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Card-based design tools: a review and analysis of 155 card decks for designers and designing

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APPENDIX A. SUPPLEMENTARY DATA

Inventory of card-based design tools by year, main category and discipline focus

	Card deck developer	Card deck name	First developed	Main category (purpose or function) and discipline focus	Secondary/sub-categories
1.	Charles & Ray Eames http://www.eamesoffice.com/the-work/house-of-cards-2/	<i>The House of Cards</i>	1952	Creative thinking & problem solving (CT) (Design)	
2.	Crickmay & Jones (1972)	<i>*Meta Cards</i>	1972	Systematic design methods & procedures (SDM) (Design)	CT (Design) HCD (PSS – see 16)
3.	Brian Eno & Peter Schmidt https://www.enoshop.co.uk/product/oblique-strategies.html https://www.joshharrison.net/oblique-strategies/	<i>*Oblique strategies. Over one hundred worthwhile dilemmas</i>	1975 (1 st ed.)	Creative thinking & problem solving (General)	DSD – see 13 (music composition)
4.	Roger von Oech http://www.innovationmanagement.se/imtool-articles/new-innovative-whack-pack-card-deck-is-perfect-brainstorming-companion/	<i>Creative Whack Pack</i>	1989	Creative thinking & problem solving (General)	
5.	Ehn & Sjögren (1991)	<i>Layout Kit</i> <i>Organisation Kit</i>	1991	Human-centred Design (HCD) (participatory production design)	
6.	Tudor et al. (1993)	<i>CARD (Collaborative Analysis of Requirements and Design)</i>	1992	Human-centred design (IT systems)	
7.	Michalko (2006) http://www.innovationmanagement.se/imtool-articles/thinkpak-brainstorming-card-deck-takes-scammer-to-the-next-level/	<i>Thinkpak. A brain storming card deck</i>	1994	Creative thinking & problem solving (General)	
8.	Tschudy et al. (1996)	<i>PictureCARD</i>	c. 1995	Human-centred design (IT systems)	
9.	Neilsen (1995) https://www.nngroup.com/articles/usability-testing-1995-sun-microsystems-website/	<i>Card Sort (closed categories)</i>	c. 1995	Human-centred design (HCI design)	DSD (website design)
10.	Lafrenière (1996)	<i>CUTA: A simple, practical, and low-cost approach to task analysis</i>	1996	Human-centred design (HCI design)	
11.	Muller (2001)	<i>Layered CARD</i>	c. 2000	Human-centred design (IT systems)	

12.	Brandt & Christiansson (2004)	<i>The User Game</i> (includes Moment Cards linked to video clips)	c. 2000	Human-centred design (IT systems)	FT –see 14 (Design)
13.	Brandt & Christiansson (2004)	<i>The Landscape Game</i> [utilises outputs from the User Game]	c. 2000	Domain-specific design (DSD) (environmental design)	FT (Design)
14.	Friedman & Hendry (2012) http://www.envisioningcards.com/	<i>Envisioning Cards</i>	2002	Futures thinking (FT) (Design)	HCD (human values)
15.	Mackay (2002) interliving.kth.se/publications/thread/index.html	<i>Interactive Thread cards</i>	2002	Systematic design methods & procedures (Design)	
16.	IDEO https://www.ideo.com/post/method-cards http://hcitang.org/uploads/Teaching/ideo-method-cards-2by1.pdf	<i>*IDEO Method Cards. 51 ways to inspire design</i>	2003	Human-centred design (PSS-Products, services & systems)	CT (Design) FT (Design)
17.	Kes Sampanthar http://www.innovationmanagement.se/imtool-articles/first-look-metamemes-brainstorming-card-deck/	<i>Meta Memes</i>	2003	Creative thinking & problem solving (General)	
18.	Roger von Oech http://creativethink.com/products.html	<i>Innovative Whack Pack</i>	2003	Creative thinking & problem solving (General)	
19.	Gerald Haman http://www.innovationmanagement.se/imtool-articles/knowbrainer-2-0-a-powerful-portable-creativity-tool/	<i>The KnowBrainer Thinker Tool 3.0</i>	2004	Systematic design methods & procedures (Design & innovation)	
20.	Hape Etzold http://www.etzold.biz/	<i>TRIZ Solution Cards</i>	2004	Creative thinking & problem solving (engineering design)	
21.	University of St Gallen https://www.slideshare.net/DTHSG/design-thinking-method-cards	<i>*Design Thinking Method Cards(DT@HSG)</i>	2005	Systematic design methods & procedures (Design & innovation)	CT (Design) HCD (PSS)
22.	Halskov and Dalsgard (2016)	<i>Domain Cards; Technology Cards; Inspiration Cards Workshop</i>	c. 2005	Creative thinking & problem solving (Design)	
23.	Economist Group Media Lab http://www.deckaholic.com/lib/idea-generator http://labs.economist.com/	<i>Idea Generator</i>	c. 2005	Creative thinking & problem solving (Design)	
24.	Brandt (2006)	<i>The Nordvest game</i>	c. 2005	Domain-specific design (built environment)	
25.	Mitch Ditkoff, Idea Champions http://www.ideachampions.com/free_the_genie.shtml	<i>Free the Genie Cards</i>	2005	Creative thinking & problem solving (General)	
26.	Gary Bertwhistle, Blue Moon Creative, Australia http://www.innovationmanagement.se/imtool-articles/need-help-	<i>Ask Einstein cards</i>	2005	Creative thinking & problem solving (General)	

	brainstorming-try-the-new-ask-einstein-card-deck/				
27.	Rory O'Connor http://www.innovationmanagement.se/imtool-articles/the-inner-vision-deck-dont-under-estimate-this-no-frills-brainstorming-tool/	<i>Inner Vision deck</i>	2005	Creative thinking & problem solving (General)	
28.	Silje Kamille Friis Kolding School of Design, Denmark https://www.designskolenkolding.dk/en/news/method-cards-open-door-life-long-learning	<i>DSKD Method Cards</i>	2006	Systematic design methods & procedures (Design)	TB –see 34 (Design) CT (Design)
29.	Arup Foresight https://www.driversofchange.com/tools/doc/	<i>*Drivers of Change cards: Demographics; Urbanisation; Climate change; Energy; Water; Waste</i>	2006-9	Futures thinking (General)	CT (Gen) DSD (e.g. built environment;)
30.	Social Innovation Lab for Kent https://socialinnovation.typepad.com/silk/silk-method-deck.html	<i>*SILK Method Deck. A deck of method cards for service innovation</i>	2007	Human-centred design (Service design)	CT (Design) TB (Gen) DSD (service design)
31.	nForm, Edmonton, Canada http://nform.com/cards/	<i>UX Cards</i>	2007	Human-centred design (digital PSS)	
32.	Beck et al. (2008)	<i>Instant Card Technique</i>	2007	Human-centred design (digital PSS)	CT (Design)
33.	Art Center College of Design http://www.mobilityvip.com/	<i>Mobility VIP (Vision Integration Process) cards</i>	2007	Domain-specific design (sustainable mobility)	
34.	Ruth Tearle & Mike Blignaut, Change Designs https://changedesignsportal.worldsecuresystems.com/all-products/facilitation/powerful-facilitation-cards	<i>Powerful Facilitation Cards</i>	2007	Team building & collaborative working (TB) (General)	
35.	Hornecker (2010) http://www.ehornecker.de/Tangibles/100321_kartenset.pdf	<i>Card Brainstorming Game (Framework card game)</i>	2007	Creative thinking & problem solving (HCI design)	
36.	E. de Bruyn & A. de Jong, Center for People & Buildings, Delft https://www.cfpb.nl/en/tools/workplace-game/#item-23	<i>The workplace game</i>	2008	Human-centred Design (office design)	
37.	Jon Aquino, Canada http://www.innovationtools.com/pdf/eyewire_cards.pdf http://jonathanaquino.com/eyewire.php	<i>EyeWire Creativity Cards</i>	2008	Creative thinking & problem solving (Design)	
38.	Kultima et al. (2008)	<i>VNA (Verbs Nouns, Adjectives) Cards</i>	c. 2008	Domain-specific design (computer games)	

39.	Roberta Tassi, Politecnico Milano/Domus Academy http://www.servicedesigntools.org/repository	<i>*Service Design Tools. Communication method supporting design processes [Creative Commons]</i>	2009	Human-centred design (Service design)	CT (Design) SDM DSD (service design)
40.	Yilmaz et al. (2012)	<i>**Design Heuristics</i>	2009	Creative thinking & problem solving (Design)	
41.	Lucero & Arrasvuori, Nokia Research Center http://www.funkydesignspaces.com/plex/PLEX_Cards.pdf	<i>**PLEX (Playful Experiences) Cards [Free download]</i>	2009	Human-centred design (PSS)	DSD (games, apps, digital devices) CT (Design)
42.	Golembewski & Selby (2010)	<i>Ideation Deck</i>	c. 2009	Creative thinking & problem solving (Design)	
43.	Kes Sampanthar http://www.innovationmanagement.se/imtool-articles/thinkcube-helps-cube-dwellers-to-be-more-innovative/	<i>Thinkcube</i>	2009	Creative thinking & problem solving (General)	
44.	Erin Malone & Christian Crumlish, Game Crafter https://www.thegamecrafter.com/games/social-mania:-designing-social-mania/	<i>Social Mania Game</i>	2009	Domain-specific design (website design)	TB (Design)
45.	Nathan Shedroff http://nathan.com/experience-design-1-cards-writing-design-and-production/	<i>Experience Design 1 cards</i>	2009	Human-centred design (interactive digital systems)	
46.	Vaajakallio (2012)	<i>Project Planning Game</i>	2009	Systematic design methods & procedures (Design)	
47.	Lockton (2010), Brunel University, UK http://designwithintent.co.uk/introduction-to-the-design-with-intent-toolkit/	<i>*Design with Intent. 101 patterns for influencing human behaviour through design [Creative Commons 3.0]</i>	2010	Human-centred design (PSS)	DSD (e.g. traffic management)
48.	Evans & Pei (2014), Loughborough University, UK and Industrial Designers Society of America https://www.lboro.ac.uk/media/wwwlboroacuk/external/content/schoolsanddepartments/designschool/downloads/id-cards%20(1).pdf	<i>*iD Cards. Design representations to support new product development [Free download]</i>	2010	Systematic design methods & procedures (Design)	CT (Design)
49.	Open University (2010), UK http://www.open.ac.uk/courses/modules/u101#	<i>* U101 Design Thinking Welcome Pack cards</i>	2010	Creative thinking & problem solving (Design)	SDM HCD (PSS)
50.	Stanford University Institute of Design https://dschool.stanford.edu/resources/design-thinking-bootleg	<i>** Bootcamp Bootleg Methods Cards [Creative Commons 3.0]</i>	2010	Human-centred design (PSS)	CT (Design) TB (Design)

51.	Simon Clapworthy http://www.service-innovation.org/new-version-of-the-touch-point-cards/	**AT-ONE Touchpoint Cards [Creative Commons 4.0]	2010	Human-centred design (PSS)	DSD (service design)
52.	Christophe Berg, Niki Smit & Liselore Goedhart, Utrecht School of the Arts http://www.mascontext.com/issues/6-amusement-summer-10/game-seeds/	<i>Game Seeds</i>	2010	Domain-specific design (computer games)	
53.	Stephen P. Anderson http://www.getmentalnotes.com/cards	<i>Mental Notes</i>	c. 2010	Domain-specific design (web/app design)	CT (Design) HCD (digital PSS)
54.	James Kelway https://www.slideshare.net/JamesKelway/uxbasis-getting-ux-integrated	<i>UX Basis. UX in a Box cards</i>	2010	Domain-specific design (web design)	HCD (PSS)
55.	Erick Schonfeld https://techcrunch.com/2010/08/25/scvngr-game-mechanics/	<i>SCVNGR (SCaVeNGeR) Secret Game Dynamics</i>	2010	Domain-specific design (computer games)	
56.	Bekker & Antle (2011) http://antle.iat.sfu.ca/research/dsd/	**DSD Cards: Developmentally situated design of products for children [Creative Commons 4.0]	2011	Domain-specific design (for children)	HCD (PSS)
57.	Charlotte Magnusson, Lund University, Sweden http://www.haptimap.org/designtools/du.html	**Dynamic User Experience Context Cards (Haptimap) [Free download]	2011	Human-centred design (PSS)	DSD (digital mobile devices)
58.	Pieter Jongerius & Wouter Middendorf, Fabrique & TU Delft https://www.fabrique.nl/insights/ https://vimeo.com/channels/fabrikuover	<i>inSights Cards</i>	2011	Domain-specific design (persuasive design of websites & interactive products)	
59.	Belman et al. (2011) https://www.valuesatplay.org/about-vap	<i>Values at Play: Grow a game cards</i>	2011	Domain-specific design (computer games)	
60.	Cooper consultants https://www.cooper.com/journal/2011/08/good_design_is_only_half_the_s	<i>Design Collaboration and Communication</i>	2011	Team building & collaborative working (Design)	
61.	Peter Simon http://www.psimondesign.com/stem-to-steam-method-cards	<i>STEM to STEAM Method Cards</i>	2011	Creative thinking & problem solving (Design)	
62.	Carneiro et al. (2012)	<i>i/o cards</i>	c. 2011	Human-centred design (interactive digital systems)	
63.	Alves & Roque (2011) http://www.soundingames.com/index.php?title=Deck	<i>Sound Design Deck</i> [Free Download]	2011	Domain-specific design (games sound design)	
64.	Eco-Innovators https://www.leylaacaroglu.com/portfolio/2016/12/16/design-play-cards	*Design Play Cards. Designing for sustainability	2011	Domain-specific design (sustainable design)	CT (Design) HCD (Products)

65.	Ola Möller https://methodkit.com/ 7 For Workshop Planning https://methodkit.com/download-workplan-cc/	<i>MethodKit®</i> 1 For Service Design 2 For Service Design in Hotels 3 For Team Development 4 For Projects 5 For Product Development 6 For App Development 7 For Workshop Planning [Creative Commons] 8 For Architecture & Public Space 9 For Cities 10 For Kitchen Design 11 For Bathroom Design 12 For Equal Places 13 With Tech Building Blocks 14 With Trends 15 With Human Needs 16 With Selection Criteria 17 With Locations 18 With Personas	2012-2018	1 DSD (service design) 2 DSD (hotel design) 3 TB (General) 4 SDM (General) 5 SDM (Design) 6 DSD (app design) 7 TB (General) 8 DSD (built environment) 9 DSD (built environment) 10 DSD (kitchen design) 11 DSD (bathroom design) 12 HCD (gender focus) 13 CT (Design) 14 FT (General) 15 HCD (PSS) 16 SDM (selection focus) 17 HCD (environment & culture) 18 HCD (PSS)	
66.	Group Pattern Language Project, Oregon, USA https://groupworksdeck.org/	<i>*Group Works. A pattern language for bringing life to meetings and other gatherings</i>	2012	Team building & collaborative working (General)	CT (Gen) SDM (Gen)
67.	Singapore University Technology Design/MIT Intl Design Center https://idc.sutd.edu.sg/wp-content/uploads/.../Design-Method-Card-1-Feb-2017.pdf	<i>**SUTD-MIT Design Methods Cards [Free download]</i>	2012	Systematic design methods & procedures (Design)	CT (Design) HCD (PSS)
68.	Ola Möller https://methodkit.com/	<i>**MethodKit for Web Development (One of 19 MethodKits relevant to design – see entry 65)</i>	2012	Domain-specific design (web design/development)	
69.	Near Future Laboratory https://nearfuturelaboratory.myshopify.com/products/design-fiction-product-design-work-kit	<i>**Design Fiction Product Design Work Kit (includes Design Fiction, Design Brief Creation Playing Cards)</i>	2012	Creative thinking & problem solving (Design)	FT (Design)
70.	Vines et al. (2012)	<i>Questionable Concepts</i>	2012	Human-centred design (PSS)	
71.	Andrei Herasimchuk et al., Involution Studios http://designaxioms.com/	<i>Design Axioms. For fine interface design</i>	2012	Human-centred design (HCI design)	
72.	LUMA Institute, Pittsburgh, USA https://www.amazon.com/Innovating-People-Human-Centered-Design-Planning/dp/098575091X	<i>Innovating for People: Human-Centered Design Planning Cards</i>	2012	Human-centred design (PSS)	

73.	Ryan Burke & Greg Bamford, Leadership+Design http://www.leadershipanddesign.org/ld-collaboration-cards.html	<i>L+D Leadership + Design Collaboration Cards</i>	2012	Team building & collaborative working (General)	
74.	Dan Brown https://www.thegamecrafter.com/games/surviving-design-projects-v2	<i>Surviving Design Projects: Managing conflict in creative environments</i>	2012 2016 (v2)	Team building & collaborative working (Design)	
75.	IVTO – Instituut voor Toekomst Ontwikkeling (Institute for Future Development), Netherlands https://ivto.org/foresightcards/	<i>Foresight Cards- STEEP Edition</i>	2012	Futures thinking (General)	
76.	Watson (2013), Designing Out Crime research centre, UTS Sydney, Australia	<i>DOC Method Cards</i>	2012	Domain-specific design (crime reduction)	
77.	TLCLabs https://www.linkedin.com/pulse/20140220215040-13520960-bias-a-game-for-product-designers-strategists	<i>BIAS A Game for Product Designers and Strategists</i>	2012	Human-centred Design (Products)	
78.	Kristel Van Ael, Namahn Human-centred Design, Brussels http://namahn.com/share/human-drives-card-deck/	<i>Human Drives</i>	2012	Human-centred Design (PSS)	
79.	James Allsopp & Kam Star, Playgen, London http://gamification.playgen.com/	<i>Adding Play Toolkit</i>	2012	Domain-specific design (games & gamification)	
80.	Chris Marcell Murchison, HopeLab, San Francisco, USA https://www.slideshare.net/hopelab/hl-check-indeckbook091412low	<i>Check-in Deck [Free download]</i>	2012	Team building & collaborative working (General)	CT (Gen)
81.	B.J. McCabe http://www.innovationmanagement.se/imtool-articles/pace-card-deck-helps-individuals-teams-to-become-more-innovative/	<i>PACE Card Deck</i>	2012	Creative thinking & problem solving (General)	
82.	Gary Burns, UK http://www.pushyourdesign.com/portfolio/Method_-_Home.html	<i>Push your Design Method Cards</i>	c. 2012	Human-centred design (interactive digital systems)	
83.	Bettina von Stamm, UK https://www.bettinavonstamm.com/totem-cards	<i>*Totem Cards. A tool for visualising the invisible</i>	c. 2013	Team building & collaborative working (General)	CT (Gen)
84.	Leitner (2013)	<i>**64 Concepts of Pattern Theory card deck</i>	2013	Systematic design methods & procedures (Systems design & innovation)	CT (Design) HCD (PSS)
85.	Keith Sawyer http://keithsawyer.com/zzdeck/	<i>Zig Zag Creativity Cards</i>	c. 2013	Creative thinking & problem solving (General)	
86.	Sara Rubino, Wimer Hazenberg & Menno Huisman, Booreiland Digital Design, Amsterdam https://www.bispublishers.com/75-tools-for-creative-thinking.html	<i>75 Tools For Creative Thinking</i>	2013	Creative thinking & problem solving (General)	
87.	Matteo di Pascale, Polytecnico Milano	<i>Intúiti Creative cards</i>	2013	Creative thinking & problem solving	

	https://intuiti.it/			(General)	
88.	Center for Creative Leadership, Brussels https://shop.rsvpdesign.co.uk/visual-explorer-facilitator-s-post-card-set-6in-x-4in	<i>Visual Explorer Cards</i>	2013	Team building & collaborative working (General)	CT (Gen)
89.	Claudio Perrone, Ireland https://a3thinker.com/deck/	<i>The A3 Thinkers Action Deck.</i>	2013	Systematic design methods & procedures (Design & innovation)	CT (Gen) TB (Gen)
90.	Funnybone Toys, USA https://www.funnybonetoys.com/product/disruptus/	<i>Disruptus</i>	2013	Creative thinking & problem solving (Design)	
91.	Chad Littlefield & Will Wise https://weand.me/product/we-connect-cards/	<i>We! Connect Cards</i>	2013	Team building & collaborative working (General)	
92.	Mitch Ditkoff, Idea Champions http://www.ideachampions.com/teamwork_cards.shtml	<i>Teamwork cards</i>	c. 2013	Team building & collaborative working (General)	
93.	Christoph Meinel, Holger Rhinow & Eva Köppen, HPI, Potsdam http://www.dennis-oswald.de/BLOG/?p=1032	<i>Design thinking Prototyping Cards [Creative Commons 3.0]</i>	2013	Systematic design methods & procedures (Design)	
94.	Deng et al. (2014)	<i>TANGO Cards</i>	c. 2013	Domain-specific design (computer games & learning interfaces)	
95.	Denning, T., Friedman, B. & Kohno, T., University of Washington http://securitycards.cs.washington.edu/index.html	<i>The Security Cards. A security threat brainstorming kit (Creative Commons 3.0)</i>	2013	Domain-specific design (computer security systems)	
96.	Jesse Schell https://www.amazon.co.uk/Art-Game-Design-Lenses-Second/dp/0692288872	<i>*The Art of Game Design: A Deck of Lenses</i>	2014	Domain-specific design (computer games)	CT (Design) SDM HCD (games)
97.	Mueller et al. (2014) http://exertiongameslab.org/projects/design-tools-exertion-cards	<i>**Exertion Cards [Free download]</i>	2014	Domain-specific design (games & digital devices for exercise & sport)	
98.	Ben Barrett-Forest https://www.behance.net/gallery/62803733/The-Design-Deck-playing-card-guide-to-graphic-design	<i>The Design Deck: A playing-card guide to graphic design</i>	2014	Domain-specific design (graphic design)	
99.	Eric Miller Design, New York https://uxkits.com/products/website-deck-of-cards	<i>Website Deck</i>	c. 2014	Domain-specific design (website design)	
100.	SY Partners, New York https://www.amazon.com/Conjure-Your-Creativity-Tip-Cards/dp/B00UY40I40	<i>UNSTUCK Conjure Your Creativity tip cards</i>	2014	Creative thinking & problem solving (General)	
101.	Douglas Schuler, Public Sphere Project, USA http://www.publicsphereproject.org/patterns/lv	<i>Liberating Voices cards</i>	2014	Futures thinking (General)	
102.	UX Techniques, Australia	<i>UX Techniques Trading Cards</i>	2014	Systematic design methods &	DSD (digital PSS)

	https://uxmastery.com/ux-australia-2014-wrap-sketchnotes/ux-trading-cards-2/			procedures (Design)	
103.	Stuart Candy and Jeff Watson, Situation Lab, USA http://situationlab.org/project/the-thing-from-the-future/	<i>**The Thing from the Future</i> [Creative Commons 2015]	2015	Futures thinking (Design)	CT (Design)
104.	Silje Kamille Friis, Kolding School of Design, Denmark https://www.designskolenkolding.dk/en/news/design-play	<i>Co-Creation cards</i>	2015	Systematic design methods & procedures (Design)	
105.	Wetzel et al. (2017)	<i>Mixed Reality Game Cards</i>	2015	Domain-specific design (computer games)	
106.	Canina et al. (2015) https://core.ac.uk/download/pdf/84891726.pdf	<i>IDEActivity Card Deck</i>	2015	Creative thinking & problem solving (Design)	
107.	Suvo Das, India http://suvo.in/suvo/?p=280	<i>DRIP SIP: Design Thinking Playing Card Deck</i>	2015	Human-centred design (PSS)	
108.	Enric Seggara, Manual Thinking, Barcelona https://www.enricsegarra.com/new-nuevo-design-thinking-kit/	<i>Design Thinking Kit</i>	2015	Creative thinking & problem solving (Design)	
109.	Louise Stigell & Alexander van Riesen, Sweden https://www.playify.se/about-playify/	<i>Playify</i>	2015	Domain-specific design (computer games)	
110.	Casais et al. (2016)	<i>*SIM cards. Design with symbolic meaning for user happiness</i> [Creative Commons 3.0]	2016	Human-centred design (PSS)	DSD (positive design)
111.	Ulla Raebild & Karen Hasling, Design School Kolding and Copenhagen Fur, Denmark https://www.designskolenkolding.dk/sites/default/files/publication/download/sustainable_fur_cards-a4print-small.pdf	<i>**Fur and Sustainability Cards: design for longevity</i>	2016	Domain-specific design (sustainable fur products)	HCD (sustainable products)
112.	Kristel Van Ael & Joannes Vandermeulen, Namahn Human-centred design, Brussels http://namahn.com/share/paradox-cards/	<i>Paradox Cards</i>	2016	Creative thinking & problem solving (General)	
113.	Alejandro Masferrer, Spain www.trytriggers.com	<i>Triggers: a powerful ideation tool</i> 1 Human centred Deck 2 Innovation Deck 3 Serendipity Deck 4 Graphic Deck	2016	1 Human-centred design (PSS) 2 Futures thinking (Design) 3 Creative thinking (General) 4 Domain-specific design (graphics)	
114.	Openmind Consulting + Design, South America https://www.openmind-global.com/conoce-mas-de-unico-el-nuevo-kit-de-open-cards-para-reconocimiento	<i>Unico</i>	2016	Team building & collaborative working (General)	

115.	Openmind Consulting + Design, South America http://openmind-store.com/en/11-open-cards-methodology	<i>Open Mind's Creativity Cards</i>	2016	Creative thinking & problem solving (General)	
116.	Alexandra Valdivieso & Norberto Chio, Seven Thinkers, Madrid, Spain https://www.kickstarter.com/projects/1251477973/khandu-building-little-thinkers?ref=category	<i>Khandu</i>	2016	Creative thinking & problem solving (Design for children)	
117.	Equilibrium Design/University of Technology Sydney https://www.equilibrium.design/projects/uts-method-cards/	<i>UTS Method Cards</i>	2016	Systematic design methods & procedures (Design & innovation)	
118.	Hödl et al. (2016)	<i>TMAP (Technology mediated audience participation in live music) Cards</i>	2016	Creative thinking & problem solving – music audience participation (Design)	
119.	Val Mitchell et al. Loughborough University, UK https://figshare.com/articles/Home_Life_Insight_Cards/4996541	<i>**Home Life Insights cards [Creative Commons 4.0]</i>	2017	Human-centred design (PSS)	DSD (sustainable home living)
120.	Board of innovation, Antwerp & New York https://www.boardofinnovation.com/tools/brainstorm-cards/	<i>Brainstorm cards</i>	c. 2017	Creative thinking & problem solving (General)	
121.	Philippa Mothersill, MIT Media Lab, USA https://www.media.mit.edu/projects/design-human-design/overview/	<i>design(human)design</i>	2017	Creative thinking & problem solving (Design)	
122.	Monica Kang, Innovators Box, Washington, USA https://www.innovatorsbox.com/spark/	<i>SPARK</i>	c. 2017	Team building & collaborative working (General)	CT (Gen)
123.	Compton et al. (2017)	<i>Generominos: Ideation Cards for Interactive Generativity</i>	c. 2017	Domain-specific design (Interactive digital systems)	CT (Design)
124.	Museum Futures Lab, TU Delft, Netherlands https://delftdesignlabs.org/news/insight-cards/	<i>Museum Futures Insights Cards</i>	2017	Domain-specific design (museum design)	
125.	Hilden et al. (2017)	<i>Context Cards</i>	2017	Domain-specific design (public transport)	HCD (transport)
126.	Eric Morrow, IBM https://medium.com/design-ibm/prototyping-ibm-design-thinking-method-cards-1328080da382	<i>IBM Design Thinking Method Cards</i>	2017	Systematic design methods & procedures (Design)	HCD (digital PSS)
127.	Leyla Acaroglu, Disrupt Design https://www.disruptdesign.co/designercise	<i>Designercise Ideation Toolkit</i>	2017	Creative thinking & problem solving (General)	
128.	Ontario Digital Services https://www.dropbox.com/sh/ku5kt35fyl7a2fe/AABWuybfmn7gHu_WwAvC7G2va?dl=0&preview=ODS-MethodCards-2017.pdf	<i>ODS Method Cards</i>	2017	Human-centred design (digital PSS)	

129.	Dan Lockton, Imaginaries Lab, Carnegie Mellon University, Pittsburgh http://imaginari.es/new-metaphors/	**New Metaphors cards [Creative Commons 2.0]	2018	Domain-specific design (interactive digital products & services)	CT (Design) HCD (PSS)
130.	Soulsight, Chicago, USA https://www.artofplay.com/products/spark	<i>Spark: The Soulsight Deck of Bright Ideas</i>	2018	Creative thinking & problem solving (General)	
131.	General Service Administration, US Government https://methods.18f.gov/	<i>18F Method Cards</i>	2018	Human-centred design (PSS)	
132.	Rikie Ishii, Idea Plant, Japan https://ideaplant.jp/triz/	<i>TRIZ Brainstorming Cards</i>	2018	Creative thinking & problem solving (engineering Design)	
133.	Logler et al. (2018) https://vsdesign.org/publications/pdf/metaphor_cards_internationaljustice_v.march2018.pdf	<i>Metaphor Cards</i>	2018	Domain-specific design (PSS for international justice)	
134.	James Dyson Foundation https://www.jamesdysonfoundation.co.uk/resources/challenge-cards.html	<i>Challenges Cards</i> [Free download]	2018	Creative thinking & problem solving (Design for schools)	
135.	Stanford University Institute of Design https://dschool.stanford.edu/resources/design-thinking-bootleg	<i>Design Thinking Bootleg</i>	2018	Human-centred design (PSS)	CT (Design) TB (Design)
TOTAL = 155 including 17 extra MethodKit decks; 3 extra Triggers decks					
* original 15 card decks for validating classification ** second 15 decks for validating classification					
web links accessed 20 April 2019					

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NB: These are the references for the above table, many of which are cited and appear in the reference list for the accompanying article.

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