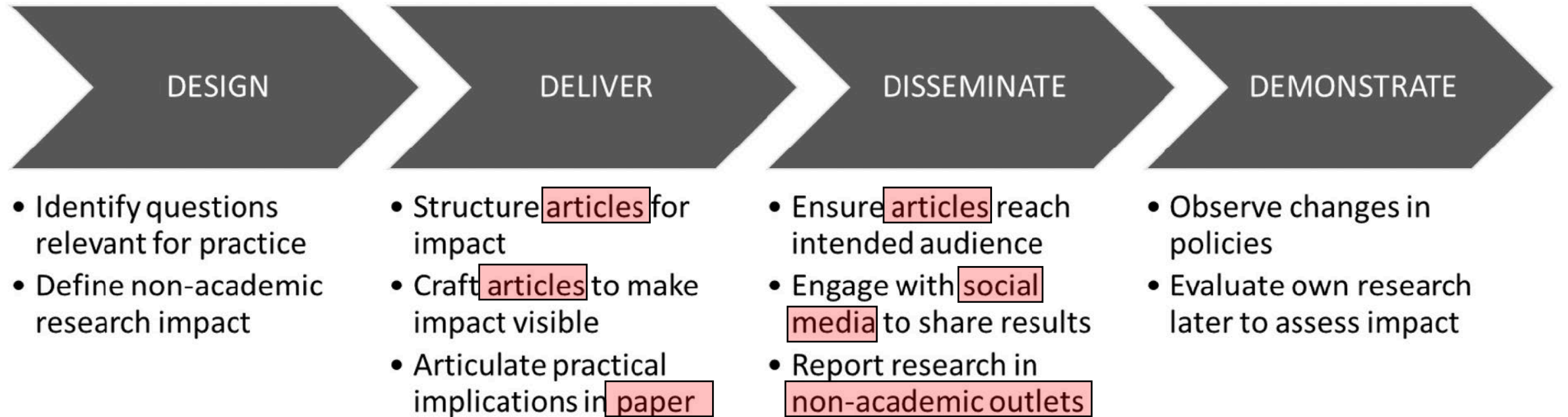
# RECAP: PILOT PROFESSIONAL DOCTORATE IN THE NETHERLANDS

- Dutch 'dual system' separating Universities and UAS, leading to need/call for distinguishable Doctorates ("8th level"): PD
- Combination of *applied research* and *complex intervention in practice*
- Combination of *creating generic applied knowledge* and *problem solving in practice*
- Our talk focusses on knowlegde *functions, goals, and products*
- As an addition to academic and professional *articles/publications*

# APPLIED SCIENCE AND ITS IMPACT ON SOCIETY: SOME RECENT POINTS OF DISCUSSION

## IJIM EDITORIAL (2024): “REAL IMPACT”

- *“Real Impact: Challenges and opportunities in bridging the gap between research and practice – Making a difference in industry, policy, and society”*
- Yogesh K. Dwivedi et al. (8 authors and 50+ contributors!)
- Editorial in International Journal of Information Management (Elsevier)
- Great stuff!
  - Solid literature overview
  - Many (pluriform) contributions from people with a number of relevant contexts/roles/interests
  - Analysis and “recommendations for stakeholders”



**Fig. 6.** The 4D Model for manifesting academic research impact.

# REASONING TOWARDS AN INTEGRATED MODEL

## SOME OBSERVATIONS AND THOUGHTS

- Though it is clearly a key goal of science/academia to contribute to society at large by creating & sharing knowledge, this effort is limited by various boundaries / standards of academia/research (including the need to *publish, mainly in peer-reviewed scientific journals etc.*).
- There is also a prevailing *directionality* of the knowledge flow in this: “from Academia to Practice”. The reverse direction is largely ignored.
- A widely held and noble (yet *also* limiting) value is that *scientific* research should be ‘independent’.
- This seems to imply for some that *situation-specific knowledge* and *non-peer-reviewed knowledge* are basically suspect (for scientists), not done; unproven, not scientific.

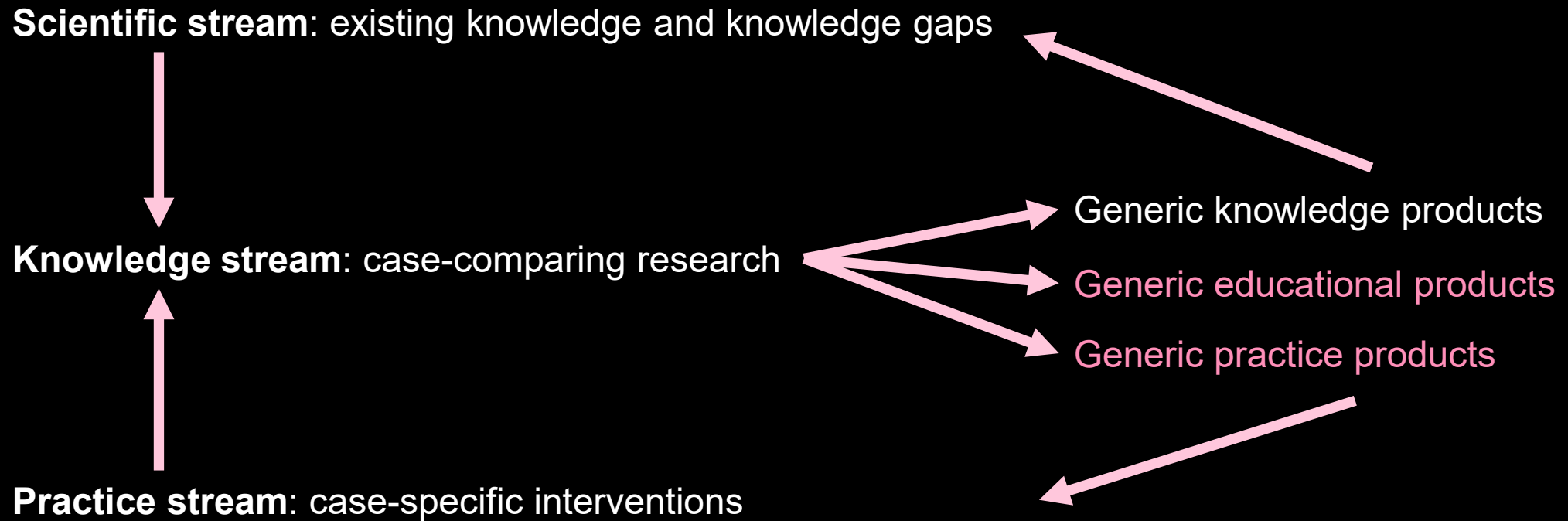
## SOME MORE OBSERVATIONS AND THOUGHTS

- Creating *Generalized Knowledge* (a.o.t. *Situation-Specific Knowledge*) is the key function for science/research, both fundamental and applied;
- Publishing (still) seems to be the primary way to shape this.
- Some emphasis on using accessible language/terminology,  
-- “**Translation** to applied context”
- Such translation is not without merit, but also a source of simplistic wishful thinking: complicated matters do not become less complicated through using ‘simple language’.
- Though jargon *is*, of course, an issue.

## A RECENT DISCUSSION IN THE NETHERLANDS (AMONG METHODOLOGISTS)

- A number of people with as main champion Daan Andriessen (prof. of applied sciences at HU) have emphasised that creating 'generic practice-oriented knowledge' (benefiting *professional education and practice*) should be the aim for practice-oriented researchers (at UASs). This as opposed to 'doing consultancy'.
- Pieter Verschuren (emeritus prof, Radboud U.) makes the contrary case that UASs should not focus on 'creating' *generalised* knowledge at all but on creating and sharing the kind of specific knowledge that is in fact much more common in practice throughout society (outside academia). [But 'all over the place' SH]
- Jac Christis (former prof. of applied sciences) takes the middel position that seems to reconsiliate the two, emphasizing the 'three streams model' in which '**practice-oriented knowledge is distilled (induced) from practice cases**' and **is shaped as knowledge products that benefit practitioners.**

# JAC CHRISTIS'S 'THREE STREAMS' MODEL

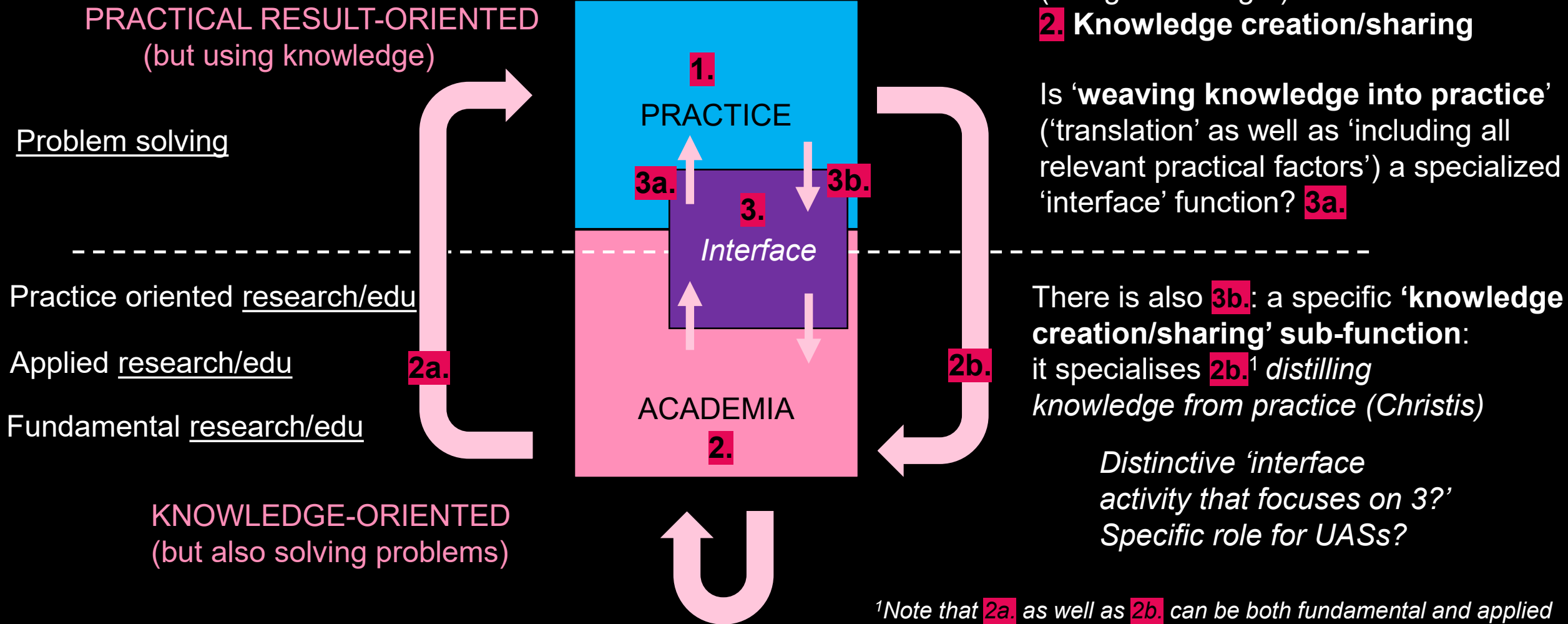


# APPLYING KNOWLEDGE: “WEAVING KNOWLEDGE INTO PRACTICE”?

- ‘Weaving knowledge into practice’ includes:
  - Combining the ‘pure, generalized knowledge’ with additional (practical, situational) factors (that usually *complicate* things substantially)
  - If generalized knowledge is *used*, it is *inherently contextualised and thus specialized* (and ultimately, instantiated) in view of the situation in practice. This is a somewhat formal (logical) interpretation of ‘application’.
  - There is also the terminological (‘translation’) aspect: **using apt language/concepts for the people involved** (but this *may* lead to oversimplification and ‘lost in translation’ effects).

Arguably, the ‘weaving of knowledge into practice’ is indeed synonymous to “**applying knowledge**”

# NUANCING THE ARENA: AN ADDITIONAL ELEMENT?

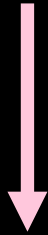


## SOME FINAL THOUGHTS ON THE STATUS OF THE '3RD KNOWLEDGE FUNCTION'

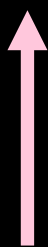
- There is no reason to see the 'interface' (function 3) as *fundamentally* apart from and 'academia'; I'd happily agree 3. is really a nuance of 2.
- However, some pragmatic difference is manifest in goals and approaches, requiring scientists to divide tasks and specialize:
  - into 'applied' and 'fundamental' (classic though tricky distinction)
  - Into 'focusing on generic/abstract knowledge' and 'doing the interfacing to not-so-scientific practice'.
  - Which requires its own *tools and methods*
- It's also very much a matter of culture, perception, and communities

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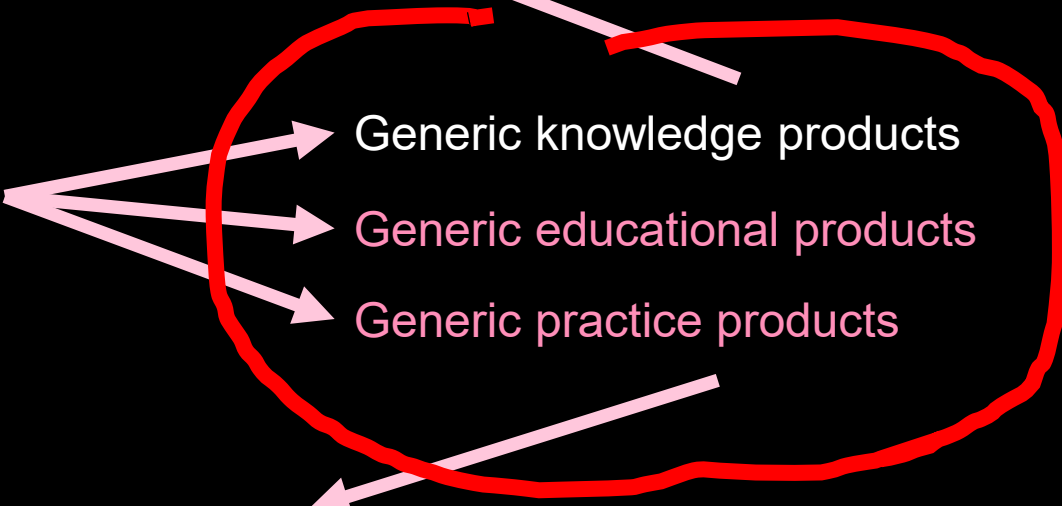
**Scientific stream:** existing knowledge and knowledge gaps



**Knowledge stream:** case-comparing research



**Practice stream:** case-specific interventions



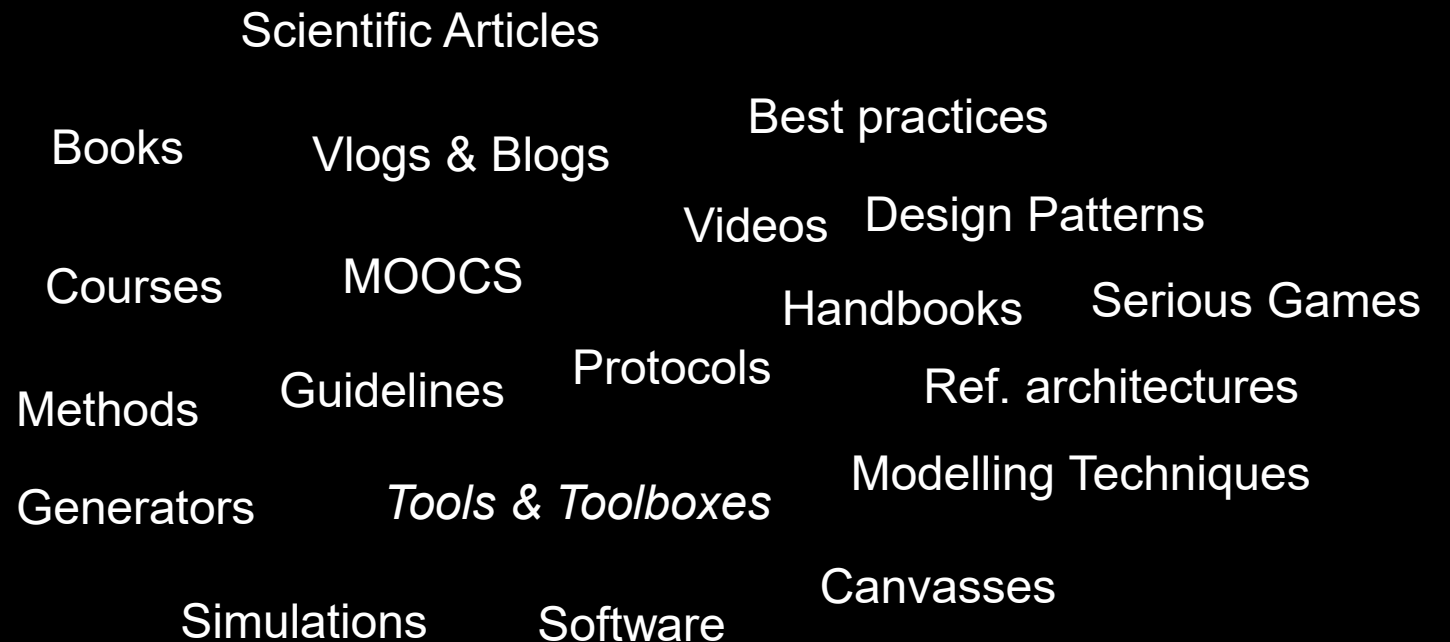
# A HANDHOLD FOR GETTING LESS ABSTRACT ABOUT KNOWLEDGE

Generic knowledge products

Generic educational products

Generic practice products

["Future Practice Contributions":  
Schuiling and Kiewiet, 2016]



# HOW IS ALL THIS RELEVANT TO THE PROFESSIONAL DOCTORATE?

- **Generic practice products** as well as **educational products** are particularly important as output for PD trajectories
- Even though both scientific and professional publications (**generic knowledge products**) are also part of the package
- The '3d Knowledge Function' (**interfacing** between academic knowledge and practice) lies at the heart of the PD (and of research @UAS)
- **Better understanding it and explaining** it may contribute to better understanding and appreciation for the PD and its knowledge goals

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