

Crossing the Rubicon: Digital Humanities Product Management

Digital Humanities (DH) technical practice has broadened considerably in the past decade, moving beyond XML encoding, data modeling, and repository development to encompass (to varying degrees of maturity) the full range of software engineering methods. The resulting technological complexity has led some teams to implement software engineering practices derived from industry, leading to the growth of Research Software Engineering (RSE) as a practice and career path. A parallel focus on sustainability has led to holistic attitudes to the Software Development Lifecycle (SDLC), and awareness of the need for methodological rigour has encouraged reusable code, containerization, and implementation of FAIR data standards. This is all positive, and will need continued attention and resource in the coming decades as our applications, systems, and infrastructures grow in complexity. It also positions the community to take the next step towards the careful integration of industry methods in DH, however, crossing the technical and ideological Rubicon into 'product' development and management.

Product Managers are in high demand in the technology sector, outstripping even Data Analysts in some industry analyses. The role is largely unstudied within academia because it is so new, and is primarily defined in technology sector books and 'blogvertising' from technology and design companies. Like many technology sector roles, the practice emerged from within technology startups aiming to conceptualise The Next Big Thing, and companies already in possession of millions of dollars funding from venture capital funds needing to focus on sales, marketing, and usage. The keyword for the first generation of product managers has been 'delight': create delightful experiences and users will flock to your product, venture funds will write cheques, and the world will be a better place.¹ This imbrication with cyberutopian values is important to note, because product management as a practice is heavily oriented towards the techno-capitalist marketplace. The goal is to proactively design and iteratively engineer, based on detailed user data, products capable of generating significant shareholder value. Why on earth would DH want to cross the Rubicon into such a domain?

The answer is much the same as with the adoption of other industry practices mentioned above: to avoid intellectual provincialism, which always rejects outside views in favour of forlorn attempts to work it out locally. The move towards product management in the technology sector suggests a profound moment in the maturity of software engineering methods. Part project manager, part

¹ Aarron Walter. *Designing for Emotion*. Brief books: New York: A Book Apart, 2011.

software analyst, part marketer, part UI/UX designer, part systems architect, product managers 'own' the full design -> engineering -> end user cycle. They emerged within Agile software engineering teams to ensure one person remains across the full spectrum of design and engineering activity. Depending on the size of their organization, product managers will spend their day doing everything from discussing strategy with CEOs, to crunching numbers with digital marketers, and discussing technical implementations with engineers. This is possible *because* of the conceptualization of the digital output as a 'product', abstracting (as it does) the technical complexity away in a manner that indicates we have arrived (for better or worse) in a world where digital and analogue products function in much the same way within the global economy.

Focusing on digital tools and services as 'products' in need of management has obvious benefits in the context of contemporary digital / platform capitalism that do not need be rehearsed here: in that worldview, the assumption is that we either pay for the product or we are the product. By viewing digital tools and services as products it brings them into alignment with the meaning of the word "product" first recorded in 1825: "An article or substance that is manufactured or refined for sale (more recently also applied to services)".² This in turn allows us to apply the full panoply of manufacturing, advertising, and supply-chain management techniques to bear to maximize profit. No longer is the digital economy barricaded off from the long run of manufacturing history; it is instead merely the latest instantiation of post-Enlightenment capitalism. The rise of product management is coextensive with the normalization of digital technology into our daily lives and the ability of the technology sector to manipulate and influence society through the application of product management techniques. Product Management is the industry practice at the core of this transition.

As powerful as the technology sector's use of the word 'product' is (in offering conceptual leverage over otherwise inscrutable layers of complexity and maximizing profit), other meanings are available. Pre-industrial definitions were more conceptual, ranging from "An object produced by a particular action or process; the result of mental or physical work or effort" (1656) to "A thing generated or produced by a mental process or state" (1650).³ The very success of contemporary product management techniques in selling us digital tools and services by analogy to post-industrial manufacturing and marketing techniques should alert us to its potential for DH; our goal must be to understand the practice

² "product, n.1". *OED Online*. December 2022. Oxford University Press. <https://www.oed.com/view/Entry/151988?rskey=IUit4X&result=1&isAdvanced=false> (accessed January 19, 2023).

³ *Ibid.*

and adapt it to our purposes. Those purposes are many and varied but the core benefit is a focus on (in our terms, research) quality. What is a good quality DH product? High quality data modeling, well commented code, transparency, reproducibility, accessibility? Infrastructural sustainability? Conceptual integrity (whatever that is)? Surely we would have to include a contribution to knowledge? The technology sector have a good point: conceptualizing digital tools and services as products is a powerful way to abstract away complexity and focus on what the object exists for, what communities and purposes it serves, and how we might seek to measure its quality. It also, I argue, opens said object up to philosophical reflection about its ontological status and relationship to objects conceptualized in similar ways across the deep past.

The big mistake technology sector product management makes, of course, is to judge the quality of a digital product only in terms of its “functional goodness” and “requirements goodness”. If it performs its function (users are delighted and monetized) and meets its requirements (concurrent users, basic legal requirements) it is considered a ‘good’ product. As Philip Brey notes, however, we also need to consider the “prudential goodness” of a product: its value to society. Indeed, Brey claims that “the highest form of goodness for a technological product is its goodness for society. This means that a prudentially good design, in the most general sense, is one that results in products that tend to be good for society”.⁴ We might also consider the values that are embedded in the design of the product. As Batya Friedman and Helen Nissenbaum noted in 1996,⁵ computer systems are inherently biased, and special care is needed to ensure appropriate values are embedded in them during the design process. In DH this would presumably extend to values such as scholarly quality and sustainability, but we might expect the best DH product management techniques to define many more.⁶

This paper will provide a brief contextual overview, as sketched above, but focus primarily on the description of two courses in product development and management delivered for the first time in 2022, in the Department of Digital Humanities at King’s College London. The first course, ‘Product Development for the Research, Cultural Heritage, and Entertainment Sectors’, guided students through the foundations of digital design and development with theoretical and philosophical reflection on the implications of product development for DH.

⁴ Philip Brey. ‘Understanding Engineering Design and Its Social, Political, and Moral Dimensions’. In *The Oxford Handbook of Philosophy of Technology*, edited by Shannon Vallor, Oxford: Oxford University Press, 2022, p.405.

⁵ Batya Friedman and Helen Nissenbaum. ‘Bias in Computer Systems’. *ACM Trans. Inf. Syst.* 14, no. 3 (July 1996): 330–47.

⁶ Batya Friedman, Peter H. Kahn, and Alan Borning. ‘Value Sensitive Design and Information Systems’. In *Human-Computer Interaction and Management Information Systems: Foundations*, 348–72. New York: Routledge, 2015.

Students were assessed on a product scope document and associated Omeka website. The second course was co-designed and delivered in collaboration with an external EdTech company (FourthRev), and delivered as a Continuing Professional Development (CPD) short course to technology sector workers interested in moving into Product Management as a career. Delivered in conjunction with technology sector partners, this course aimed to produce critically and ethically reflective graduates, trained to consider values and bias and be mindful of emerging regulations. In combination, the goal of these two courses is to begin the task of framing a specifically DH mode of product management training and to inject DH values and design principles into the technology sector. The larger hope is that the next generation of digital product development, across commercial, government, NGO, and academic contexts, is well positioned to benefit from the collective knowledge of the global DH community.