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Practicing What We Preach? Reflections on More Sustainable and Responsible IS Research and Teaching Practices

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Abstract:

Research on IS solutions for environmental sustainability have evolved to a modest, but firm body of knowledge. Despite this progressive understanding about the potential of IS in enabling environmental sustainability, our academic practices seem widely unaffected by these insights. The way we do research or conduct teaching is rarely influenced by sustainability considerations. For example, before the pandemic many of us belonged to a hypermobile group that travelled 5-6 times more than the average employee. Our research is also often not aligned with environmental goals. We research digital technologies without sufficiently acknowledging the significant amounts of resources they consume. Similarly, our teaching often focuses on the effective development and use of information systems; however, rebound, second order, or spillover effects are barely covered. Based on these observations we raise the question: Are we practicing enough of what we preach? While recognizing several efforts of IS researchers, we can no longer ignore the 'environmental elephant in the room'. In our panel report, we discuss the status-quo and ideas to improve the environmental and societal impact of our academic practices and present three ideas to move forward: Leverage virtualization and limit air travel, overhaul teaching curricula, and recalibrate incentives and evaluation regimes.

Keywords: Environmental Sustainability, Sustainable Development Goals, Business Ethics, Management Teaching.

[Department statements, if appropriate, will be added by the editors. Teaching cases and panel reports will have a statement, which is also added by the editors.]

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1 Introduction

In the last decade, there has been heightened awareness surrounding the triple bottom line concept of sustainability which aims at aligning economic goals with that of social justice and environmental quality (Elkington & Rowlands 1999). The emphasis on environmental sustainability has also been made within the IS academic discipline, with Watson et al. (2010, p. 24) drawing attention to the importance of conducting research on how IS can help reduce "energy consumption and CO_2 emissions" and with Melville (2010) putting forward a research agenda for IS innovation for improving organizations' eco-efficiency and eco-effectiveness. Consequently, over the years, we have seen the rise in Association for Information Systems (AIS) special interest groups (SIGs) (SIGGreen focusing on environmental sustainability and SIG ICT4D focusing on social sustainability), association-wide initiatives (e.g., AIS Bright ICT Initiative or AIS Sustainability Task Force), conference tracks, and journal special issues (Elliot & Webster, 2017; Gholami et al., 2016; Malhotra, Melville & Watson, 2013, Kranz et al., 2015). Studies on IS solutions for environmental sustainability have covered a substantive range of application domains, such as within the energy sectors, mobility, circular economies, and organizational work practices (Wunderlich et al., 2019; Sedera et al., 2017, Ketter et al., 2016; Zeiss et al., 2021, Kranz et al. 2021). Similarly, another body of work, those specifically focusing on ICT for development (ICT4D) have drawn attention to the importance of social sustainability and how technologies and technological infrastructure can improve the lives of citizens (e.g., Avgerou 2008).

The extant literature on sustainability within IS and the wider business discipline draws attention to two fundamental issues: It is not only important to provide a technical solution to sustainability, but true to the IS discipline's socio-technical premise (Sarker et al. 2019), it is as critical to ensure that the processes and human behaviors promote sustainable practices as well (e.g., Overby 2008). For example, Overby (2008) presents the "process virtualization theory" as a way to decide which processes can be fully virtualized or augmented with virtualization in an effort to promote sustainability. The importance of virtualization or dematerialization of processes has become even more visible recently, where COVID-19 has shifted much of the organizational processes into a virtual mode as the world witnessed a major shutdown in its physical interactions. A second observation from the current research on IS and sustainability is that it is not sufficient to simply do research on sustainability, but researchers need to act as change agents that disseminate, advocate, promote, and educate such practices in their own, their institutions', and our discipline's collective lives. Moreover, it is only through changed practices that the kinds of experiments with virtualization that have arisen out of necessity as a response to the pandemic can become better embedded in daily environmentally sustainable behaviors. Scholars in IS and beyond will also have to adopt more mindful approaches regarding their academic practices on the personal, institutional, and community levels. To be broadly adopted, mindful approaches will need to be supported and incentivized by many stakeholders in the scholarly landscape (e.g., funding bodies, appointments committees, academic associations, universities).

If we just revisit our academic lives, every one of us will see at least some room for improvement. For instance, most of us have a hypermobile lifestyle which includes travelling by air for work several times a year to conferences, research stays and collaborations, or guest lectures. On average scholars travel by air 5-6 times more than an average employee (Le Quéré et al., 2015; Stohl, 2008). Klöwer et al. (2020) report on a global conference in San Francisco that generated three metric tons of CO_2 equivalent emissions (tCO_2e) per scientist which is twice as much as the yearly tolerable emission per person. Another study found that professors at the University of Montréal annually emit 10.76 tCO_2e that results from an average 33,000km travelled per person (Arsenault et al. 2019).

Also, the number and organization of our community meetings could be better aligned with ecological goals. We research and apply technologies, such as blockchain or artificial intelligence, without sufficiently addressing the enormous amounts of energy they consume and other unintended impacts of IS usage. These unintentional environmental and also societal side-effects of IS usage are also barely included in our teaching curricula. In sum, while we increasingly promote research on IS and environmental and social sustainability, we should do more to increase sustainability of IS research and teaching practices. We think that as academics we have a special obligation (who else should understand research on climate change and its consequences and educate people? who else has such a large personal carbon footprint?) and role in society (who else has large and diverse networks spanning scholars, students, policy makers, and practitioners?) that we need to embrace to do our bit to limit climate warming and environmental degradation to the minimum extent possible.

To address these very issues, a panel planned for physical attendance which eventually was held virtually at the ECIS conference in 2020 discussed three fundamental questions:

(1) Do we practice what we preach? How much integrity and credibility does our research on IS for sustainability hold, if we do not practice sustainability ourselves?

(2) What can we change in our academic practices to make them more sustainable in the future? Where can we find compromise, where not?

(3) How can we increase the societal impact of existing and future IS research on environmental sustainability? How can we increase the chances that the knowledge we create becomes broadly embedded in teaching curricula and societal debates and finds its way into business practice and policies?

Our panel report addresses the guiding questions as follows. We begin with how academic conferences could be adapted to be more environmentally friendly, inclusive, lively, and at the same time allow community building and socialization. Next, we reflect upon virtualization in other academic practices such as recruitment, exams, and guest lectures and on the inhibitors and facilitators of institutionalizing more responsible education, research, and practices in universities. We conclude with a résumé of actionable ideas on how to increase the sustainability of our academic practices for individual scholars, academic associations and institutions, and funding bodies. We finish with a brief summary and outlook.

2 Scholarship and Environmental Sustainability

Scholars from multiple disciplines have repeatedly highlighted the environmental sustainability potentials of information systems (Gholami et al., 2016; Sedera et al. 2017). Specifically, it has been argued that information systems can help individuals, organizations, and societies (a) make sense of multilayered and complex sustainability issues, (b) articulate and evaluate sustainable action possibilities, (c) perform sustainable actions, and (d) assess the sustainability outcomes of performed actions (Melville 2010; Watson et al., 2010).

We can transition from academic practices that have large face-to-face interaction to those where scholars are mainly conversing through digital technology (Overby 2008). Information systems supporting this transition typically comprise of file sharing and communication features, such as instant messaging or video conferencing (Seidel et al., 2013). Through this decoupling of information from their physical referent (Lusch & Nambisan, 2015; Normann 2001), fewer physical resources are produced and moved, thereby contributing positively to environmental sustainability.

As most emissions surrounding academic conferences are owing to attendees' travel practices, a full or partial virtualization of the attendance can significantly reduce a conference's environmental impact (Arsenault et al., 2019; Spinellis & Louridas, 2013). While a fully online conference reduces travel-related emissions entirely, it can also lead to "digital exhaust" (Leonardi, 2020) which may have a detrimental effect on sustainability. Several studies have investigated hybrid (augmented) scenarios where conferences are held simultaneously at multiple, strategically located sites that are themselves additionally connected through video conferencing (Table 1). Thereby, many long-haul flights can be avoided as attendees would visit their local conference hub (Coroama et al., 2012; van Ewijk & Hoekman, 2020; Kloewer et al., 2020). Depending on many parameters, such as the baseline scenario, the attendance profile, the number of conference sites, as well as the chosen transportation modes, the emission reduction potential of using virtualization and multi-hub arrangements ranges between 30% (two conference hubs) and 99.9% (fully virtual). Hence, organizing AMCIS, PACIS, and ECIS as a simultaneous three-site conference with well-located hubs in North America, Europe, and Asia, may reduce carbon emissions between 45 to 75% as it reduces air travel and multiple participation. We estimate that alternating between a hybrid and virtual ICIS in consecutive years would bring down CO_2 emissions between 60 - 70 %.

Table 1. Overview of Studies on the Emission Reduction Potential of Virtualization

Reference	Academic conference(s)	Travel-related emission reduction potential of virtualization
Hischier and Hilty (2002)	*15th International Environmental Informatics Symposium* in Zurich	Baseline scenario: single-site conference with 308 attendees Comparison scenario: video-linked three-site conference Assumption: number of attendees remains fixed CO_2 emission reduction potential: up to 43%
Coroama et al. (2012)	*R'09 Congress* and *World Resources Forum* in Davos and Nagoya	Baseline scenario: video-linked two-site conference with 531 attendees Comparison scenario: two single-site conferences Assumption: two-site conference attracts more attendees CO2 emission reduction potential: 37-50%
Orsi (2012)	*2007 World Congress of the International Association of Landscape Ecology* in Wageningen	Baseline scenario: single-site conference with 734 attendees Comparison scenario: video-linked two and three-site conferences Assumption: number of attendees remains fixed CO2 emission reduction potential: up to 30% (two-site) and up to 46% (three-site)
Jäckle (2019)	Six global conferences of the *European Consortium for Political Research* in Bordeaux, Glasgow, Montreal, Prague, Oslo, and Hamburg	Baseline scenario: single-site conferences with 1188-1937 attendees Comparison scenario: centralization of conference venues, promotion of low-emission landbound means of transportation, online participation for researchers from far away (4000+ km) Assumption: number of attendees remains fixed CO2 emission reduction potential: 75-90%
van Ewijk and Hoekman (2020)	Three global conferences of the *International Society for Industrial Ecology* in Ulsan, Surrey, and Chicago	Baseline scenario: three single-site conferences with 401-625 attendees Comparison scenario: video-linked two and three-site conferences Assumption: multi-site conferences attract more attendees CO2eq emission reduction potential: 25-50% (two-site) and 46-75% (three site)
Klöwer et al. (2020)	Fall Meeting of the American Geophysical Union (AGU) in San Francisco, California	Baseline scenario: 28,000 attendees travelled 285 million kilometers emitting the equivalent of about 80,000 tonnes of CO2 (tCO2e). Comparison scenario: (A) fully virtual (B) global meeting held across three interconnected hubs using live streaming Assumption: number of attendees remains fixed CO2eq emission reduction potential: Scenario A: 99.9% and for scenario B 79% (three-site with 5% virtual)

Many studies on virtual conferences during the pandemic report positive effects. Costs of virtual conferences are lower (45-60%), the number of conference participants increased, and most importantly satisfaction with virtual conferences and the intellectual and professional engagement during the pandemic was high such that many would prefer them compared to long distance travelling to a physical conference (Medina & Shrum, 2022, Klöwer 2020, Viglione 2020). But virtual conferences have one major

drawback. They cannot emulate the rich social experiences of physical academic conferences such as meeting, networking, and speaking informally with friends, colleagues, and students (Medina & Shrum, 2022, Leimeister et al. 2021). Especially those conference participants without a strong academic network (junior researchers such as Post Docs, PhD or graduate students) and participants from outside academia (e.g., practitioners, panel representatives, publishers) benefit the most from intended and spontaneous networking opportunities at physical conferences (Leimeister et al. 2021). In the following, we elaborate on the strengths and weaknesses of physical and online conferences and how those can be balanced in hybrid multi-channel and multi-site conferences (see Table 2).

Table 2. Balancing Between Physical and Virtual Conferences

Objective	Physical conference	Virtual conference	Hybrid conference approaches
Lower environmental impact	Travel, hotel stays, catering cause higher emissions and waste (Some mitigation through carbon offsetting, better planning of venues avoiding long-haul flights, and encourage more environmentally friendly modes of travel than air travel if possible).	Much lower impact, although conferencing tools need additional computing power (Mitigation through datacenters using renewable electricity).	Switch to biennial physical conferences complemented by fully virtual conference in alternate years. Hybrid conferences lower emissions and waste but require more computing power and technology. Local conference hubs further reduce travel-based emissions and require less computing power as attendees use resources jointly. Incentivize virtual attendance by lowering or waiving fees or introducing budgets.
Social interaction and exchange	Full sensory experience, serendipitous and deliberate socializing.	Full sensory experience (not yet) possible, limited opportunities to make and renew contacts.	Enable and reserve time slots for virtual open and private meetings. Include informal formats that bring together scholars attending on-site and remotely, e.g., with similar interests, hobbies, and skills. Use back-channel technologies (e.g., micro-blogging or messaging services such as Twitter or Slack) to keep conversations going after the conference.
Knowledge dissemination	Physical space limits can result in knowledge rationing.	No reason to ration knowledge. All papers meeting quality standards can be	On-site activities should focus on interactive formats (“flipped conferences”) and

		accepted.	presentation should focus on papers that draw an audience and inspire discussion Other presentations can be pre-recorded, and people can watch them without restrictions of time and space.
Discussion and informal exchange	Panelists and presenters interact with audience and receive multiple visual cues. Ample opportunities for informal exchanges, also on non-professional issues. Very low risk of being secretly recorded and no digital exhaust is created.	Limited audience interaction and few visual cues. Non-acquainted scholars may find it hard to informally exchange. Secret surveillance and recording may create uneasiness to express unpopular opinions openly and confidently.	On-site audience provides visual cues, remote audience should be deliberately included and represented in discussions. Promote (virtual or hybrid) informal exchanges led by a more senior scholar who sets the appropriate tone and atmosphere. Raise awareness, use technical means and code of conduct to decrease the risk of secret surveillance and recording.
Community building (esp. junior scholars) and maintaining	Higher socialization opportunities, especially for junior scholars (e.g., doctoral consortium, senior scholar slam, junior faculty meetings).	Limited opportunities to build social capital among junior scholars.	Promote physical attendance of junior scholars at conference venue. Pre-arrange meetings (e.g., 1:1 or 'speed-dating') between senior and junior scholars.
Social justice and less bias	High travel costs and fees deter participation of scholars from less developed countries and without funding (cultural and social reproduction). Travel is burdensome or impossible for the disabled, ill and scholars having visa restrictions or caretaking commitments.	Reduced cost lower barriers to participate for scholars from less developed countries, disabled and chronically ill scholars can easily participate. More diversity and lower importance of institutional and geographical biases and asymmetries. Less discrimination (e.g., women, ethnic minorities, disabled).	Make especially interactive and discursive formats like panels, keynotes, professional development workshops virtually accessible for underprivileged groups for no or low fees. Facilitate exchanges between participants from different developed and developing countries and different academic systems.

Work-life balance	Travel distorts professional and private life, especially for those with caring commitments.	Easier to integrate with professional and private obligations, however time zone issues cause problems.	Make interactive and discursive formats like panels, keynotes, professional development workshops virtually accessible (bundled and unbundled) at the globally most convenient times. Make recorded presentations, panels, workshops etc. accessible to enable watching at the most convenient times (e.g., members only).
Fun and tourism	Ample opportunities to have fun with peers at the conference (e.g., dinner, receptions, parties). Experience and enjoy other places and cultures.	Full sensory experience (not yet) possible However, playing online games or having a virtual beer (or any other drink) after the official program can be fun.	Provide videos or live talks about the conference venue. Use immersive technologies to virtually tour the city, region, or country.

For academics and professional societies, the most substantive action is to reduce air travel. Additionally, conferences can have large physical space requirements in terms of the venue and associated hotels. As existing buildings are about 40 percent of total societal energy consumption, small conferences would eventually reduce the construction of the venues they require and allow for alternative, steadier uses of venues. Smaller local conferences using academic venues would reduce the direct carbon impact by reducing air travel and future building construction. In the latter part of this report, we present a proposal to reduce the size of IS conferences and shift the focus towards three regional conferences.

Although physical conferences provide a distinct space away from many of the daily interruptions of working life, virtual conferences can result in a family life that is likely to be less disrupted, and thereby create more work-life balance (Sarker et al., 2021). Especially for those who have caretaking responsibilities, disabilities, or visa restrictions virtual conferences along with recorded sessions provide greater flexibility and greater inclusiveness.

The need for greener, more eco-efficient conferences and academic practices did not simply come into focus due to the emergence of COVID-19. We were already aware of the need for new IS academic practices, with global warming being one of the biggest grand challenges of our time. However, during the pandemic we realized that it is possible to operate online conferences successfully. Hybrid conferences, where some can attend physically while others can participate online, have been proposed. Hybrid conferences increase inclusiveness because they reduce geographic and financial barriers to participation (Jarvis et al., 2020). The knowledge creation system will benefit from engaging a larger and more diverse audience (Jordan & Palmer, 2020) thereby drawing attention to problems being experienced in both the developed and developing world (Parker, 2018). Virtual conferences have a major downside related to the social experience that could be detrimental to scholarly development. When we participate in a panel or present a paper, we can see and interact with the audience. We can take the sentiment of the audience, get a feeling for the general opinion in the audience, and can interact directly in verbal and non-verbal ways. More controversial topics can be followed up in smaller groups right after the panel, where there is no concern that somebody might listen or even record the conversation. During virtual conferences, there is typically no direct interaction, and there are few follow-up informal or private conversations—although virtual IS opportunities exist to create similar or even better possibilities to (re)connect and discuss even after the conference. Although a virtual conference may never be as fun (think of dinners, receptions, and

dancing) and culturally inspiring as a physical conference at a remote location, also in this respect digital technology provides potent ways to broaden the cultural horizon and have an after-conference beer or any other drink together. As we know from our research, once users get involved in new IS and actualize novel IS affordances chances are that they actually embrace and like the new IS (Seidler et al. 2018; Kranz et al. 2021).

Some virtual conferences offer services like virtual tables after a presentation, where online participants can move between different tables and can blend in on some of the conversations that take place. However, even such activities introduce a level of formality and structure to processes that often are most effective precisely because of their informality. Whilst such shared spaces work well as tools to reconnect and chat with people one already knows, they are less effective at creating serendipitous connections. Research can be stimulated by fortuitous random connections, such as at a conference dinner (e.g., Whitley & Rukanova, 2008). Junior AIS faculty and PhD students may feel excluded if they believe they do not know the community well enough to join ongoing conversations. Nevertheless, it is precisely by joining such conversations that they become part of our academic community.

Virtual conferences are also likely to contribute to a loss of community since social bonds are less frequently reinforced than through regular face-to-face interactions. Additionally, opportunities to forge new social capital are missed because online presentations are often less conducive to chats after a session or a follow-up meeting at the conference. In addition, other work and family commitments can (re)impose themselves on the life of the academic during the virtual conference.

However, despite these challenges of virtual conferences, it is also important that everything we are doing as AIS conference practice needs to be considered through the UN sustainable development goals lens. Thus, a middle ground approach might work best. For example, while attending physical conferences will remain crucial for most of us for some specific reason, not all of us have or can travel to all conferences for no good reason, especially if (some of) the objectives for attending a conference (particularly knowledge creation) can also be fulfilled by participating online. Also, there is a large imbalance between those scholars that can afford to regularly attend conferences (15% of scholars are responsible for 70% of conference air travel (Cass et al. 2005)) which cements existing inequality biases and asymmetries disadvantaging scholars from the global South, caretakers, disabled, and ethnic minorities. Further, research suggests that the academic benefits (i.e., number of citations) of conference participation are not as large as aspired (Chalvatzis & Ormosi, 2021). Hence, "higher carbon impact is not necessarily associated with enhanced academic outcomes" (Chalvatzis & Ormosi, 2021).

Hence, hybrid approaches can reduce carbon emissions, be more inclusive and preserve opportunities to create social capital. This model is a starting point for what is likely to be a contentious discussion because we see COVID-19 as a stimulus for reinvention rather than an irksome interruption before a return to *normal*. The objectives are to lower the footprint of AIS conferences, raise the engagement level across the discipline, communicate timely knowledge to the membership, build a more inclusive community, and enhance the mindfulness of our community, especially those at the start of their careers who are building up their sense of identity and social capital.

However, hybrid conferences are no panacea, because of the 'forced demand' to attend, especially for more junior researchers. To lower this demand, we could separate paper acceptance from paper presentation. To avoid rationing knowledge because of physical space limits, all papers that meet the conference standard should be published in the proceedings, with authors choosing the conference at which they wish to present their findings. For time sensitive papers, this could include the option of a virtual presentation rather than physical travel. For others, the research should be presented at the most suitable geographic location. Accepted papers selected for presentation should be those that are most likely to stimulate audience discussion and interaction. This means that a physical conference could be reduced to a few tracks that are broadcasted to all who register as online attendees, and this would significantly lower the environmental impact. Additionally, virtual conferences should experiment with different formats (see Table 2) to make the virtual experience more social, fun, entertaining, unique, and enjoyable although we are aware of the (current) limits of digital technology to emulate the full sensory experience of physical conferences.

Conferences are a major source of revenue for many academic societies, including AIS, whose budget depends on the large surplus that a well-attended meeting can generate. A major shift to virtual meetings, will need conference or membership fees to cover the revenue decrease. Alternatively, a differential fee model could be considered with an additional carbon offset fee for those traveling to more than one

conference a year and to conferences outside their region except ICIS. However, those scholars whose papers are selected for presentation at a non-local conference could have the carbon offset fee waived. The goal is to reduce the carbon footprint by reorienting around local conferences but also giving local participants an opportunity to interact with non-local scholars whose work has been selected for presentation because of critical characteristics, such as an important conceptual advancement. This would help disseminate the best thinking and research globally without the environmental impact of a large global gathering.

3 Academic Practices Beyond Virtual Conferences

Although participating in physical academic conferences is a very visible part of academic impact on the environment, in practice there are many other academic practices that can also have a significant environmental impact including guest lectures, workshops, field work, PhD exams and the recruitment cycle. For instance, at the University of Montréal professors annually generate 10.76 tCO_2e that results from an average 33,000km travelled per person (Arsenault et al. 2019). To put that number (note only travel-related emissions) into perspective, annual per capita CO_2 emission in the U.S. is 14.44, in the U.K. 5.12, in Germany 7.75, and 1.69 in India. To limit global warming to 1.5°C, each person on earth is entitled to generate about 1.5 tCO_2e per year. These numbers reveal the unsustainability of established academic practices and an increasing number of articles critically scrutinizes academics' climate hypocrisy (Higham & Font, 2020).

Being invited to give research presentations at other institutions is an important way of obtaining feedback from peers to improve the quality of research papers. Indeed, MIS Quarterly notes "getting feedback from experienced colleagues is a good way to ensure that a paper has reached a point where scarce journal resources can be effectively employed to refine it[1]". Historically, such research presentations would involve national (or international) travel to the other research institution. In addition, a high-profile speaker or important topic might result in a larger than normal audience, many of whom may be adding their own environmental footprint by attending the seminar. However, just as with research presentations at conferences, there is nothing to prevent such events from taking place virtually or in hybrid formats. With universities increasingly setting up teaching spaces that allow a mix of in-person and remote contributions, hybrid research presentations are likely to become increasingly common in the future.

They also have the additional benefit that an international speaker might be more willing to contribute to a research seminar online than having to combine the presentation with a physical visit to the location. This is particularly likely to be an attractive option for seminar locations that are not in natural travel hubs (e.g., major cities). As with virtual conferences, however, such presentations run the risk of distorting the community and discipline building activities and deter informal conversations that often follow a formal presentation. For example, Latour (2004, p. 62) introduces his chapter noting "It is the end of the afternoon, close to the time for moving to the nearby Beaver pub for a pint of beer. A quiet but insistent knock is heard on the door of the Professor. An IS doctoral student peers into the office". Such exchanges (and associated Socratic dialogues) may be less likely to take place if a formal, online office hour must be scheduled with a fixed start and end time.

The examination of PhD theses or external moderation of examining practices for quality assurance purposes are another aspect of academic life that have historically involved travel. Changes introduced as a result of the pandemic are becoming regularized such that the option of a virtual examination / exam board meeting is now deemed an acceptable alternative format. Clearly, given the diversity of PhD examination practices (Whitley et al., 2004) there is challenge for the more ceremonial public defenses to take place virtually; especially where environmental considerations might preclude the inclusion of the academically most appropriate examiner for the thesis. Such boundary cases will help academia articulate the relationship between the most appropriate academic expertise for the contribution to knowledge embodied in the thesis and the environmental costs associated with having that academic expertise contribute to specific forms of academic practice which have their own significant symbolic and institutional roles.

A third academic activity which often entails significant environmental costs is the process of academic recruitment. Whilst the knowledge creation part of the recruitment process can be addressed through virtual paper presentations and one-on-one follow up meetings with relevant faculty, from the perspective

[1] See https://misq.org/mission

of the applicant, accepting a job offer involves far more than just an opportunity for knowledge creation and academic development. It also involves moving to a new location, possibly a new city or even a new continent, for the individual and their family. Such decisions should not be taken lightly. There are claims that we are increasingly in a pluriculture (Ihde, 1993) whereby media and culture as well as food styles are increasingly universalized—rather than being distinct and localized to a particular region. However, a short visit to Dublin for ICIS is unlikely to provide a strong sense of what living in London will be like. Whilst it is possible to defer this fly-in element of the recruitment process, perhaps until after a formal job offer has been made, this runs the risk of distorting the job market further, with applicants perhaps preferring local jobs because they know the physical environment, over job offers dependent on a follow up visit to the campus and city.

4 Encouraging More Responsible Management Education

In the second part of our panel, we discussed more broadly about how to increase the societal impact of existing and future IS research on environmental sustainability focusing on teaching curricula, business practice, and policies (RQ3).

4.1 Institutionalization of Responsible Management Education

The vision of the United Nation's *Principles for Responsible Management Education* (PRME) is to advance the Sustainable Development Goals and contribute to creating a fairer, more inclusive, and sustainable world through responsible management education, research, and practice. It is a voluntary initiative with more than 860 members worldwide which includes Deans and Presidents of business schools as well as top management of large corporations (Weybrecht, 2022). It brings together the UN and business and management schools[2] around the world to inspire and champion responsible management education, research, and practice globally through the application of six principles: purpose, values, method, research, partnership, and dialogue (PRME, 2016). The primary objective of responsible management education is to ensure that tomorrow's business leaders are taught specific skills that enable them to balance both economic and sustainability goals. The business and management schools which are the signatories of the PRME, specifically commit to align their activities with basic values relevant to sustainability, corporate social responsibility, and business ethics through interdisciplinary and intersectoral academia-management collaboration covering three layers of responsible management education, research, and practice (Laasch et al., 2020).

However, many universities still have a dominant economic focus as opposed to the triple bottom line view of sustainability (Elkington, 1994). There may be an occasional sustainability course in an MBA program or a flyer here and there, but a real interest in sustainability is largely nonexistent. A sustainable business acts not only to ensure its own success, but also to benefit the wider community and maintain a natural, healthy environment. Universities should embed sustainability, social responsibility, and ethics throughout their day-to-day operations, as well as integrate it into their education as well as into practice and research.

Universities need to ensure that business leaders are educated to consider the economic, social, and environmental impacts of what they do and integrate these issues into their business operations (Parkes et al., 2017). The 7th principle of PRME's mandates that academic institutions "should serve as example of the values and attitudes we convey to our students" (Rasche et al., 2020b). Figure 1 depicts the past, present, and future of corporate responsibility and sustainability (Rasche 2021).

[2] https://www.unprme.org/about

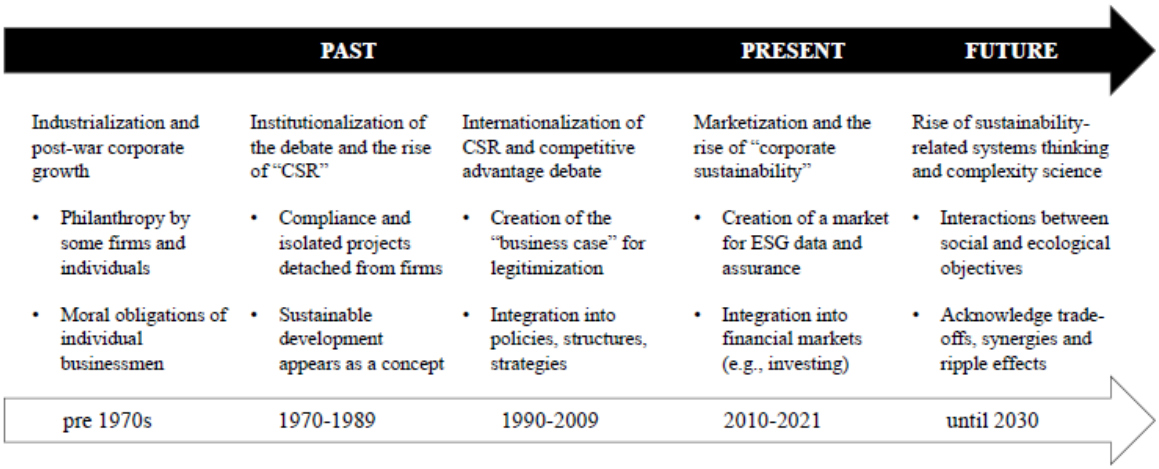

Figure 1. The Past, Present, and Future of Corporate Responsibility and Sustainability (Rasche 2021)

Weybrecht (2022) recently investigated the extent to which business schools are engaging in the Sustainable Development Goals (SDGs) and what that engagement looks like based on how schools have reported their engagement using data gathered from over 1.034 Sharing Information on Progress reports submitted by business schools that are signatories to PRME covering the period 2015-2020. The study suggests that business schools have been slow to engage in the SDGs and many of the reported connections with the SDGs are weak and superficial. What is missing from most of the reports is connection between the goals and targets of the SDGs and the school's operations. This means business schools are not aware of their role in terms of their own impact and in relation to their campus and employees. This is problematic both in terms of reaching the SDG goals, and the ability of institutions to influence their own stakeholders by "walking the talk".

Correspondingly, Laasch et al. (2022) suggest that business schools should focus on educating future management professionals to play an important positive role in society to embrace a 'societal value' proposition. Others such as Cardiff Business School build business models centered on a 'public good' value proposition. Similarly, other business schools' 'research' value propositions might be redesigned by exclusively offering research outputs that address grand challenges. This proactive innovation in 'world solutions' research value proposition goes beyond what many schools already do by labelling existing research outputs through their relationship to a particular sustainable development goal (Lassch et al. 2022).

Rasche et al. (2020a) provides important insights into how the institutionalization of responsible management education in business schools occurs due to different types of institutional pressures. Institutionalization of responsible management practices also reveals whether universities engage in substantive or only symbolic adoption of these practices (Høgdal et al, 2019; Rasche and Gilbert, 2015). Universities may decouple their formal structures from their everyday organizational practices and day-to-day operations (Rasche et al., 2020a).

Institutional theory suggests coercive, mimetic, and normative pressures affect adoption and diffusion of responsible management education, research, and practice in universities (Rasche and Gilbert, 2015). Coercive pressures lead to adoption of the policy or practice because organizations tend to avoid expected negative consequences due to non-compliance.

Coercive pressures mainly result from accreditation bodies and professional associations such as the UK based Association of MBA's (AMBA), the European Quality Improvement System (EQUIS), and the Association to Advance Collegiate Schools of Business (AACSB). Business schools need accreditations to maintain their social legitimacy and to differentiate themselves from competitors (Doherty et al., 2015; Durand and McGuire, 2005). Coercive pressures from ranking bodies also affects adoption and diffusion of responsible management education, research, and practice (Rasche et al., 2020a). The Financial Times' MBA ranking recently included a criterion focusing on ethics and sustainability (Financial Times, 2018). Corporate Knights is another increasingly popular ranking motivating universities to adopt responsible management education, research, and practice.

Mimetic pressures also force universities to follow the behavior of peers. As leading universities adopt responsible management education, research and practice, other universities need to respond to this emerging market trend, to preserve their social legitimacy (Rasche et al., 2020a). Universities also face normative pressures from the public and media. Since the financial crisis in 2008, business schools have been criticized for neglecting the ethical dimension of business and management and for promoting a culture of narrow self-interest that contributed to the crisis of capitalism (McDonald, 2017). Some studies suggest we need radical reform of the conventional business school model (Parker, 2018).

The student body is another source of normative pressure as they are increasingly demanding more courses on ethics, social responsibility, and sustainability in their core curriculum (PRME, 2016). A survey suggests that 64 percent of Millennials would not work for a company that lacks strong CSR values while 88 percent perceive a job with a positive societal impact as more fulfilling (Cone Communications, 2016). Hence, universities and programs that score high on sustainability are likely to attract more students in the future. In the next section, we explain inhibitors and facilitators for adoption of responsible management education.

4.2 Inhibitors for Adoption of Responsible Management Education

The *cost of integrating responsible management* courses across programs can be an inhibiting factor for wider adoption of responsible management. The competition among universities for students and funding has increased significantly while many governments have reduced public funding for higher education. However, the lack of financial resources does not necessarily lead to decoupling. Other factors such as faculty or reputation seem to promote extensive implementation of responsible management education, research, and practice (Snelson-Powell et al., 2016). Snelson-Powell et al. (2016) found smaller and prestigious universities tend to adopt such practices significantly, while larger and less prestigious universities tend to adopt these practices only symbolically.

Faculty could be another inhibiting factor in widespread adoption of responsible management education, research, and practice. Faculty might resist change for different reasons. For example, they might perceive such education useless within the constraints of a free market system (Rasche et al., 2020a). Some faculty may also view responsible management being associated with a political agenda and therefore they completely avoid it (Rasche et al., 2020a).

Sustainability remains a marginal area of interest among editors of top journals and is often limited to special issues. The academic job market has become increasingly competitive and determined by publications in top journals and this has led to increased risk of getting involved with topics outside the current mainstream such as sustainability (Wright and Nyberg, 2016; Gholami et al., 2016). However, we feel that the overdue change is underway. Currently, ranking bodies such as Financial Times and Forbes assign higher weights in their ranking methodology to salary prospects motivating universities to invest in career services rather than responsible management education, research, and practice. CSR and sustainability in the Financial Times ranking carry a weight of 3 percent compared to 40 percent for the salary (Financial Times, 2018).

Ambiguity is another important inhibitor for adoption of responsible management education, research, and practice (George et al., 2006). The PRME (2018) requires business schools to adopt “the values of global social responsibility” and to “create educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership”. Some Business Schools may exploit such vagueness and only symbolically adopt responsible management rather than institutionalizing it (Rasche et al., 2020a). The same criticism applies to AACSB, which states, “sustainable development, environmental sustainability, globalization, and other emerging corporate and social responsibility issues are important and require proactive engagement between business schools and business students”. However, they do not provide detailed guidelines about how business schools should translate these ideas into concrete action (Rasche et al., 2020a).

The *lack of core competencies for sustainability* is another key limitation for sustainability education (Halinen, 2017). Previous studies have criticized AACSB’s curriculum flexibility and highlighted the need for mandatory inclusion of responsible management in curriculum (Windsor, 2002). Most of the courses related to responsible management education in MBA programs are elective courses and not covered in disciplines of finance and accounting in particular (Rasche et al., 2013; Nicholson and DeMoss, 2009). A reason for the above issue is the disagreement among different ideological positions regarding core curriculum in business school (Rasche et al., 2020a). The content related to responsible management

education, research, and practice is largely critical of the neoclassical model of economics and assumptions such as “profit maximization or shareholder value should be the main business objective” and therefore economics and finance faculty may completely avoid discussing those topics in their classes (Rasche et al., 2020a; Wright and Nyberg, 2016).

The recent report by the US National Academies of Sciences, Engineering, and Medicine Board on Higher Education and Workforce and the Science and Technology for Sustainability Program (BHEW, 2020) presents recommendations on strengthening sustainability curriculum in terms of core competencies, contents, and broader contexts; building the academic environment to incentivize these programs; and developing a sustainability workforce. The report suggests universities need to build sustainability education programs by bridging disciplinary silos and by promoting diversity, equity, and inclusion. Such an infusion of responsible management into curriculum can be made by making such a course or module be part of the integrated core courses and capstone courses that are often part of MBA and undergraduate business programs. Being a part of core or capstone courses will ensure that it is rising above disciplinary boundaries, is provided to students in an integrated way, and also emphasizing its importance.

4.3 Facilitators for Adoption of Responsible Management Education

Educating students to become change agents in business and society is an important task for sustainability education programs (Kremers et al., 2020). Achieving the SDGs will require change agents from multiple disciplines beyond the small number of students who study sustainability in depth. Sustainability programs should harness the enthusiasm of students for improving global life quality and equip them with the necessary competencies, knowledge, and skills (BHEW, 2020).

Faculty in sustainability programs should incorporate emerging sustainability content areas to prepare students to address complex sustainability challenges in a real-world setting while incorporating problem-based and solution-oriented approaches to sustainability (BHEW, 2020). Universities and businesses from different industries and sectors need to engage with each other more closely to co-educate and develop managerial talent, to co-create new ideas and understanding, as well as to innovate and establish new business (Flammer et al., 2019).

Professional societies such as AIS play a key role in facilitating community building and resource sharing by creating special interest groups such as SIGGreen. They can also set standards and determine parameters for program evaluations and accreditation, and lead efforts for standardized data collection about students, employees, and employers (BHEW, 2020).

Faculty can also motivate leaders by offering convincing reasons for adopting responsible management education, research, and practice (Misangyi et al., 2008). They can organize resources (Solitander et al., 2012) or translate the ambiguous requirements of responsible management education, research, and practice. It is important that these faculty members (champions of sustainability, ethics, and social responsibility) have direct access to top management to make sure resources are allocated and sustainability initiatives are not killed due to politics within the university (Rasche et al., 2020a).

5 Ideas on the Way Forward

While all panelists agree on the relevance of environmentally and socially sustainable academic practices, they put forth different ideas on how to achieve this objective. We saw two camps emerging in our panel. One camp that takes a more liberal position calling for incentive-based approaches to change practices and voluntary commitments. The other camp takes a more normative position arguing for more rigid and binding guidelines and a top-down “greening” of academic practices. Yet, given that we all want to be part of the solution and acknowledge that a return to the pre-COVID status quo is not sustainable, we propose concrete suggestions for individual academics, departments and universities, academic communities, and funding agencies.

5.1 Leverage Virtualization and limit Air Travel

Among the aforementioned camps was large agreement that virtualization of research and teaching activities offers many possibilities to reduce our environmental footprint. It also provides other benefits such as increased time efficiency, more inclusion, and greater exchange opportunities as restrictions in time and space become less important. But virtualization has its limits. Most importantly, current

virtualization technologies cannot emulate the entire sensory experience humans have in physical encounters. Thus, relationship quality suffers from pure virtual interaction with peers. However, as the corona pandemic has made us more used to virtual meetings and conferences these shortcomings can be addressed by creatively leveraging the technology affordances of digital channels. Five elements are crucial for the success of virtual encounters (Fulcher et al. 2020): (a) clear identification of goals; (b) deliberate design of structured interactions; (c) use of accessible, intuitive, and widely available technologies; (d) pre-event training with platforms tools; and (e) post-meeting assessment of outcomes.

In the future, it is also likely that we see virtualization technologies that come very close to the sensory experience of physical encounters. Many companies are working with advanced digital technologies including computer vision, virtual reality, machine learning, spatial audio, holograms, and real-time compression to enable realistic 3D meetings in which people can naturally talk, gesture, and make eye contact [3]. Thus, technical progress could increase the reach and representation capabilities of virtualization techniques, ideally without simply reallocating the carbon footprint from travel to technology use and potentially render the limits of virtual exchanges increasingly less important.

As in other work and private contexts, this will allow more virtual forms of collaboration, meetings, conferences, and less commuting because of work-from-anywhere arrangements. However, most panelists agreed that informal and serendipitous networking still need physical meetings. As a way forward, we argue for an “digital reinvention of traditional conferences” and a mindful approach to travel. In our views, AIS conferences already did a good job in going virtual due to the pandemic on a short notice. Hybrid conferences can be a great way to make our field more inclusive (e.g., low-income countries, parents) and visible. When it comes to travel, we argue for a mindful approach that carefully weighs the individual and collective benefits and costs of a journey, including its environmental impact. Each of us could try to decrease the number of journeys made, e.g., by consolidating meetings or prioritizing regional conferences.

We also need to rethink the number and frequency of conferences in our field. With ICIS, AMCIS, ECIS, PACIS, HICSS, and others we have many physical conferences a year that attract global attendance. We think that a more environmentally friendly and inclusive way is to move to a biannual ICIS alternating between a hybrid and fully virtual mode. The hybrid ICIS should be extended to give scholars the possibility to use local university venues for collaboration (e.g., working on papers, social networking) which would avoid additional flights and interruptions during the year. In alternate years (those without physical ICIS), AMCIS, ECIS, PACIS can merge and take place simultaneously at three regional hubs. Also, virtual attendance without travelling should be possible. Because of the high carbon-intensity associated with travelling to Hawaii for most attendees, HICCS should become mostly a virtual conference.

The panelists diverged in their opinion on how drastically or binding potential rules and principles shall be, and which stakeholders (e.g., AIS, universities, departments) shall design and control these rules, if at all. While the panelists find it non-trivial to decide when to physically attend a conference due to the absence of general heuristics that help mediate the partially conflicting personal and ecological interests, the majority of the panel rejects binding rules in the face of academic and individual freedom. In any case, conference organizers could also think of extending conferences to give researchers more time to network, discuss, do job interviews, and collaborate which will limit individual travel for other occasions and choose only these papers for presentations that will likely inspire scholars and elicit a lively debate. AIS and others should also use carbon emission calculators to find optimal locations based on prior attendee data and to make conference attendees aware of carbon emissions and promote ways to compensate for them (Diaz et al., 2020). Thus, AIS should audit the carbon footprint of our conferences and make this information transparent. Further, we argue that carbon offsetting should become mandatory for all in the global North and those traveling to more than one conference a year AIS should introduce a levy (except junior scholars and those with official roles). Our ultimate goal should be to have conferences with net-zero carbon emissions. To achieve that, all universities, funding, or governmental bodies should allow payments for the compensation of greenhouse gas (GHG) emissions.

[3] For instance, see Google’s Project Starline: https://www.youtube.com/watch?v=Q13CishCKXY or big tech’s plans for a metaverse: https://www.washingtonpost.com/technology/2021/08/30/what-is-the-metaverse/

5.2 Overhaul Teaching Curricula

The pressing issue of climate change and environmental degradation makes more sustainable organizational practices a strategic imperative, no more a nice-to-have feature or a fig leaf for unsustainable practices (Watson & Kranz, 2021). As companies play a key role in cutting GHG emissions to zero and preserving natural ecosystems, public awareness and scrutiny are growing, not least due to the pressure on governments by social movements such as "Fridays for Future" driven by Generation Z. Also, investors such as the world's largest investment firm BlackRock have recognized that climate change risks are real and severe and urge CEOs to act[4]. As a result, socially responsible investing is booming and firm performance is increasingly not only assessed on financial figures, but together with environmental, social, and governance (ESG) indicators. Thus, times of ignorance, greenwashing, and wait-and-see strategies are definitely over. This does not only apply to companies, but also to the education of current and future business and IS professionals.

Hence, the next generations of business and IS managers need to have increased awareness and knowledge on first and second order effects and unintended consequences of economic activity on societies and environments. For that we should integrate contents and formats in our teaching curricula through case studies, practitioners, social entrepreneurship trainings, self-reflections and assessments, or simulations that incite learning, critical thinking, problem-solving capabilities, and holistic judgement to equip students to make sustainable, fair, and prescient decisions for people, profits, and the planet. This is important as universities are the cradle of future business leaders and studies suggest that students educated on business ethics promote more ethical decision-making (Ruiz-Palomino et al., 2019).

Our discipline should be at the forefront of change as digital innovations will be at the core of sustainably transforming industries with the highest impact on our environment such as energy, transportation, industrial production, and agriculture. Thus, university professors have an essential function and great opportunity to educate the next generation of practitioners as responsible managers and citizens to not only focus on creating financial stakeholder value, but to include the health of societies and environments as equally important criteria. As we sense a call for action to decrease entry barriers and to lead by example, we aim at contributing to a course on IS and sustainability to educate students to respond to the needs of the present without compromising the capacity of future generations and to strengthen the responsibility for sustainable development within universities (Lozano et al., 2013).

5.3 Recalibrate incentives and evaluation regimes

With climate warming and societal inequalities, we face challenges that academics and academic institutions must morally respond to but require an orchestrated approach as these challenges are problems of coordinated collective action (Higham & Font, 2020). Hence, the "current approach, which relies on individual sacrifice, hinders cooperation and delays an effective collective response to anthropogenic climate change (Stern, 2007; IPCC, 2014)". For instance, the participation in the high-carbon air travel regime is a social convention, and effective transition from social conventions requires "policy-led coordination among players (Banister & Hickman, 2013; Schwanen, 2016)" (Higham & Font, 2020, p. 6). A first important step in this respect is to create awareness and transparency at the levels of departments, universities, and academic associations through tracking (see for instance, Arsenault et al. 2019). As a second step, policies such as Concordia University's flying less policy[5] that enables and incentivizes less flying activity need to be developed and enforced. This requires of course an adjustment of how institutions grant tenure and promotion. This also applies to the necessary overhaul of teaching curricula which first needs an evaluation of the status quo (how many sustainability-related courses are offered? Is incorporating sustainability-related issues in courses mandatory? How many sustainability-related courses need to be chosen by students?). After that a strategy can be implemented that specifies how the supply of sustainability-related courses can be promoted and incentivized.

Another issue emerging from the panel refers to the compatibility of existing incentive and evaluation regimes with increasing demands of funding bodies concerning societal impact. The perception of most panelists is that funding bodies or society at large will not continue to support scientific disciplines which fall short in contributing to the UN's Sustainable Development Goals. In some countries, the shift in expectations has already materialized. For instance, in the UK Research Excellence Framework

[4] See: https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter
[5] https://www.concordia.ca/content/dam/artsci/geography-planning-environment/docs/Flying_Less_Policy_GPE_June1_2019.pdf

2014/2021, societal impact accounts for 25 percent of assessing the quality of research. Similar evaluation regimes are being put forward in Australia, the Netherlands (Social Impact Assessment Methods Productive Indicators), and by the EU commission (IMPACT-EV, Open Science) or private companies (e.g., Researchfish).

These evaluation regimes come forward with indicators of measuring the construct of societal impact that include knowledge dissemination, funding from external stakeholders, application of results, counselling, and collaboration with stakeholders beyond academia (Davison & Andersen, 2019). However, measuring, comparing, and weighing these proxies for societal impact in a standardized, widely accepted, and global way is full of challenges and potential disagreement. On the other hand, just because counting the number of publications and citations is straightforward, this evaluation practice omits much of what our profession and discipline has to offer to society. Thus, an important call for action is that we as a discipline, most probably under the auspices of AIS, work on evaluation criteria that account for more than research output. To be fair and widely adopted, the weighing of these criteria must be manageable and account for different career stages (i.e., increasing attention on societal impact at later career stages) to be used by appointment, promotion and tenure committees, and funding bodies.

Beyond evaluation criteria, some panelists claimed that the IS research community still insufficiently rewards researchers who study problems with a societal impact. Most reputable IS journals have failed to stimulate the necessary research and knowledge development (Gholami et al., 2016). Perhaps the shortfall is due to the divide between explanatory and intervention science (Seidel & Watson, 2020), with the former being considered critical for academic success and the latter necessary for solving business and societal problems. It seems that more practical and less theory-driven research struggles for acceptance in many IS journals because the gatekeepers emphasize theoretical contribution over practical relevance. Also in this regard, change is needed because gatekeepers influence which topics researchers choose. For example, MISQE has created a special editor position dedicated to impactful research studies on sustainability (Watson & Kranz, 2021). For these impactful studies, usual requirements to methodological scientific rigor and generalization should remain, only the requirements regarding theoretical contribution should be carefully balanced with societal impact (Gholami et al., 2016; Kranz et al., 2015).

6 Conclusion and Action Points

With this panel, we sought to broadly reflect on the sustainability of our academic practices. The discussion covered several topics (e.g., conferences, teaching, incentive regimes) where our academic practices should be better aligned with sustainability goals. Several potential solutions to decarbonize and dematerialize our academic practices were proposed. While some of those solutions can be implemented rapidly, mostly those which have a greater impact require more substantial changes of our research routines and culture (see Table 3 for a summary). We also discussed the indirect and systemic impact of our practices on environmental sustainability and society at large. Among panelists there was a broad consensus that our teaching curricula need to integrate topics on environmental and social sustainability to make the next generations of IS and business managers aware of the (unintended) consequences and side-effects of digital technology usage. A problem that we discussed that is more difficult to solve is evaluation regimes that undervalue service and impact to society. While we agreed on the pressing need to change single-sided indicators of academic success such as the H-index, different ideas emerged regarding how a complementary indicator can be designed that is easily computed, understood, updated, and compared across (sub-) disciplines and countries.

Table 3. Action Points for more Sustainable and Responsible IS Research and Teaching Practices

Objective	Individual	Organizational (e.g., departments, universities, funding agencies)	Academic Community (e.g., research groups, associations such as AIS)
Lower environmental footprint	▪ More mindful travelling behavior (e.g., limit in-person attendance of conferences, meetings etc.) ▪ Reduce air travel, choose more sustainable means of transportation if possible ▪ Do virtual meetings whenever possible ▪ Demand virtual presentations, keynotes, workshops, or examination ▪ Consider unintended environmental effects of digital technology usage	▪ Discourage flying activities ▪ Promote sustainable travel modes ▪ Allow carbon offsetting ▪ Track, analyze, and publish carbon footprint ▪ Make virtual attendance in meetings such as PhD exams possible ▪ Introduce carbon budgets by career stage and other criteria ▪ No funding for conferences that have no GHG emission target or reduction policy ▪ Increase support for virtual conferences while limiting long haul flights ▪ Invest in state-of-the-art technology and support ▪ Allow 'conference leaves' for virtual conferences	▪ Move to biennial conferences (physical or hybrid) complemented by fully virtual conference in alternate years (e.g., ICIS) ▪ Extend physical conference to allow for extra in-person activities ▪ Make virtual conferences more socially rewarding (e.g., virtual social events, serendipitous meetings) ▪ Use open-source technologies ▪ Switch to regional hub models (e.g., joint AMCIS, ECIS; PACIS) ▪ Always enable virtual participation and record sessions ▪ Track, analyze, and publish carbon footprint of academic activity (e.g., conferences) ▪ Encourage or mandate carbon offsetting ▪ Choose conference venues that reduce air travel ▪ Promote sustainable travel modes ▪ Use university venues for conferences ▪ Discourage travelling to more than one conference a year
Increase responsibility	▪ Be and act mindful in teaching and research about social implications of economic activity, employ stakeholder view ▪ Consider unintended social effects of digital technology usage ▪ Encourage and do research that contribute	▪ Adjust tenure and promotion criteria to reflect academic performance more broadly beyond H-index and publication rankings Overhaul teaching curricula to include more sustainability and responsibility courses and topics	▪ Develop recommendations and rankings on how to measure social impact ▪ Foster and facilitate collaboration on joint teaching activities (e.g., MOOCs) ▪ Promote social inclusiveness, support underprivileged groups, and fight inequalities in all community activities and

	to the UN's SDGs ▪ Active role in sustainability-related knowledge dissemination and transfer to multiple parties such as business, policy, and NGOs		committees

Last, but not least, we hope that scholars are not only guided by evaluation criteria, but in addition by the intrinsic motivation and a moral obligation to make a difference by generating knowledge for a better world and act accordingly. In an increasingly polarized world in which opinion trumps solid scientific evidence and deliberate misinformation spreads across all types of media, we should not only be a voice of reason, but also act as sensible humans that care about next generations and our livelihoods. With an improved alignment of extrinsic and intrinsic motives, we will hopefully observe a rise in more sustainable and responsible academic practices that contributes to solving the substantial economic, societal, and environmental challenges ahead.

References

AGECC (2010). Energy for a Sustainable Future: The Secretary-General's Advisory group on Energy and Climate (AGECC) Summary Report and Recommendations. Retrieved from https://www.un.org/chinese/millenniumgoals/pdf/AGECCsummaryreport%5B1%5D.pdf

Arsenault, J., Talbot, J., Boustani, L., Gonzalès, R., & Manaugh, K. (2019). The environmental footprint of academic and student mobility in a large research-oriented university. Environmental Research Letters, 14(9), 095001.

Banister, D., & Hickman, R. (2013). Transport futures: Thinking the unthinkable. Transport Policy, 29, 283-293.

Board on Higher Education and Workforce (BHEW) of the National Academies of Sciences, Engineering, and Medicine (2020). Strengthening Sustainability Programs and Curricula at the Undergraduate and Graduate Levels. Retrieved from https://nap.nationalacademies.org/catalog/25821/strengthening-sustainability-programs-and-curricula-at-the-undergraduate-and-graduate-levels

Brammer, S., Branicki, L., & Linnenluecke, M. K. (2020). COVID-19, societalization, and the future of business in society. Academy of Management Perspectives, 34(4), 493-507.

Cass, N., Shove, E., & Urry, J. (2005). Social exclusion, mobility and access. The Sociological Review, 53(3), 539–555.

Chalvatzis, K., & Ormosi, P. L. (2020). The carbon impact of flying to economics conferences: is flying more associated with more citations?. Journal of Sustainable Tourism, 29(1), 40-67.

Cone Communication (2016). Millennial Employee Engagement Study. Retrieved from https://www.conecomm.com/research-blog/2016-millennial-employee-engagement-study#download-the-research

Coroama, V. C., Hilty, L. M., & Birtel, M. (2012). Effects of Internet-based multiple-site conferences on greenhouse gas emissions. Telematics and Informatics, 29(4), 362-374.

Davison, R. M., & Bjørn-Andersen, N. (2019). Do we care about the Societal Impact of our research? The Tyranny of the H-Index and New Value-Oriented Research Directions, Information Systems Journal, 29(5), 989-993.

Diaz, O., & P Contell, J. (2020). Selecting Conference Venues: A Carbon Footprint Calculator Based on Past Editions.

Doherty, B., Richards, A., and Meehan, J. (2015). The business case and barriers for responsible management education in business schools. Journal of Management Development, 34(1), 34–60.

Durand R, McGuire J. Legitimating Agencies in the Face of Selection (2005). The Case of AACSB. Organization Studies, 26(2), 165-196.

Ekwurzel, B., Boneham, J., Dalton, M. W., Heede, R., Mera, R. J., Allen, M. R., & Frumhoff, P. C. (2017). The rise in global atmospheric CO 2, surface temperature, and sea level from emissions traced to major carbon producers. Climatic Change, 144(4), 579-590.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. California Management Review, 36(2), 90-100.

Elkington, J. (2020). Green swans: the coming boom in regenerative capitalism. Greenleaf Book Group.

Elliot, S., & Webster, J. (2017). Special issue on empirical research on information systems addressing the challenges of environmental sustainability: an imperative for urgent action. Information Systems Journal, 4(27), 367-378.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. Strategic Management Journal, 40(7), 1097-1122.

Financial Times (2018). Executive MBA Ranking 2018: ranking and analysis. Retrieved from https://www.ft.com/content/56c5593a-bfe7-11e8-84cd-9e601db069b8

Fulcher, M. R., Bolton, M. L., Millican, M. D., Michalska-Smith, M. J., Dundore-Arias, J. P., Handelsman, J., Klassen, J. L., Milligan-Myhre, K. C., Shade, A., Wolfe, B. E., & Kinkel, L. L. (2020). Broadening Participation in Scientific Conferences during the Era of Social Distancing. Trends in Microbiology, 28(12), 949-952.

George, E., Chattopadhyay, P., Sitkin, S. B., & Barden, J. (2006). Cognitive underpinnings of institutional persistence and change: A framing perspective. Academy of Management Review, 31(2), 347-365.

Gholami, R., Watson, R. T., Hasan, H., Molla, A., & Anderson, N. B. (2016). Climate change and green IS solutions: how can we do more. Journal of Association for Information Systems Special Issue on Information Systems Solutions for Environmental Sustainability, 17(8), 308-313.

Gholami, R., Watson, R. T., Hasan, H., Molla, A., & Bjorn-Andersen, N. (2016). Information systems solutions for environmental sustainability: How can we do more?. Journal of the Association for Information Systems, 17(8), 2.

Halinen, I. (2017). The conceptualization of competencies related to sustainable development and sustainable lifestyles. Paris: IBE UNESCO International Bureau of education.

Hardin, G. (1968). The Tragedy of the Commons. Science, 162(3859), 1243–1248.

Higham, J., & Font, X. (2020). Decarbonising academia: Confronting our climate hypocrisy. Journal of Sustainable Tourism, 28(1), 1-9.

Hischier, R., & Hilty, L. (2002). Environmental impacts of an international conference. Environmental Impact Assessment Review, 22(5), 543-557.

Høgdal, C., Rasche, A., Schoeneborn, D., & Scotti, L. (2019). Exploring student perceptions of the hidden curriculum in responsible management education. Journal of Business Ethics.

Ihde, G. B. (1993). Die relative Betriebstiefe als strategischer Erfolgsfaktor. In Industrielles Management (pp. 87-97). Gabler Verlag, Wiesbaden.

Jäckle, S. (2019). WE have to change! The carbon footprint of ECPR general conferences and ways to reduce it. European Political Science, 18(4), 630-650.

Jarvis, C. I., Van Zandvoort, K., Gimma, A., Prem, K., Klepac, P., Rubin, G. J., & Edmunds, W. J. (2020). Quantifying the impact of physical distance measures on the transmission of COVID-19 in the UK. BMC medicine, 18(1), 1-10.

Jeurissen, R. Elkington, J. (2000). Cannibals With Forks: The Triple Bottom Line of 21st Century Business. Journal of Business Ethics, 23, 229–231.

Jones, K. E., Patel, N. G., Levy, M. A., Storeygard, A., Balk, D., Gittleman, J. L., & Daszak, P. (2008). Global trends in emerging infectious diseases. Nature, 451(7181), 990-993.

Jordan, C. J., & Palmer, A. A. (2020). Virtual meetings: A critical step to address climate change. Science Advances, 38(6), eabe5810.

Ketter, W., Peters, M., Collins, J., & Gupta, A. (2016). A multiagent competitive gaming platform to address societal challenges. MIS Quarterly, 40(2), 447-460.

Klöwer, M., Hopkins, D., Allen, M., & Higham, J. (2020). An analysis of ways to decarbonize conference travel after COVID-19. Nature 583, 356-359.

Kranz, J., Kolbe, L. M., Koo, C., & Boudreau, M. C. (2015). Smart energy: where do we stand and where should we go?. Electronic Markets, 25(1), 7-16.

Kranz, J., Fiedler, M., Seidler, A., Strunk, K., Ixmeier, A. (2021). Unexpected Benefits from a Shadow Environmental Management Information System, MIS Quarterly Executive: 20(3).

Kremers, K., Liepins, A. & York, A. (Eds.) (2020). Developing change agents: Innovative practices for sustainability leadership. Montreal, QC: McGill Publication. Retrieved from https://open.lib.umn.edu/changeagents/chapter/where-living-and-learning-meet/.

Laasch, O., Moosmayer, D., Antonacopoulou, E., & Schaltegger, S. (2020a). Constellations of transdisciplinary practices: a map and research agenda for the responsible management learning field. Journal of business ethics, 162(4), 735-757.

Laasch, O. (2020b). Book Review: Tackling doctoral education in responsible management: Resources for learning from ethical professors and intellectual shamans. *The International Journal of Management Education*, *18*(2), 100386.

Laasch, O., Ryazanova, O; and Wright A. (2022). Lingering covid and looming grand crises: envisioning business schools' business model transformations. Academy of Management Learning & Education 21(1),1-6.

Latour, B. (2004). On using ANT for studying information systems: a (somewhat) Socratic dialogue. In Avgerou, C., Ciborra, Land, F. (eds.). Social Study of ICT, Oxford: Oxford University Press. 62-76.

Leimeister, J.M., Stieglitz, S., Matzner, M. et al. Quo Vadis Conferences in the Business and Information Systems Engineering (BISE) Community After Covid. Bus Inf Syst Eng **63**, 741–749 (2021).

Leonardi, P. M. (2020). COVID-19 and the new technologies of organizing: digital exhaust, digital footprints, and artificial intelligence in the wake of remote work. Journal of Management Studies, 58: 249-253.

Le Quéré, C., Moriarty, R., Andrew, R. M., Canadell, J. G., Sitch, S., Korsbakken, J. I., ... & Zeng, N. (2015). Global carbon budget 2015. Earth System Science Data, 7(2), 349-396.

Loh, E. H., Zambrana-Torrelio, C., Olival, K. J., Bogich, T. L., Johnson, C. K., Mazet, J.A., Karesh W., Daszak, P. (2015). Targeting Transmission Pathways for Emerging Zoonotic Disease Surveillance and Control. Vector-Borne and Zoonotic Diseases, 15(7), 432-437.

Lozano, R., Lukman, R., Lozano, F. J., Huisingh, D., & Lambrechts, W. (2013). Declarations for sustainability in higher education: becoming better leaders, through addressing the university system. Journal of Cleaner Production, 48, 10-19.

Lusch, R. F., & Nambisan, S. (2015). Service innovation. MIS Quarterly, 39(1), 155-176.

Malhotra, A., Melville, N. P., & Watson, R. T. (2013). Spurring impactful research on information systems for environmental sustainability. MIS Quarterly, 37(4), 1265-1274.

Mazzucato, M. (2020). Capitalism's Triple Crisis, Project Syndicate. Retrieved from https://www.project-syndicate.org/commentary/covid19-crises-of-capitalism-new-state-role-by-mariana-mazzucato-2020-03?barrier=accesspaylog

McDonald, D. (2017). The golden passport: Harvard Business School, the limits of capitalism, and the moral failure of the MBA elite. New York, NY: HarperBusiness.

Medina, L. R., & Shrum, W. (2022). Going virtual: Academic conferences in the age of COVID-19. First Monday, 27(4).

Melville, N. P. (2010). Information systems innovation for environmental sustainability. MIS Quarterly, 34(1), 1-21.

Misangyi, V. F., Weaver, G. R., & Elms, H. (2008). Ending corruption: The interplay among institutional logics, resources, and institutional entrepreneurs. Academy of Management Review, 33(3), 750-770.

Nicholson, C. Y., & DeMoss, M. (2009). Teaching ethics and social responsibility: An evaluation of undergraduate business education at the discipline level. Journal of education for business, 84(4), 213-218.

Normann, R. (2001). Reframing business: When the map changes the landscape. John Wiley & Sons.

Nyberg, D., & Wright, C. (2020). Climate-proofing management research. Academy of Management Perspectives, (ja).

O'Callaghan-Gordo, C., & Antó, J. M. (2020). COVID-19: The disease of the anthropocene. Environmental research, 187, 109683.

Orsi, F. (2012). Cutting the carbon emission of international conferences: is decentralization an option?. Journal of Transport Geography, 24(C), 462-466.

Overby, E. (2008). Process virtualization theory and the impact of information technology. Organization Science, 19(2), 277-291.

Parker, J. (2010). Competencies for interdisciplinarity in higher education. International Journal of Sustainability in Higher Education, 11(4), 325–338.

Parker, M. (2018). Shut down the business school. University of Chicago Press Economics Books.

Parkes, C., Buono, A.F., & G. Howaidy (2017). The Principles for Responsible Management Education (PRME): The first decade – What has been achieved? The next decade – Responsible Management Education's challenge for the Sustainable Development Goals (SDGs), The International Journal of Management Education, 15(2), Part B, 61-65.

Patz, J. A., Graczyk, T. K., Geller, N., & Vittor, A. Y. (2000). Effects of environmental change on emerging parasitic diseases. International journal for parasitology, 30(12-13), 1395-1405.

PRME (2016). The State of CSR and RME in Business Schools and the Attitudes of their Students. Retrieved from http://www.unprme.org/resource-docs/25MGSMPRMEReport2016.pdf

PRME (2018a). Principles of Responsible Management Education. Retrieved from http://www.unprme.org/resource-docs/10SixPrinciples.pdf

PRME. (2018). PRME Champions. Retrieved from http://www.unprme.org/working-groups/champions.php

Rasche, A., & Gilbert, D. U. (2015). Decoupling responsible management education: Why business schools may not walk their talk. Journal of Management Inquiry, 24(3), 239-252.

Rasche, A., Gilbert, D. U., & Schormair, M. J. (2020). The Institutionalization of Responsible Management Education. In The SAGE Handbook of Responsible Management Learning and Education (pp. 426-438). SAGE Publications.

Rasche, A. (2021). Unternehmerische Verantwortung und Nachhaltigkeit: Vergangenheit, Gegenwart und Zukunft. In: Moellering, G. (Ed.). Was heißt unternehmerische Verantwortung heute? Reflexionen zum 100. Geburtstag Reinhard Mohns. Gütersloh: Verlag Bertelsmann Stiftung, pp. 113-129.

Raworth, K. (2017). Doughnut economics: seven ways to think like a 21st-century economist. Chelsea Green Publishing.

Ruiz-Palomino, P., Martínez-Cañas, R., & Jiménez-Estévez, P. (2019). Are corporate social responsibility courses effective? A longitudinal and gender-based analysis in undergraduate students. Sustainability, 11(21), 6033.

Ryazanova, O., Wright, A., and Laasch, O. (2021). Studying the ongoing change at the individual level: Who am I (becoming) as a management educator and researcher? Academy of Management Learning & Education, 20(4), 497-500

Sarker, S., Ahuja, M., Sarker, S., & Bullock, K. M. (2021). Navigating Work and Life Boundaries. Springer Books.

Sarker, S., Chatterjee, S., Xiao, X., & Elbanna, A. (2019). The sociotechnical axis of cohesion for the IS discipline: Its historical legacy and its continued relevance. Mis Quarterly, 43(3), 695-720

Schwanen, T. (2016). Innovations to transport personal mobility. In D. Hopkins & J. Higham (Eds.), Low carbon mobility transitions. Oxford: Goodfellow.

Sedera, D., Lokuge, S., Tushi, B., & Tan, F. (2017). Multi-disciplinary green IT archival analysis: A pathway for future studies. Communications of the Association for Information Systems, 41, 28.

Seidel, S., & Watson, R. T. (2020). "Integrating explanatory/predictive and prescriptive science in information systems research. Communications of Association for Information Systems, 47, 49.

Seidel, S., Recker, J., & Vom Brocke, J. (2013). Sensemaking and sustainable practicing: functional affordances of information systems in green transformations. MIS Quarterly, 37(4), 1275-1299.

Seidler, A. R., Henkel, C., Fiedler, M., & Kranz, J. (2018). Encouraging Pro-Environmental Behaviour: Affordances and Institutional Logics in IS-enabled Organisational Sustainability Transformations. *Research-in-Progress Papers*. 72. Retrieved from https://aisel.aisnet.org/ecis2018_rip/72

Snelson-Powell, A., Grosvold, J., & Millington, A. (2016). Business school legitimacy and the challenge of sustainability: A fuzzy set analysis of institutional decoupling. Academy of Management Learning & Education, 15(4), 703-723.

Solitander, N., Fougère, M., Sobczak, A., & Herlin, H. (2012). We are the champions: Organizational learning and change for responsible management education. Journal of Management Education, 36(3), 337-363.

Spinellis, D., & Louridas, P. (2013). The carbon footprint of conference papers. PloS one, 8(6), e66508.

Stock, P., and Burton, R. J. F. (2011). Defining terms for integrated (multi-inter-trans-disciplinary) sustainability research. Sustainability, 3, 1090–1113.

Stohl, A. (2008). The travel-related carbon dioxide emissions of atmospheric researchers. Atmospheric Chemistry and Physics, 8(21), 6499-6504.

Swiss Re Biodiversity and Ecosystem Services (BES) Index (2020). Habitat, water security and air quality: New index reveals which sectors and countries are at risk from biodiversity loss. Retrieved from https://www.swissre.com/institute/research/topics-and-risk-dialogues/climate-and-natural-catastrophe-risk/expertise-publication-biodiversity-and-ecosystems-services.html

van Ewijk, S., & Hoekman, P. (2020). Emission reduction potentials for academic conference travel. Journal of Industrial Ecology.

Viglione, G. (2020). How scientific conferences will survive the coronavirus shock. Nature 582(7811):166–167.

Watson, R. T., & Kranz, J. J. (2021). Guest Editorial: Moving from Good Intentions to Measurable Sustainability Results. MIS Quarterly Executive, 20(2), 2.

Watson, R. T., Boudreau, M. C., & Chen, A. J. (2010). Information systems and environmentally sustainable development: energy informatics and new directions for the IS community. MIS Quarterly, 34(1), 23-38.

Weybrecht, G. (2022), Business schools are embracing the SDGs – But is it enough? – How business schools are reporting on their engagement in the SDGs, The International Journal of Management Education, 20 (1), 100589.

Whitley, E. A., & Rukanova, B. (2008). A symmetric analysis of the border control information systems for people and trade.

Whitley, E. A., Sieber, S., Cáliz, C., Darking, M. L., Frigerio, C., Jacucci, E., Nöteberg, A., and Rill, M. (2004). What is it like to do an Information Systems PhD in Europe? Diversity in the practice of IS research, Communications of the Association for Information Systems, 13, 317–335.

Wilkinson, R., & Pickett, K. (2011). The spirit level: Why greater equality makes societies stronger. Bloomsbury Publishing USA.

Wilkinson, R.G., and Pickett, K. (2018). The Inner Level: How More Equal Societies Reduce Stress, Restore Sanity and Improve Everyone's Well-being. London: Penguin.

Windsor, D. (2002). An open letter on business school responsibility. Retrieved from http://info.cba.ksu.edu/swanson/Call/Call.pdf

Wohlgezogen, F., McCabe, A., Osegowitsch, T., & Mol, J. (2020). The wicked problem of climate change and interdisciplinary research: Tracking management scholarship's contribution. Journal of Management & Organization, 26(6), 1048-1072.

Wuebbles, D. J., Sharma, A., Ando, A., Zhao, L., & Rigsbee, C. (2020). Converging on solutions to plan sustainable cities. Eos, 101.

Wunderlich, P., Veit, D. J., & Sarker, S. (2019). Adoption of Sustainable Technologies: A Mixed-Methods Study of German Households. MIS Quarterly, 43(2), 673-691.

Zeiss, R., Ixmeier, A., Recker, J., & Kranz, J. (2021). Mobilising information systems scholarship for a circular economy: Review, synthesis, and directions for future research. Information Systems Journal, 31(1), 148-183.

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