

Brunella Longo

Knowledge Changes

The **I C m² : R €** papers
on data and change management

Extract

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To the memory of my beloved dog, Pupa

Table of Contents

Introduction	1
2021	
10.1 The years ahead	12
10.2 Linked up and pitfalls down	16
10.3 Knowledge saves lives	21
10.4 A missing discipline for the world of data	24
10.5 Brace brace: there are no pilots for the infosphere	28
10.6 What hath God wrought	33
10.7 Water in the net	37
10.8 The valley of deletion	41
10.9 Digital Humanities: a long time coming?	44
10.10 Data Science in a jam	48
10.11 Gangsters in your pocket	51
10.12 Goodbye and good luck!	55
2020	
9.1 All change, all change - for brevity	57
9.2 Summits lost in vapour	62
9.3 Take a sad song and make it better	67
9.4 Good is something you do	71
9.5 Longing for a Walkman effect	75
9.6 What is interesting keeps changing	79
9.7 The poetics of technical objects	82
9.8 The vicious circles of human and artificial intelligence	86
9.9 Aloof from the bickering, close to the core	90
9.10 Narratives that stink	94
9.11 Exit strategies for the cul-de-sac of the cookie	99
9.12 Standards for life	104
2019	
8.1 It's the business model, stupid	108
8.2 The hole in the gap	116
8.3 Are all our thoughts just gambles or predictions	121
8.4 Mother Courage and the shotguns of cybercrime	127
8.5 Warm changes and cold showers	134
8.6 It is a system, not an organ. Part 1	142
8.7 It is a system, not an organ. Part 2	154
8.8 It is a system, not an organ. Part 3	158
8.9 Is there any ideal pace for innovations	164
8.10 Beyond the illusions of push	169
8.11 A stitch in time saves nine	176
8.12 The digital ethics jigsaw - or is it just a blob	182
2018	
7.1 Look for money in the world, not in the journals	189

7.2 Share, share, does anybody care?	197
7.3 What lies ahead for corporate intranets	203
7.4 Flaws and flops in deregulation and self assurance	209
7.5 Leap before you look	216
7.6 When the accuracy page is not found	221
7.7 Where there is dirt there is a system	227
7.8 The balcony of envy	232
7.9 Mirrors mirrors on my screen... revisited	239
7.10 Does the call for veganism need to be emotional?	247
7.11 Notes on Universal Discredit	250
7.12 Houston, we've had a problem	265
2017	
6.1 Save the Safest. Sonia's discoveries on data falsification	269
6.2 No bit for blame: the OxCheek and SmartAss story	277
6.3 Every journey matters: opportunism and consumer rights in swarm intelligence.....	284
6.4 Decluttering machine learning through accuracy	288
6.5 Patient education and the Little Shop of Horrors	292
6.6 Otzi the iceman and the secrets of rankings	298
6.7 The printers' job	307
6.8 I am not the lady next to me	312
6.9 How to make a Top Ten	317
6.10 The map is not the territory, or... is it?	325
6.11 There is no fire brigade for the Internet!	330
6.12 If this is a landlord	335
2016	
5.1 What is the essence of data science?	343
5.2 Knowdging and visions of paradise	347
5.3 Knowdging and visions of paradise	350
5.4 Knowdging and visions of paradise	354
5.5 Three good reasons for the UK to stay in Europe	359
5.6 Governance of relationships comes at a price	364
5.7 The firewalls, the filters and the logged off	368
5.8 Is this your moment?	374
5.9 IoT waiting for Godot	382
5.10 Tony, the global repentant of copyright	390
5.11 The benefits of disagreement	401
5.12 Is success in the connections you make?	407
2015	
4.1 Let's talk about the money	410
4.2 Isn't it time to start the calculation game	413
4.3 If change does not come easy, make it easier to change	419
4.4 Is the evidence not enough?	423
4.5 Take care of your bacteria	429
4.6 Transparency is the new privacy. Part 1: Trust	435

4.7 Transparency is the new privacy. Part 2: Accountability	440
4.8 Innovation in recruitment: talking royalties instead of wages	452
4.9 Big boys, the cunning of copyright and the looming of the syndication... ..	455
4.10 Changing minds: can open data deter finance professionals from misleading... ..	467
4.11 Personas in search of an author and the ecstasy of agile requirements... ..	473
4.12 Do you know the value of your life?	479
2014	
3.1 I do not want your passwords! Can emotional intelligence help with IT... ..	484
3.2 Let's close in on privacy crimes	487
3.3 Watch that change that changes anything!	490
3.4 Do you sell Executive MBAs? Keep waiting!	493
3.5 So do you want to bully me? And how?	497
3.6 You said that!	501
3.7 Global internet governance needs more than the European right to be forgotten... ..	504
3.8 Atoms need precision	508
3.9 Repetita don't always iuvant	513
3.10 Let social media battles end or, at least, be traceable and regulated... ..	516
3.11 Nothing like a wrong bankruptcy order to spoil my reputation?	520
3.12 Lessons learned from the defeat of Google Authorship and catalogues' contests... ..	525
2013	
2.1 Professionalism is what you want	531
2.2 No, cyber security training does not solve the problem	534
2.3 Soft (s)kills! Let's make it a bit harder	539
2.4 Are you really sure you've got two ideas?	542
2.5 Those Brunellas are Google's delusions. Get over it!	546
2012	
1.1 A picture is worth a thousand words - or zero	549
1.2 Britishness for professionals	552
Subject Index	554
How to cite	564

Introduction

To understand just one life you have to swallow the world.

- Salman Rushdie, *Midnight's children* (1981)

Knowledge changes is the collection of the articles I wrote and published for my online magazine *icm2:re [I Changed My Mind Reviewing Everything]* between 2012 and 2021.

The focus of the magazine was on change management and the world of data. Here are the words I wrote back in 2011 to describe its mission:

This column deals with some aspects of change management processes experienced almost in any industry impacted by the digital revolution: how to select, create, gather, manage, interpret, share data and information either because of internal and usually incremental scope - such learning, educational and re-engineering processes - or because of external forces, like mergers and acquisitions, restructuring goals, new regulations or disruptive technologies.

The title - I Changed My Mind Reviewing Everything - is a tribute to authors and scientists from different disciplinary fields that have illuminated my understanding of intentional change and decision making processes during the last thirty years, explaining how we think - or how we think about the way we think. The logo is a bit of a divertissement, from the latin divertere that means turn in separate ways.

With *icm2re* I wanted to shed a light on the risks and opportunities of treating and sharing data at the intersection between technical advances, with all their cunning, and the social and human factors, where it is impossible to untangle innovation from the broader individual, organisational and institutional contexts in which it takes place. It is true that change happens only by way of turning the head of the people involved. However, the direction and the grade of the twirl depend on context and volition. Context can enable, delay or block change through the exploitation of its granularity. Issues of governance have huge impact on volition. These aspects of change were constantly on my radar as pillars of a missing infrastructure for the digital world I was calling for in relation to weak or absent business models (as discussed in *icm2re* 7.1) or for the design of policies in specific sectors (like planning processes considered in 4.3, nutrition in 7.10, antibiotic resistance in 4.5, welfare benefits in 7.11 and more) but also because of the repeated scandals always rooted in hidden technical, organisational and communication glitches that have emerged almost every day since the beginning of the new millennium, like the UK Post Office Horizon IT system or the assessment of quality data about the drug Primodos (10.3). I could not avoid to point the finger against the mismanagement of information in large projects that caused failure of governance and innovation (like the Concord case, mentioned in 9.3) or the human tragedies sparked by media rows, community engagement initiatives that went utterly wrong, data falsification (9.2, 6.1-6.3, 6.8, 6,11, 6.12).

Another pillar I frequently advocated the need for was self-regulations and new legislation on social media: these two sides of the same coin were on top of my mind with questions about the ways to prevent new forms of hate crime and crimes against human rights. These originate from the general lack of inhibition allowed by online anonymity and above all from the exploitation of massive data privacy breaches (3.2), from episodes of the so called cancel culture or gaslighting (10.8), from algorithmic treatment of data aiming at invading people privacy with aggressive commercial intents (9.11-12).

I believe I showed how many and different types of disasters can happen because of lack of proper governance and competence while harvesting, managing, policing or ignoring open data, from the ones I mentioned in *Save the Safest* (6.1) and in *Flaws and flops in deregulation and self assurance* (7.4) to the digital slavery phenomena of the labour market of the gig economy (8.1 and 8.12), from the rise of cybercrime (8.4) to the broken promise of more fairness in public procurement brought by digital governments (4.6-4.7).

I was keen on considering the risks of an immature and superficial approach to open data with an optimist, open mind: I wanted to suggest how information in the public domain could lead to positive policy changes

in many sectors, from water utilities (10.7) to nutrition (10.12) to the promotion of healthier lifestyles (9.4) or health and safety standards (7.4, 6.5), from new opportunities for intelligence and operational research practices (9.7-9) to the design of sustainable manufacturing processes (8.11). And yet very often I had to admit that both the management and the scientific communities dealing with information and knowledge at professional level seem incapable to inform politicians on the many issues about international cooperation, geopolitics strategies or immigration policies: even in these times of big data and machine learning, knowledge changes are hard to achieve and these areas remain stubbornly driven by prejudices, beliefs and values instead (8.5).

Some articles are passionate advocacy pieces for change in the design of non intrusive and reliable audience metrics (9.5, 7.8), for better assured health literacy campaigns (8.6-8), for governance of relationships (5.6-5.8), for the internet of things (5.9) and for using copyright mechanisms as a force for good and fairness in the creation and distribution of wealth in the digital economy (3.12, 5.10, 4.9).

I had also in mind to write about the prevalent ideology and geopolitics of change management theories at the time - I will explain in a moment - but soon after the launch of *icm2re* in March 2012 the entire world fell on me as I became unintentionally and totally unexpectedly homeless. This traumatic event had a self-censorship impact on my agenda for several months. During the summer of the London 2012 Olympics, when I had imagined I could make a living working for one of the many organisations I had liaised with for the previous three years, I found myself spinning among letting agents and hotels, without any work and income at all and rejected or mocked by the many I asked for help. With my little suitcase of ideas about flaws and pitfalls in data and change management for the digital age, I had to stop writing and face the need to survive, relying only on what had remained of my savings. It does not surprise that for a while I preferred to avoid confrontational stances about management theories or academic studies, in particular on change and project management theories. But nonetheless in the following years I voiced opinions, stories, doubts and ideas that could be seen by some as controversial or ahead of their time at first. They seemed quite appropriate and legitimate theoretical points to me, like the need for precision and accuracy at the core of data management (3.8 and 9.6), the need for critical thinking as the essence of data science (5.1), the importance of knowledge management for public engagement with science and innovation (8.3, 8.9, 7.2), the role of systems engineering in information design (7.5, 7.6, 7.7) and how theories of innovations have shaped (or not) our relationship with new technologies (5.9). I am glad to notice that these stances have landed on the desktops of many policy makers, consultants, authors and have been echoed and expanded in the meantime.

The subject index shows how many specific information problems of our time and technologies of information and communication I dared to write about offering my reflections and examples of case histories for internet governance, media law, ICT innovations, public policy design, engineering, cybersecurity and the practicalities of data and information management across several industries. But I also used my developing knowledge of problems involving my own data that happened to be entangled in a quest for justice, housing, healthcare, work, human rights and in the fight against misrepresentation over the internet.

Teaser to a standard

Before explaining the genesis and the development of *icm2re* and now *Knowledge changes* a little further, I must say that in the end, a silver lining for all the clouds of my concerns about data and innovation for the digital modern came from nothing less than the ISO (the International Organization for Standardization).

In fact, the year after I ceased *icm2re*, in 2022, ISO published the first edition of the 10020:2022 Standard on *Quality management systems - Organisational change management - Processes*. I am satisfied that, although its effectiveness will depend on the will and the skills of the adopters, the standard represents an initial answer to the many questions my articles put forward year after year: the ways in which we do things in

the digital world always consist in handling data to make small or big changes and cannot be left to the only chances of improvisation or goodwill.

The new standard offers also a practical tool I like very much called "change matrix". This is a two dimensional simple grid that helps with the synthetic and systematic overview of twenty factors that characterise actions or represent identified risk and opportunities in all the phases of the change management process. Many if not the whole of my icm2re articles can thich all the twenty boxes and can be used to organise learning materials or training courses. The formal definition of concerns, risks, opportunities and other variables in ISO 10020:2022 sounds to me as a recognition that rumination about warnings not understood, risks discarded, specifications not written, documentation non existent and all the flaws and pitfalls I wrote about should be listened to and valued as signals for intelligence and improvements.

Cross referenced to ISO 9001, ISO 10020:2022 is aimed at ensuring that changes are well managed, understood, planned, controlled, reviewed. To this extent, it recognises that organisational change happens through actions that impact three layers of activities - governance, management and implementation - pervaded by principles and practices of risk management. A scenario based approach allows to identify and deal with hypothesis and evidences about the impact that change could have on any of the interested parties: these include also organisations or individuals that can be directly associated with a stakeholder even when they are not identified as such. The provision shoots an arrow straight at the core of so many stakeholders or community engagement campaigns I have witnessed over the last twenty years in which the absence of accountability or the lack of legal terms for a specific remit or duty of care allow unscrupulous managers to ignore risks.

The new standard comes from a strong culture of project planning and configuration management in complex IT programmes that is still far from being universally understood, endorsed, adopted across the sectors. In this respect, I believe my articles offer accessible stories, ideas, suggestions and shortcuts to facilitate the understanding of the "why" we need standards for sustainable change management in the world of data even when the organisation seems not prepared enough for a systematic approach to it - this is the case, for instance, of small businesses, charities, companies that are facing declining demand, recruitment issues, financial problems.

Not everybody agrees on this point and there is plenty of change management practitioners and authors that continue to master the discipline as the art to win people *resistance* to improve a certain way of working or inhibit certain actions, as management gurus have suggested since long.

To make more understandable the context to the reader who has not great familiarity with change management processes or literature, I must remind here that in 2012, just weeks after the debut of my icm2re magazine, Harvard professor and bestseller author John Kotter published a sparkling book entitled *Leading Change* in which he reiterated ideas on change management philosophy in circulation since the 1980s.

Kotter's book was immediately seen as the refreshed vademecum for business schools and policy makers, although it did not open any new avenue on how to deal with disruptive technologies and big data projects. In fact, Kotter simply denied, implicitly, that there were new reasons of concern due to technological pressures - an argument that practitioners from the world of IT and corporate governance had feebly put forward for several years between 1995 and the 2000s. He gave new simple practical directions on how to just keep on banging on the usual assumptions about organisational change into the new reality of big data: you need to create a sense of urgency - he insisted - making people accepting the need to reprioritise their activities, make sure you have the right team in place - not everybody can be on board - and sharing the same vision. That's it.

Today a uniform and unified theory on change management is still long way off but in spite of the perseverance of Kotter's model for change anchored to popular theories of communications and public relations, I believe it has now become easier for everybody to see that in many circumstances those ideas of urgency, leadership, engagement and acceleration are not fit for purpose anymore and are not sustainable. Traditional approaches to change management are inherently manipulative, focussing on group polarisation

and design of the most convenient human interactions without ethical concerns, and tend to leave behind a vast quantity of debris in the form of wicked issues unresolved, frictions between partners, conflicts of interests, risks of litigations and reputation damages.

The Kotter recipe for change and innovation, in its fascinating reductionism and emphasis on exceptional technical skills and team cohesion in order to "create substance out of chaos", does not give in practice any respite to sustainability, for governance doubts or to the general overarching quest for diversity and inclusion.

With its overoptimistic assumptions on the effectiveness of top-down, directed changes and management tricks to win people *resistance* to change, Kotter's model has infiltrated a large number of guidelines and literature on change management over the last thirty years. I would have made a fool of myself if I had tried to directly and openly criticise that approach with my icm2re online publication (and by the way I had already made an attempt in that direction in 2009 within the Governance Special Interest group of the Association for Project Management, as I wrote in 3.6). I chose instead to be more oblique and talk about things I had done or witnessed, problems I had seen or solved, ideas that could open new thinking about something, *re-thinking* procedural knowledge at all times and *re-structuring* problems as good ways to prepare ourselves and our processes and procedures for the digital transformation.

Today more transparent, participative, operational and systematic approaches to change management are becoming common, thanks to the ideas of many authors and the case histories of many organisations that seem more in tune with the complexity of the world we live in: as mentioned above, the new ISO standard focuses on the rationale of knowledge and not anymore only on the urgency of emotional engagements to bring about change. But in a wider sense, it seems to me that there is a paradigm shift in the world of management and in the labour market: notions so fashionable twenty years ago like *resistance* or *empowerment* are not very relevant anymore, whereas *inclusion* and *intelligence* are. The secret of sustainable change in the digital era seems to be consisting in slowing down, not in accelerating the production of waste and useless data. This shift requires indeed *knowledge changes*, working with open minds and good quality data and processes in responsible and productive ways, aware of the emotional and cognitive complexity of the information we are immersed in (on this, an example I wrote about is the call for veganism, see 7.10).

It must be said that a couple of years before my decision to cease icm2re, in 2019, Cass R. Sunstein, another famous Harvard scholar, began to anticipate to the public at large and to other academics the conclusions of his interdisciplinary investigations about how change happens on a larger, societal scale, very often from minimal initiatives of pioneers and innovators. I am amazed to note that in 2016 I shared my hunch on these matters, together with the tale of my own experiments dating back to 1999/2000, in icm2re 5.11, *The Benefits of disagreement*. The evidence I gathered through a small learning project about change by listening and inclusion and not by leadership and acceleration showed me that a systematic, transparent and fair route to manage organisational change induced by ICTs is possible. This route has become an ISO standard today.

How did it start and why did it end

The column was originally conceived between 2010 and 2011 as a proposal I made to the editor of "Managing Information", magazine of ASLIB, the professional association for information management founded in 1924. In the same years ASLIB was about to be acquired and be dissolved and then, since 2015, to remain a brand in the portfolio of the Emerald Group Publishing.

At the very core of my idea was the question I put in the headline of the first article (1.1, *Is Change Management just a matter of changing perceptions?*), when I asked if change management is a method we can offer and implement across industries to generate organisational changes and introduce innovations in fair, transparent ways or just a set of rules and practices useful to persuasion, to "bring the people with you",

to determine change leveraging on communication - usually within a short term scenario. I had in mind to talk through intricated examples of business cases and I chose to start bringing to the fore two different examples of data that seemed to me the most horrendous in terms of potential misrepresentation and errors: visual communication and legal referral fees. In both cases data could be fabricated, twisted and turned to demonstrate the need of whatever change was commissioned.

As highlighted above, my methodological question was already circulating in few academic fringes but it was decisively rejected in practice: employees, project managers and consultants were instead compelled to adhere compactly to the general overarching need for alignment between strategies or directions for change and organisational processes and systems.

When I designed the icm2re magazine, I would have liked to engage with professionals in the information world, particularly those working in corporate and in government. I was trying to reach out people in libraries, archives and museums to suggest the integration of collections and databases, and more outreach campaigns to engage with new audiences. I imagined I would continue to work as a consultant and adviser for libraries, universities, research centres and businesses in the creative sector - as I had done for many years in Italy, before the spoils system and the political environment vanished my entrepreneurial ambitions over there. But also my employment and working prospects as an information expert in the UK seemed to be soon subject to a sort of mobbing aimed at keeping me at a distance.

That was also the destiny of my proposal for ASLIB: in spite of the advanced talks about my collaboration, I was informed that "Managing Information" was about to cease soon and pretty much without notice while the Association would be dismantled so that any plan about my idea for a regular column on data and change could not go ahead.

My project was on the verge of derailment. But I decided I would go ahead on my own, starting the website and registering the publication in the UK ISBN Registry. For months after the first article I did not have too much time to write: I was evicted on a Section 21 Notice from the flat I had agreed to buy and other personal priorities took over. When I eventually found another place where to live after four months, and amid a long series of misfortunes that followed, it was good to continue with my icm2re project.

From then on, for several years, research findings, investigations, debates, personal facts and rantings on the justice I was calling for remained very much intertwined with my reflections into technical and policy matters on social, economic and cultural change: not only I had lost my home and my savings while trying to move them in another European Country (at the time! Brexit seemed far-fetched). I had also lost my reputation as a consultant but not the ability to write, attract interest and generate engagements. The icm2re magazine gave me the opportunity to have a voice, at least virtually, on what I believed were matters of professional choices about innovation. Like a security blanket, icm2re helped me enormously to remain who I was while I was facing, managing and adapting to changes in my life largely beyond my control.

The length and depth of these articles are different from month to month, year to year. Also the heterogeneity in style conveys traces of my own personal circumstances at the time of writing: there were moments in which a new article for icm2re would be my only distraction from problems of health, money and homelessness, along with the series of disordered and unsuccessful civil claims I made as a self-represented litigant in the hope that the Courts could help me recover at least my stakeholder pension (after the first eviction) or my belongings (after the second eviction). And yet, my commitment to write even when I did not have any work assignment, and ideally liaising with other authors and thinkers even when I was feeling isolated, allowed me to manage the change my mind needed to overcome hardship and prevent further deterioration of my mental health.

It did not protect the deterioration of my immune system though. The diagnosis of an autoimmune disease arrived in 2017.

In January 2020, when I wrote *All change all change* announcing my future articles would be shorter, the process of emotionally detaching myself from my security blanket had eventually kicked in. Since 2018, my work for icm2re had become more regular while I was able to do casual work as housekeeper and gardener, after the third eviction from my only home "with no fault of my own", again on a Section 21 notice. This was

the very source of inspiration for *icm2re* 7.7, *Where there is dirt there is a system*. But I also felt tired of writing for free, to publish opinions, data, directions, references that were evidently quite valuable and always very much followed up by other consultants or by information management and data scientists colleagues working in government as well as in corporate offices whilst nobody was commissioning anything to me. The Covid-19 pandemic urged me to confront the evidence that *icm2re* was requiring me an enormous amount of time to research issues, write the articles and publish them online while I was living on casual earnings and welfare benefits.

I was coming to term with the need to prioritise my health over any other interest. A change was needed for myself.

Lights and shadows from my past Italian projects

At times, I talked about history, art exhibitions or literature to give examples of or suggests ideas for creative approaches to governance of technological innovations: this attitude to always look at the positive aspects of organisational or technological change has pervaded the whole of my career since I started work bringing computers in public libraries and then online databases in corporate information centres in Italy. Examples from my past Italian projects inspired *icm2re* articles 6.6, 6.9, 6.10. The discussion about the skills needed for the digital transformation and therefore for the design of new curricula pervades many articles, with or without explicit mention to my own past initiatives in the training sector as an e-Learning entrepreneur working with many academics and large organisations (7.9, 6.6). Quite often I expressed my views about the need to integrate art and science to achieve genuine interdisciplinarity (10.9, 9.1) particularly relevant for the skills and competencies needed to fight cybercrime (2.2-2.3, 7.6, 7.12, 6.4). I looked at these difficult themes with the confidence of the lessons learned through the lights of my past Italian projects. However, the same past cast the shadows of uncomfortable truths over several articles. In *icm2re* 2.2, 4.2, 3.6 and 5.10 I recalled some nasty circumstances that drove me into a deep crisis before and after I left Italy in 2008, re-igniting symptoms of PTSD in connection to previous trauma (the "Grauso affair" I mentioned in 2.2 and 4.2). Before I came to England, in 2007, a former colleague and IT manager who had the audacity to commission me a desk research on matters of intellectual property told me, in confidence, that "they" feared me. She was referring to the dominant political and corporate elite that was in control of the institutions as well as the media and the industrial sectors and had transformed so much of the Italian economy and public administration after 2001. But I shrugged off the suggestion: at the time my writer's portfolio consisted in articles about e-learning products and services and books on technical innovations, information management and how to innovate services in libraries. Plus, I had authored training courses about online databases and search engines for about a decade. Who could be interested in censoring such minimal, technical works?

I thought she was joking. Years later I had to recognise she was right. My technical writings were not at all only technical, they contained assumptions and implications for an open society, open to the internet and other ICT innovations with huge societal impact that would be delayed in Italy for at least another decade. I was rightly seen as one of those "zeros" individuals that have the hidden, subtle power to produce signals that can activate social and economic changes through weak ties, networking, word of mouth. That is why libel, slander, unfair competition, social and business isolation and other personal attacks were thrown at me: that is the usual strategy to prevent "zeros" individuals to become influential in ways that are unwanted by the dominant political class.

I had been unpredictably and surprisingly successful with my eLearning services when, at the turn of the millennium, the general political mantra was to oppose IT innovations in education and either co-opt independent internet entrepreneurs in more suitable digital programmes or marginalise them.

Around 2005 and for several years after, Google showed porn and other defamatory contents through its advertising keywords system when people searched my name or the name of my business and there was no way to fix the issue (and not even to report it to somebody at the time). Similar algorithms pilloried my social

media accounts on Facebook and Twitter for a long time until I gave up and completely withdrew from these online spaces, years later (see 3.10). My Italian lawyer could only say I had attracted attention from dodgy people.

A former colleague I had worked with in the early 1990s wanted to meet me in 2006 just to tell me she had left her employment and decided to join as a franchisee an international company in a sort of Ponzi scheme for Web developers, before she understood that the age of the HTML coders was over, there were no clients waiting for her services and she had remained without any job at all: in her views, that was all my fault because she has decided to follow my example! The conversation left me almost speechless. I was now seen as an ideal scapegoat by the new policy makers: not anymore an agent for change, but an agent to blame. I remember I tried to explain that having anticipated many internet changes with my own training agency since 1995 was not a guarantee, not even for my own success, in 2006.

The unforeseen and unfriendly business and political environment I faced, totally unprepared, between 2005 and 2008 motivated my later interest for data and change management.

Unfinished businesses

Some ideas for follow up articles or for other publications I announced through icm2re as forthcoming remained unfinished or were abandoned along the way. I left traces of these in the version for *Knowledge changes* but I redacted some paragraphs to avoid confusing references to materials that have not been published in the meantime and I doubt will be in the future.

Perhaps the most remarkable of these unfinished businesses is the one I had announced at the very beginning of icm2re, with issue 1.2, *Britishness for professionals*, soon after the online magazine started and I had to freeze the whole project for almost one year. I re-emerged from the shock of finding myself homeless just in time to see my stakeholder pension threatened by grotesque insolvency proceedings: some aspects of this horrific miscarriage of justice transpire in various articles and in particular in icm2re 3.11 and 4.10 when eventually, years later, I was able to talk about the special *Britishness for professionals* that allows approved persons in the financial sector to get away with very sophisticated crimes in the UK, profiting from loopholes in the legal system at national and international levels.

I could not believe I had fallen victim of a scam the result of which was to lose all my savings and stakeholder pension. Determined to rebuild my life and have a say on the way I had been treated, I wanted to write not only about change and competences and the law of evidence in a world of digital tricks, but also about the very deep cultural and anthropological reasons why professionalism must be able to confront so called "force majeure" of vested interests hidden in the culture, and the subcultures, we live immersed in. I was still holding the idea of working as an ICT consultant for the development of policies and quality in digital projects within large organisations. I was also hoping that the Civil Courts would eventually recognise my right to have things put right and award me compensation and the possibility to recover at least the money from the sale of my Italian properties. I bought my first home when I was in my early 20s, I started saving for a stakeholder pension in the mid 1980s when that type of investment for the future was not even publicised and my entire adult personality has been shaped around my independence and my working and professional career: I simply could not believe that such a trajectory of disgraces I went through in my early 50s could not be reverted through my commitment to work. That was the aim I had in mind when in 2014 I eventually restarted the sole trader consultancy, then turned into a self-publishing business.

Somebody told me that in between the lines of icm2re there was a lot to learn about mafia and corruption in public life. If so, I am afraid that insight on the massive organisational and cultural change needed to fight mafia and corruption in public life remains another huge unfinished business of mine.

Often unintentional, driven by feelings of deep indignation - see *Those Brunellas are Google's delusions* (2.5) for instance - or a genuine willing to make a contribution to advances in the creative sectors and in public policies, many ideas I shared through my articles have attracted interest and attention and I would

have liked to go deeper. In particular, in icm2re 3.11, 4.12 and then 5.2-5.4, I would have liked to say more about what I called *knowdging* - the application of nudging for knowledge management purposes suggested by many behavioural economists that have had great success in marketing and communication over the last two decades, largely taking over functions and roles that until the 1990s were typically assigned to special librarians, documentalists, information officers.

Sometimes I spoke in anger on changes that affected me personally, badly and unexpectedly. This was surely the case of the Government reform of the planning process and the plan of my local authority for "community engagement" as a way to detect and expose rough landlords: that plan was at the very heart of my second eviction and prolonged homelessness following my collaboration and whistleblowing with the London Borough of Lambeth and The Metropolitan Police - see issue 4.3 and above all 6.12, *If this is a landlord*, in which I shared the learned lesson about the English legal system that allows the devastation of people right to have a life: without a home you cannot really have a life.

However, homelessness as a form of targeted persecution or hate crime is another theme on which my reflections remained unfinished: for my own wellbeing I decided not to write any further on my experience of it after my third eviction. I can only be glad to see that the wide issue of homelessness has been addressed this year (2023) by The Royal Foundation's Homewards programme that aims to make it "rare, brief, and unrepeatable". Hopefully this five years programme will also take into account the need to have measures in place to prevent the displacement and persecution of persons through the exploitation of the harsh English Landlord and Tenant legislation and through other abuses of the UK legal system.

Some articles are extremely long and contain detailed report of research, investigations, summarisation of legal provisions or just my memories of previous projects and studies. Others are quite short and go straight to the single point I wanted to make in relation to a specific situation or case-history, like 3.1 *I do not want your passwords!* on emotional intelligence as a tool to prevent cybercrime. Cyber security is another theme I dropped after 2018.

I have been tempted to shorten some lengthy pieces but then I preferred to leave them intact because sometimes they are emotional chronicles of my "life in Britain": it is easy to recognise today that disconcerted rantings about topics of professional interest, like the pieces on approved persons (4.10), on engagement of professional communities (3.6) or on my bankruptcy order (3.11), were the direct consequence of my frustration. In this shattered context, with my own life in bits and pieces, problems and research findings or reflections remained often "on hold" for months and even for years. For instance, the long article about Universal Credit (issue 7.11) remained in the making for a couple of years and when I eventually decided to publish it, I found impossible to shorten the huge collection of data I had accumulated in my notes so that I had the idea to transform them in a fictitious conversation with a sort of Chat-GPT ante litteram. I also wanted to point out new limitations in decision making processes that could come with artificial intelligence. Similarly, procrastination and rumination and a long list of references and case histories affected the making of icm2re 10.4, a piece about human computer interaction, that I called *the missing discipline for the world of data*: in this occasion I was patient enough to edit the torrential first draft and made it in about 1600 words after about six years "on hold". Conversely, other articles came out in a flash, like issue 2.4 about the illusion of *gaining insights and ideas just sharing access to information*, a relatively short and bitter reflection matured while accessing between the spring of 2011 and the autumn of 2013 what was actually once again a large quantity of examples, case-histories, business cases about the risks of open data. But I did not have the time and energy to sort and sift all that documentation I had gathered and I was also tired to think about it so that at a certain point I just put down what I wanted to say, cut all my rumination short and published the article at once.

The missing business model

In late 2016 I wanted to try to get some money from subscriptions and pay per views for my icm2re articles. In fact, in the meantime the management of micropayments online had become very easy to set up. But I did not have a single request of subscription for over a year and the publicity over the internet did not help at all.

I reverted that decision of requiring "pay per views" payments the year after. The extreme difficulty if not impossibility to make an income from icm2re, as outlined in the post-scriptum of issue 5.6, had become in the meantime crystal clear: it echoed the destiny of many online projects started by traditional publishers. It was not depending exclusively on my almost desperate circumstances or lack of sales acumen and the right networks of relationships.

Another turning point in my motivation to continue the magazine in spite of no revenue came when I had the idea to make another attempt to obtain remuneration in the form of "ethical payments" in exchange for the full pdf version of the articles.

And once again it did not work. But with icm2re 7.1, *Look for money in the world not in the journals*, at last, I accepted the evidence that there was absolutely no prospect of commercial success for the magazine but some copyright royalties from secondary rights.

The entirety of the old-fashioned publishing industry did not find reliable business models in the online world other than a messy and often volatile mix of streams of revenue when acting, with considerable role for size, skills and organisation, as a "multiple media company" as I had predicted in a book I wrote in 2001 (*La nuova editoria*, that I am pleased to have republished in 2022 in a second edition).

After issue 7.1, I continued icm2re by inertia still having to edit and finalise a number of drafts accumulated over the recent years but with the end of the magazine in mind. I decided that I wanted to keep on researching and writing with more freedom on other matters.

If I had to rearrange the articles according to sorting criteria other than the chronological one, I would say that issue 7.1 *Look for money in the world not in the journals* should come first, as an introductory piece that could explain the reason d'être of the entire collection.

And it was the only article for which, as detailed in its post scriptum, I eventually received a payment from Hal R. Varian, Google Chief Economist. What a small world after all, isn't it?

The reverse chronological order

I hope the reader will recognise there is significance in the choice of keeping the articles sorted as they were written and published in the first place year by year but for offering the volumes in reverse chronological order, with the 10th and final year coming first.

In fact, seen in retrospect, the last three volumes sound like a testament I wanted to leave while retiring from a professional career that has very much shaped my adult life. This is the very meaning of the articles I wrote reflecting about the disciplines I studied and practiced over the years.

From web to print

The search for a new title for the book has not been long. As soon as I wrote I would cease the publication of icm2:re because "*change is the rule of life*" and I wanted to research and write about other matters, the publisher-in-me came up with a new title: *Knowledge changes*. Indeed, I do think these two words represent the essence of what was the aim of the icm2:re magazine and its contents. If we need or want to change we always have to look at the knowledge behind and ahead of that change.

I designed the icm2re publication as a web monthly column, I made that distinctive, childish design of the title rendered through a coloured lettering. The user could see it in each page of the icm2re website together with the editorial text about the scope of the publication. The link to the articles of the other

pages (table of contents of each volume, chronological and subject indexes, lead paragraphs for each article) would be clickable, offering the WWW typical richness of browsing hyper-textual contents. This is not available, of course, on the printed page.

The online Web edition had its own identity I cannot even try to reproduce here neither for the paperback nor for the ebook edition. The printed book and its electronic equivalent do not have the graphic and interactive features I designed for the website.

However, I have tried to make a graceful degradation of those characteristics here, keeping the exact contents but in an adapted different format and order: titles, texts, visual features, notes and references, subject index and table of contents. The printed and ebook indexes still work in ways similar to the former Web version, pointing to the number of the single icm2re issues (not to page numbers). The feature of a different picture in each title has retained its considerable space.

I feel it is a bit sad to abandon forever the very accessible HTML and CSS code I had devised in the early 2000s and then I reused for the icm2re website and of course also to abandon the icm2re website but... it's alright to let it go. The icm2re code was designed when the majority of web architects and designers preferred proprietary and not very accessible Web authoring tools whereas in 2023 I see its type of layout and principles of usability are widely adopted and implemented across sectors and through diverse accessible script languages or content management suites. I am sure that the problem of how to keep and preserve digital contents will be dealt with by libraries and archives and solved with the assistance of technology at some point in the next future.

For this new ebook and paperback editions, some texts have been slightly abridged, misspelled words and typos have been hopefully fixed, bibliographic references are provided whenever I had originally intended to do so, talking about matters of policy or research and I felt I could send signals to or influence people working in academic or government offices.

I decided I would not make any further updates or major redaction nor add more bibliographic references where I had originally decided not to do so. I do not want to censor, hide, withdraw anything of what I wrote or make it into something different.

My passion and curiosity for the new and for the unshaped allowed me to talk and share my ideas and fears about public policies or IT governance on matters that have become in the meantime very popular, like artificial intelligence and the legislation and governance on social media. That is why many articles still sound fresh and topical even if they were written almost ten years ago. I do not need to change anything of what I wrote.

Brunella Longo
London, September 2023

Subject Index

3D Printing: 3.8, 9.4
Accessibility: 6.10, 6.10
Accountability: 4.7
Accuracy: 6.4, 6.4, 7.6
Advertising: 2.5, 3.10, 4.11, 9.5
Agency theory: 2.5
Algorithmic governance: 6.2, 6.3
Altmetrics: see Statistics
Artificial Intelligence: 6.11, 6.3, 6.4, 7.11, 9.12, 10.10
Assurance: 6.4, 6.7
Autoimmune diseases: 8.6, 8.7, 8.8, 10.12
Automation: 6.11
Behavioural Economics: 4.6, 4.7, 4.12, 5.2, 5.3, 5.4, 7.1, 7.5, 7.12, 9.3
Bestseller: 9.6
Bibliometrics: see Statistics
Big data: 7.7, 7.11
Binding communication: 1.1, 1.2, 3.10, 4.11, 9.8
Britain and Europe: 1.2, 3.5, 3.9, 4.4, 4.6, 5.5, 8.5
Business intelligence: 9.7, 9.8
Business re-engineering: 4.3, 6.12, 6.12
Business schools: 3.4, 5.1
Cancel culture: 10.8
Career progression: 3.4
Categorisation: 3.12
Celebrity culture: 9.2
Certifications: 2.1
Citation pearls: 4.9
Classification: 3.12, 7.7
Cloud architecture: 7.3
Climate change: 10.7
Cognitive dissonance: 1.1, 1.2, 3.8, 5.10, 5.11, 5.12, 5.6, 5.7, 5.8, 5.9, 6.10, 6.10
Commoditisation: 2.4, 7.1, 7.1
Communication processes: 2.3, 3.10, 4.3, 6.10, 6.12, 6.12, 6.5, 6.8, 6.9
Community engagement: 4.3, 6.12, 6.12
Competences: 2.1
Computer misuse: 3.2, 4.12, 4.12, 10.11
Concorde fallacy: 9.3, 9.3
Configuration management: 3.3, 6.7, 6.7, 7.12
Consumer rights: 6.3
Content creation: 9.2
Continuous professional development: 5.1, 6.5, 6.5
Cookies: 9.11
Copyright: 3.12, 4.9, 6.11, 9.5
Corporate communication: 9.8
Corporate Governance: 3.4, 3.11, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Criminal law: 3.11
Cultural and media studies: 7.7, 7.10

Customer services: 2.3, 6.7
Cyber crime: 2.2, 2.5, 3.10, 4.1, 4.10, 4.4, 6.1, 6.11, 7.4, 8.4, 10.11
Cyber security: 2.2, 3.1, 3.2, 3.3, 3.7, 3.11, 4.4, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.1, 6.7, 6.11, 7.3, 7.4, 8.4, 10.11
Cycling: 9.4
Data analytics: 3.3, 3.9, 10.4
Data engineering: 3.2, 3.3, 4.1, 4.2, 4.5, 4.6, 4.7, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.2, 6.3, 6.4, 6.8, 6.9, 6.10, 6.11, 7.2, 7.4, 7.5, 7.6, 7.7, 7.10, 7.11, 10.12, 10.10
Data governance: 7.4, 10.3
Data librarianship: 10.1, 10.3, 10.5, 10.10
Data literacy: 10.1, 10.3
Data Management: 3.4, 5.1, 6.6
Data Ownership: see Data Protection
Data Protection: 3.2, 3.6, 3.7, 3.10, 4.1, 4.2, 4.3, 4.6, 4.7, 4.10, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.1, 6.8, 6.12, 10.10, 10.11
Data Science: 3.4, 5.1, 10.1, 10.3, 10.4, 10.5, 10.10, 10.11
Data sharing: 2.4, 3.6, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 7.2, 7.3, 10.3
Database design: 10.2
Deep learning: 9.12
Defamation of character: 1.1, 1.2, 3.6, 3.10, 3.11, 4.1, 4.2, 4.4, 10.3, 10.6
Design personas: 4.11
Digital advertising: 9.11
Digital copyright exchange: 3.12
Digital economy: 1.1, 1.2, 2.4, 3.4, 3.12, 4.8, 4.9, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 7.1, 7.8, 7.9, 7.11, 8.1, 8.2, 8.10, 9.5, 9.5
Digital ethics: 8.12
Digital humanities: 10.9
Digital labour: 4.8, 4.9, 4.10, 4.11, 7.11, 7.8, 8.1, 8.2, 8.11
Digital publishing: 9.5
Digital slavery: 8.1, 8.2, 8.12
Digital Twins: see Data Engineering
Disinformation: 1.1, 1.2, 2.3, 3.10, 4.3, 6.12
Disruption theory: 9.1
Drugs side effects reporting systems: 10.2
Education and e-learning: 7.9, 10.9
ebooks: 9.5
Economic violence: 4.1, 4.2, 4.10
Ego networks: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
EMBA: 3.4, 5.1
Emotional intelligence: 3.1, 7.8, 7.10, 7.12, 9.3
Entrepreneurship: 7.9
European Parliament: 3.5
External information sources: 9.7, 9.8
Fact finding: 2.2, 7.4
Fair change: 9.3
False data: 2.5, 3.11, 6.1, 7.4
Falsification: 2.5
Fraudulent associations: 2.5, 3.10, 3.11, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.1
Freedom of enterprise: 3.12

Freedom of speech: 3.12, 10.6
Frustration of contract: 3.1, 4.10
Game theory: 3.4
Gamification: 2.3
Gender pay difference: 8.2
Gig economy: 4.8, 4.9, 4.10, 8.1, 8.2, 8.11
Globalisation: 3.7
Governance: 2.3, 3.2, 3.3, 3.6, 3.9, 3.11, 4.6, 4.7, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.1, 6.3, 6.4
Groupthink: 3.1, 3.6, 4.6, 4.7, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Health and safety: 6.1
Health literacy: 4.5, 6.5, 7.10, 8.6, 8.7, 8.8, 9.9, 9.10, 10.2, 10.12
History of Medicine: 10.2
Human computer interaction: 2.3, 5.10, 5.11, 5.12, 5.6, 5.7, 5.8, 5.9, 6.10, 6.10, 10.4
Human factors: 2.2, 10.4
Human Resources: 4.8
Human Rights: 3.5, 3.10, 3.11, 3.12, 4.4, 10.6
ICANN: 3.7
ICT evolution: 8.10
Imitation: 2.4
Incremental change: 8.9
Influence: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Informatics: 10.9
Information behaviours: 3.1, 2.2, 2.4, 3.2, 4.1, 4.2, 4.3, 5.3, 5.4, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.12
Information deception: 4.3, 6.12
Information design: 4.3, 6.3, 6.4, 6.6, 6.10, 6.11, 6.12, 7.5, 7.8, 9.7, 10.4
Information literacy: 2.3, 2.4, 4.5, 4.12, 4.12, 5.2, 5.3, 5.4, 6.5, 6.7, 7.10
Information Management: 3.4, 3.7, 3.12, 4.12, 5.1, 6.10, 6.8, 6.9, 7.1, 7.2
Information policies: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Information Retrieval: 6.6
Information sciences: 5.2, 5.3, 5.4, 10.5
Information security: 2.2, 3.1, 5.5, 6.1, 7.3, 10.3, 10.11
Information systems: 9.7
Innovation policies: 3.9, 10.8
Innovation theory: 7.1, 7.12, 7.2, 8.10, 9.3
Innovation: 3.6, 4.4, 5.10, 5.11, 5.12, 5.6, 5.7, 5.8, 5.9
Interdisciplinarity: 9.1
Interlocks: 5.6, 5.7, 5.8, 5.9, 5.10, 5.10, 5.11, 5.12
Internal information sources: 9.7, 9.8
Internet and media law: 1.1, 1.2, 2.3, 3.1, 3.10, 3.11, 3.12, 3.2, 3.6, 3.7, 4.1, 4.10, 4.11, 4.2, 4.9, 6.1, 6.11, 6.2, 6.3, 6.8, 6.9, 10.6
Internet Connections: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Internet governance: 2.3, 3.7, 6.11, 7.1, 7.2, 10.3
Intranet: 7.3
Investigative journalism: 9.10
Kakonomics: 9.1
Knowdging: 5.2, 5.3, 5.4
Knowledge governance: 10.3
Knowledge management: 1.1, 1.2, 3.4, 3.8, 4.12, 5.2, 5.3, 5.4, 6.4, 6.5, 6.6, 7.2, 7.3, 7.5, 8.3

Legal information management: 4.2
Lifelong learning: 6.5, 2.1, 2.4, 3.6, 4.5, 5.1, 6.6, 6.7
Long waves theory: 8.10
Machine learning: 6.4, 6.11, 7.11, 7.7
Management theories: 9.6
Manufacturing: 3.8, 8.11, 8.9, 9.4
Marketing: 9.11
Media genres: 9.2
Medical Decision Making: 4.5
Metadata and taxonomies: 3.8, 3.10, 3.12
Micromanagement: 3.1
Misinformation: 1.1, 1.2
Misrepresentation: 2.5
Multiculturalism: 3.5
Nudging: 4.12, 5.2, 5.3, 5.4, 6.5, 7.12
Open data: 4.10, 5.5, 7.2
Operational research: 9.7, 9.8
Pandemic flu: 9.6, 9.9, 9.12, 10.2
Parliamentary debates: 5.5, 8.5
Patient education: 4.5
People management: 5.10, 5.11, 5.12, 5.6, 5.7, 5.8, 5.9, 5.13
Personal data: 4.3, 6.12, 10.6
Philosophy of information: 10.5
Plastic: 8.9
Platforms: 7.8
Procedural justice: 9.3
Process engineering: 8.11
Process management: 4.3, 4.6, 4.7, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.1, 6.12, 9.3
Professional associations: 2.1, 3.6
Professional development: 7.6
Professionalism: 1.2, 2.1, 3.1, 4.4, 4.10, 5.1, 5.2, 5.3, 5.4, 7.8
Programmatic advertising: 9.11
Public perception: 1.1, 1.2
Public policies: 3.6, 4.3, 4.6, 4.7, 6.12, 9.4
Public policy design: 4.3, 4.4, 4.5, 4.6, 4.7, 4.12, 6.12, 7.4, 9.9, 9.10, 10.7
Public understanding of science: 9.9, 9.10, 10.1, 10.2, 10.3, 10.7
Publishing: 7.1
Push technologies: 8.10
QRs codes: 7.5
Qualifications: 2.1, 6.1
Quality: 6.4
Reading: 9.5
Recruitment policies: 4.8
Recyclable materials: 8.9
Referral fees: 1.1, 1.2
Relationships: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Requirement engineering: 2.2, 3.1, 3.3, 3.9, 4.11, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.2, 6.3, 6.4
Research & Development: 10.10, 10.11

Research access: 9.4
Research co-production: 9.10
Retention schedule: 4.1, 4.2, 7.5
Right to personality: 3.10, 3.11, 4.10, 4.9, 4.11, 8.12, 10.6
Scam economy: 2.3, 2.4
Scam psychology: 4.6, 4.7
Search engines: 2.5, 3.12, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 6.6
Sense making: 10.7
Sensors engineering: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 7.5
Skills: 2.1, 2.3, 4.2, 5.1, 6.4, 6.6, 6.7, 6.10, 6.11, 7.6, 7.8, 10.5, 10.9
Smart factories: 6.2, 6.3
Social construction of reality: 9.10
Social contagion: 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12
Social media: 1.2, 1.1, 2.3, 3.10, 3.11, 6.10, 6.8, 6.9, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 10.6
Social sciences: 7.7
Special Adviser roles: 3.4, 5.1
Specifications: see Requirements
Standards: 4.10, 4.11, 6.10, 6.4, 7.6, 7.8, 8.3, 9.11, 9.12, 10.11
Statistics: 10.1, 10.10
Substitutions: 4.8
Sunk-costs trap: 9.3
Surveillance capitalism: 8.1, 8.2, 8.12
Sustainability: 9.4
Syndication right: 4.9
System engineering: 7.6, 7.7
Tampering: 6.1
Theory of information: 10.5
TLDs: 3.7
Training and education: 2.2, 2.3, 10.9
User Experience: 10.4
Valley of death: 10.8
Virtual reality: see Data Engineering
Visual communication: 1.1, 1.2, 3.8
Web deception: 1.1, 1.2
Web marketing: 2.5, 3.9, 6.7
Welfare: 7.11
Whistle blowing: 3.2
Zero-value goods: 1.1, 1.2

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