Introducing Sustainable Management Strategies to SMEs

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0. Introductory Summary

This contribution is based on interim results of an ongoing research project of the *Gemeinwohlökonomie-Forschungsverein*, qualified in Austria by the National Research Funding agency (FFG) entitled (translated): “Sustainable Business Game for SMEs” (the German acronym is NaWiS4KMUs, NaWiS for short, which will be used further in this article).
The main objectives of the project as defined from the beginning are:
- To motivate SMEs (Small and Medium Size Enterprises) to set up a comprehensive strategy for sustainability management, starting from their engagement with the Common Good Balance Sheet as a reference model of the Association of Economy for the Common Good (German acronym GWÖ), and who, to this end, agree to act as suppliers of (empirical) inputs to the project by their manifested experience,
- Establish networks of companies willing to share their common interest in setting up their own sustainability management,
- To follow and analyse current, especially regulatory / legal developments in sustainability reporting and to prepare the respective state of legislation for SMEs and their information supply,
- To investigate the integrability of hitherto non-financial reporting models into financial accounting and, where possible, to incorporate them,
- To develop methods for introducing sustainability management into SMEs in a “fun way”,
- To develop exemplary, model open software tools for sustainability reporting on a platform such as e.g. the preferred European GAIA-X cloud for SMEs. These tools should be activatable under a unified dashboard.
In contrast to the current projects of developing directives and standards for the establishment of sustainability management, which are discussed, developed and lobbied for the definition of legal provisions at the European level without exception "top down" and primarily for large companies, the NaWiS project takes the opposite path of a "bottom up” development with the conscious active involvement of SME companies - in a first phase, companies from Austria are included for this purpose. (The specific difference we found is that SMEs different form larger companies focus on positive stakeholder communication and that they concentrate on the essential core of their business Another distinctive feature that sets the project apart from current approaches to finding standards for sustainability reporting is that it will explore how the collection of sustainability data and how the implementation of the future management ideas developed from it can be done in a playful and thus motivating way for all employees).
The course of the project as an innovation project is based on the model of a "Design Thinking" process and, in recognition of this method, is accompanied by both the Austrian Research Promotion Agency and the SMEs defined and involved as stakeholders.

1. The initial situation

The main objective of the NaWiS project which is to be presented here, is to explore whether and how SMEs in Austria can be motivated to deal with questions of sustainable business management, to develop such a management and to introduce it with playful methods.

In order to approach this goal - a scientific or even theoretically complete description does not seem possible to us authors and active contributors at the moment - we have chosen the approach of deliberately arriving at findings "bottom up" on the basis of workshops and interviews with SMEs on how SMEs as essential bearers of economic processes can be won over by the majority to actively participate in processes on necessary, major changes for the benefit and survival for the own company through sound sustainability management. (We have to admit, that this approach lacks a well defined social science based methodological model as common in social science, however the agreement with the funding agency was that our project design mainly following the Design Thinking model would be a well accepted scheme).

Such approach of defining the motivation process from the bottom up turned out to be an almost insoluble issue, considering the infinite diversity of SMEs, their business purposes, their contexts, their size and their constitutions. As other studies have shown [1], analyses and conclusions can only be drawn from examples of selected companies. In our project, a total of 7 companies were persuaded through their participation in workshops to give their views on sustainable management. Structured interviews were conducted with a further 18 companies, from which the findings cited in this article could be derived.

The current discussion and regulatory proposals to require companies to move towards sustainability management are almost invariably directed towards large and, from the point of view of legislators, "monolithic" companies. In other words, the current strategies to motivate business as a whole are almost invariably top-down and geared towards large companies. This insight was gained in our project, among other things, in a remarkable interview [2] with BASF Executive Board Member, Saori Dubourg, who chairs the “Value Balancing Alliance” (VBA) [3] beyond the boundaries of her own company, a grouping of relevant DAX (German stock market index) companies that addresses the issue of integrating non-financial reporting aspects into statutory, primarily financial reporting obligations building upon the IFRS balance sheet standard. The VBA represents one of the key lobbying players in the current discussion on the creation of a European directive on statutory sustainability obligations.

In order to put the dimension of the role of SMEs in perspective, our project has deliberately focused as an information base on the structure of the Austrian economy, which we consider to be representative of economies characterised by SMEs, such as those of the Southern German states, Northern Italy, Catalonia or the Scandinavian countries, such as Sweden in particular [4], from where we were able to obtain extensive study material for our own work through an article entitled "Maintaining Sustainable Practices in SMEs: Insights from Sweden" [1].

The economic structure in Austria can be characterised by a few statistical figures based on the year 2020 [5]: In terms of numbers, 99.6% of all enterprises are SMEs (about 360,000), of which about 80% are family businesses. In terms of employment figures, SMEs provide 2/3 of all jobs (reference figure ~ 2 million), contribute approximately this proportion with 520 billion € to economic output and value creation in the country. The equity ratio of one third

shows that the companies are not (sufficiently) self-financed on average and 5% return on sales is not exactly exhilarating, compared to the profitability figures known from corporate groups. In other words: on average, Austrian SMEs are under considerable pressure to be profitable and, as far as their financing is concerned, are dependent on external material influences that they cannot control on their own. Especially banks through their largely ”home made” credit regimes take major influence on the welldoing of SMEs. (As for taxation the numbers are not easy to acquire. A point of well known concern, however, is that SMEs much more than large corporation pay the full official tax rates, whereas the large and multinational companies in Austria in average pay only around 50% of the official rate, i.e. SMEs carry the burden of public finances more than the big ones).

The specific positioning of SMEs with regard to their sustainability management can be characterised as follows according to the initial results of our survey and largely consistent with results as reported in [1]:

- A majority of companies has been made aware of the topic of sustainability management and have already heard something about the “Green Deal” and the "Green Taxonomy", mainly through public communication,

- With the exception of a few companies, the majority do not see themselves in a position to decide to what extent and according to what standard(s) they will have to prove whether they are operating sustainably in accordance with the rules. The current situation resembles complete confusion and uncertainty as to how they will have to orient themselves.

- It is also completely unclear to the companies whether they will have to comply with regulatory requirements, and if so, to which extent and when.

All companies active in the market are aware that in their role within a supply chain they will sooner or later be obliged to provide information on their sustainability management, whereby the current situation is that the economically more powerful partner in this chain is inclined to impose its own obligations on the smaller supplier, but this usually represents an excessive demand on the latter.

In view of the fact that most SMEs are dependent on the rules imposed on them by the financial sector, especially with regard to risk assessment, the financial partners - usually the (house) banks - place additional demands on the companies in terms of proof. According to our own research, banks use different, in-house reference standards according to which they assess the creditworthiness or investment-worthiness of their customers, which in turn causes additional expenses for the companies. All in all, this creates not an easy situation, combined with the fear that the burden of verification obligations will increase. Having said so, SMEs, however, want to become testified to be “green” by receiving a repudiated quality seal demonstrating their competence (as this was the case years ago with the ISO 9000 qualification).

In the course of the development of regulations for sustainability reporting, as is imminent in the form of both long-range directives and shorter-ranging regulations of the European Commission, special attention must be paid to EFRAG [6], which has a special role as a think tank and preparer of the directives of the EU Commission. EFRAG's role and mandate reads as follows:

EFRAG is a private association established in 2001 with the encouragement of the European Commission to serve the public interest. EFRAG extended its mission in 2022 following the new role assigned to EFRAG in the proposal for a CSRD (Corporate Sustainabilitiy Reporting Directive) of 21 April 2021, providing Technical Advice to the European Commission in the form of fully prepared draft EU Sustainability Reporting Standards and/or draft amendments to these Standards. Its Member Organisations are European stakeholders and National Organisations and Civil Society Organisations. EFRAG's activities are organised in two pillars: A ***Financial Reporting*** *Pillar: influencing the development of IFRS Standards from a European perspective and how they contribute to the efficiency of capital markets and providing endorsement advice on (amendments to) IFRS Standards to the European Commission. Secondly, a* ***Sustainability Reporting*** *Pillar: developing draft EU Sustainability Reporting Standards, and related amendments for the European Commission.*

EFRAG has compiled a differentiated list of draft directives, standards and commentaries currently under development or in transition to final legislative proposals. The work content clearly indicates that the model for entities is group and large entities. At the time of writing this paper, only an internal list of demands on reporting principles from an SME working group, the so called "C8 Cluster", had become known, which reads as follows:

1. *Simplify the wording*
2. *Limiting the administrative burdens*
3. *Study the possibilities of ranges instead of discrete numeric evidences*
4. *Focus on sectorial differences*
5. *Fight inequality, foster involvement*
6. *Explore the possible use of available information without undue cost*
7. *Offer a solution today before the financial system decides on its own*
8. *One concept to include a broad diversity: SMEs*
9. *Sustainability Reporting Standards for all SMEs, not only for the listed ones*
10. *Positive approach to sustainability in SMEs*
11. *Make the role of SMPs (Small and Medium Size Practitioners) easier on sustainability practice.*

This list of demands represents evidence that meeting the needs of SMEs will be inherently inconsistent and ultimately difficult.

The readiness for sustainability reporting by SMEs

The selection of the companies participating in our project was selective and not representative insofar as our research group had its historical roots in the Common Good Economy movement and accordingly already had good contacts with companies that were committed to the idea of the Common Good Economy and had already applied the so-called Common Good Balance Sheet to their business. The question that arose directly and naturally from this was whether and to what extent the Common Good Balance Sheet can serve as a basis for sustainability reporting. These assumptions were not disputed among the target group of companies involved in the NaWiS project, but it turned out that the companies committed to the idea of the Common Good Economy are a clear minority within the collective of SMEs. Both in communication with the largest business association representing SMEs in Austria [7] and through two sub-project on stakeholder communication [8], [9], of which results will be cited later, it became apparent that normative requirements, as such the application of the Common Good Balance sheet is considered, find little acceptance on the part of a majority of liberal and conservative thinking SMEs as exist in Austria. If "enforced"

standards are accepted, then only if they are imposed by law. This, however, is the issue that our NaWiS project addresses, namely the question of how to get companies that have no motive of their own to talk about their sustainability management to do so.

The other side of the consideration, however, is that, as has already been stated, SMEs are mainly managed by their owners, prototypically as family businesses, especially the strategic orientation of SMEs based on corporate values. According to our surveys, this ethical orientation goes so far that a high degree of congruence between the corporate philosophy of the owner(s) and the social orientation of the company can be identified. Our surveys give indications that SMEs that are aware of their social and even political responsibility make their own efforts to bring their corporate philosophy into line with the newly emerging requirements for sustainability management. Based on different motivations, as they were also very well examined in [1], we would go so far as to postulate that environmentally and sustainability-conscious companies, in contrast to large corporations with their own ideas, often distinguish themselves as forward thinkers and pioneers in questions of effective sustainability management and can thus serve as role models. In any case, the famous and vaunted innovative spirit of SMEs can play a pacemaker role in the practical implementation of sustainability management as a model for the entire economy.

2. Innovative momenti in the conduct of the project: The Design Thinking project structure and the identification of “personas” for getting a grip on the variety of SMEs

The innovative project structure lies in the foundation of a bottom-up approach, that steers the complete NaWis-project. It includes the group of future users in the process as an essential basis in order to maintain a close relationship to the realities of SMEs. What was the reason why did we decide to choose such project structure? In a first instance to avoid a fault that often leads to lack of compliance and engagement by SMEs: to impose rules and regulations, that force SMEs to contribute. As proven by interviews with ECG consultants and SMEs which are already highly engaged in ECG, [12] owners of SMEs are demotivated when being forced, but can be highly motivated to engage in better performance in terms of engagement in sustainability. Sustainability management needs positive motivation, to be exercised as part of enterprises’ life and not being seen as “just another regulation” being imposed on the already overregulated SMEs. This reveals a substantial paradox in the field of sustainability and is particularly effective in the case of SMEs: on the one hand, companies and their employees should be motivated to decide and act sustainably on their own initiative; on the other hand, there is a systemic compulsion on the part of the authorities to provide proof, which results in pressure on companies.

The goals of NaWis as defined above show, that we had to adopt a completely new approach when it comes to introducing sustainability management strategies to SMEs. This approach presumes, that SMEs have no or not well defined strategy, that sizes of enterprises differ a lot (between 1 to 250 employees), if any internal reporting and management exist at all, they cannot compared to larger companies.

In order to be able to develop at least an initial approach to the topic we are working on, we have chosen an approach that is oriented towards the process model of design thinking [10], [11], [12].

Characteristic of this model for an open innovation process is the following:
Design thinking is a process that is suitable for the development of solutions, products, services in this sequence. The requirements in this development process must be sufficiently complex and the hoped-for solutions must not be obvious, so to speak.
The development of innovations applied to NaWiS is based on several steps, which are depicted linearly in the diagram shown in Fig. 1, but in the concrete application, reflection loops enable a review of the assumptions and results. This approach differs significantly from classic innovation processes, such as the stage-gate model, which defines "points of no return" in order to be able to guarantee a process progress defined by project management.
Framework times are defined, but not specific result expectations or points of no return, which would fundamentally contradict the open innovation approach chosen. The focus is both on the result and the proximity to the users' needs - the basis for the bottom-up approach as we committed to.
This also means that the research results and findings are very much oriented towards the needs and less towards the usances of academia, i.e. our approach is not following a classical scientific process rather than being driven by an intensive interaction between the participants.
The process involves experts and representatives of the companies involved from the very beginning. This ensures that the development of methods and tolls is as close as possible to the reality and practices of the companies.
Inputs from companies, teamwork of the internal development team and workshops that review the results with the companies are carried out alternately in a continual process.

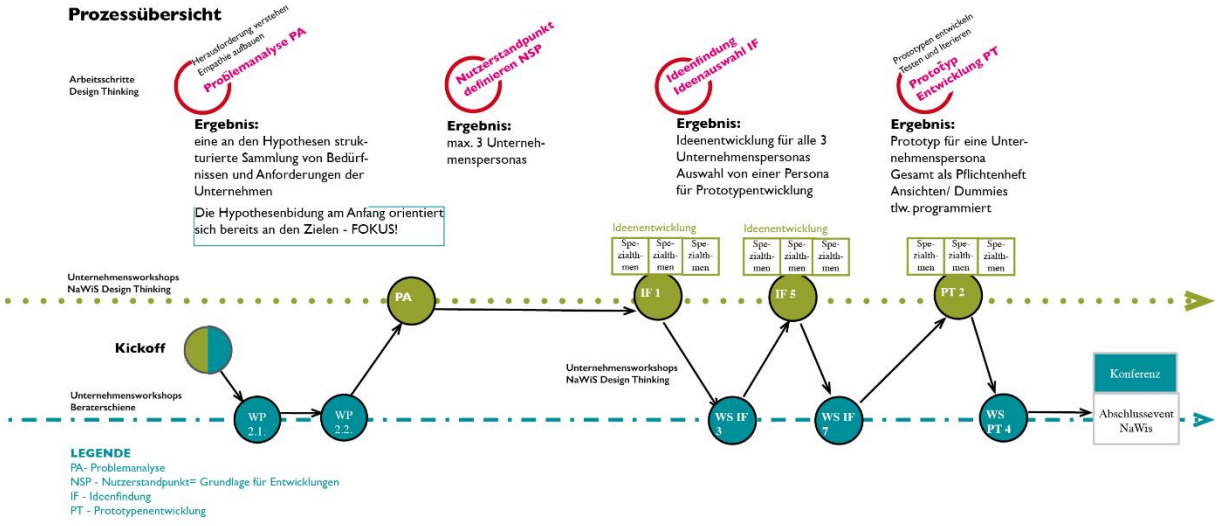

Fig. 1: NaWiS' innovative Design Thinking process in survey

The explicit process steps are: Problem analysis, user point of view, idea generation, prototype development, protoypes then to be finalised to a consolidated product or service.
The linchpin of all developments in the project is the user's point of view in the form of so called company *personas*, which were defined for supporting the ongoing developments by means of workshops and interviews.
As stated at the beginning and in various places of this article, it is almost impossible to capture the diversity of SMEs according to economic sectors, size, social, economic and

geographical context, business models, legal and management constitution, etc. and to represent it completely for the purposes of this article. The NaWiS project has therefore decided to define three prototypical and fictitious enterprises typical of the Austrian business landscape. The method used to crystallise these three representative companies is that of identifying the said *personas* [13].
The personas we chose are: (1) A construction company with about 80 employees, (2) an IT company with about 50 employees, (3) an organic farming company with about 25 employees.
For these three personas, four fields were selected in which the topic of sustainability was identified as particularly relevant: (1) materiality, (2) employees, (3) suppliers/customers and (4) gaming, which means game-like and “joyful” acquisition of information on the enterprise’s sustainability endeavours.

3. The studied reference models and their evaluation for the NaWiS project

If one deals with the challenge of creating a future-oriented localisation of models, methods and frameworks for and with SMEs, which all aim to show a path towards sustainability management, one will inevitably discover in the current situation that the offer is more than diverse and multiple from the various points of view. A project like NaWiS naturally has to deal with the current "proliferation" of reference models, especially in order to create clarity and order in this confusing situation and in order to ultimately be able to offer our "customers", the SMEs, orientation as to whether and if so, whether there are standards and methods according to which they can align their (future) sustainability management.
The table below (Table1) shows which models were examined more closely in the NaWiS project, namely under the aspect of which model / which of the methods could be optimally suited as a reference for the company's own organisational development.
It is indisputable that the implementation of almost all models will entail a considerable management effort both for their establishment and their permanent application, i.e. it will not be practicable for companies of a size below approx. 15 employees. Even new emerging standards such as those prepared by EFRAG [6] as the legitimate input provider to the European Commission for its legislative initiatives are grosso modo not adapted to the needs of SMEs. EFRAG has, as discussed elsewhere in this article, set up a working group called "Cluster 8" whose task is to adapt or "tailor" most of the standards for SMEs, but to date no more than "pious wishes" from SME representatives have emerged as requirements from this working group.
Although it is the concern of the NaWiS project to introduce sustainability management in SMEs also with reference to (future) standards and law, the project does not aim to participate in this discussion as a lobbying party. The current state of the discussion from the perspective of the NaWiS project is that ultimately the regulations expected for 2023 can also be assessed and implemented by SMEs with their own competence.

Model Scope	Title of *example* model	Specific on Sustainability	Web page(s)
General and generalistic frameworks	1) **SDG**s 2) UN Global **COMPACT** for Business ref. Human Rights, Labour, Environment, Anti Corruption	1) All 17 subgoals 2) Guide to Sustainability	1) https://sdgs.un.org/goals 2) https://www.unglobalcompact.org/ and https://d306pr3pise04h.cloudfront.net/docs/publications%2FUN_Global_Compact_Guide_to_Corporate_Sustainability.pdf
Reference Models for *Ethical* Management	1) **Economy for The Common Good (ECG)** 2) **IEEE 7000**	*1) Sustainability* = An international Open Access Journal. -> Special Issue: Sustainable Economy for the Common Good 2) Addressing Ethical Concerns in System Design	1) https://www.ecogood.org/apply-ecg/common-good-matrix/ and https://www.mdpi.com/journal/sustainability/special_issues/Sustainable_Economy_Common_Good 2)https://standards.ieee.org/ieee/7000/6781/
Ecological Management Systems	**EMAS = EU Eco-Management and Audit Scheme**	**Certifiable Eco-Management System (software supported)**	https://ec.europa.eu/environment/emas/index_en.htm
EU regulatory	1) **EFRAG** set of standards (in preparation) 2) **EU CSRD** (legally binding)	1) Corporate sustainability Reporting Roadmap 2) Corporate Sustainability Reporting Directive	1) https://www.efrag.org/ 2) https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en
The most widely used *Sustainability Reporting* "Standard"	**Global Reporting Initiative (GRI)** "Standards" set	Three series of Standards: (1) GRI Universal Standards (2) GRI Sector Standards, (3) GRI Topic Standards	https://www.globalreporting.org/
Reference models by private initiative (*IFRS related*)	**Value Balancing Alliance (VBA)**: Environmental and social impacts -> in comparable financial data.	"Sustainability Talk 2020: On the responsibility of numbers"	https://www.value-balancing.com/ and https://www.value-balancing.com/en/meet-us/experience-us/sustainability-talk-2020.html
Standards issued by neutral & official *standardisation bodies* (examples !!!)	1) **ISO 9000** series w.r.t. environmental management 2) **ISO 14001** on environmental management 3) **ISO 26000** on Social Management	1) Extension of classical ISO 9000 2) Practical method for companies and organizations of any type to manage their environmental responsibilities. 3) Guidance on social responsibility	1) https://www.iso.org/iso-9001-quality-management.html 2) https://www.iso.org/iso-14001-environmental-management.html 3) https://www.iso.org/standard/42546.html

Table 1: Overview of various current standards for sustainability management

We are also aware that the European Supply Chain Act [14] which has only just been published when this article was written, will in a first wave lead to SMEs within the supply chain having conditions imposed on them by the respective higher-level contractual partners, which these contracting, larger companies will have to fulfil due to their own legal obligations, the scope and depth of which will be unreasonable for SMEs to apply. NaWiS has therefore made it its business to empower SMEs and their management to be able to stand up to the new laws argumentatively and to master their own ways of implementing legal requirements.

4. The empirical work and findings by conducting a series of workshops with SMEs

The basic approach of finding a way for SMEs to be motivated and won over for sustainability management is the core of the NaWiS project. The aim here is to create an empirical foundation on the basis of which methods and tools can be provided as a result, which on the one hand are adapted to the needs of SMEs and on the other hand keep the constraint of normative standards away from small companies in particular. One of the most important points of criticism identified by SMEs regarding the potential introduction of sustainability management is that currently offered "safe" standards, as well as expected future regulations, are considered too burdensome and therefore unsuitable because of their normative "prescriptive character". NaWiS is trying to find ways to realise effective sustainability management even in small companies by means of intensive communication with representative, affected companies and, alternatively, by means of our theoretical discussion on the basis of so-called personas as introduced elsewhere this paper.
The original plan for the empirical collection of information on sustainability management in SMEs envisaged **two phases of workshops** with affected companies, of which the first phase, i.e. the first series of workshops, has been completed, the second series has yet to be carried out, but the content will be readjusted according to the results from phase 1.

1st workshop series (duration: 2 days):
1.1 Discussion of (a) the concept of sustainability, (b) the significance of sustainability for society, (c) components of sustainable economic management and their impact on economic life.
1.2 Concretisation in the companies: (a) requirements, (b) importance of sustainability management beyond a sustainability report, (c) goals and benefits for a company.
1.3 Comparison of current standards: (a) Relevant standards in practice, (b) Interactive exchange on this topic between the working groups.
1.4 Reflections and reflection loops on own ideas

After this first phase, we proposed to the companies the decision options to enter the second workshop phase or to participate more deeply in the NaWiS project. At the time of writing this report, only the previous planning can be reported, but not yet the redefinition based on the experiences of the first workshop series.

For the second phase, three workshops are conceived as follows:

a. Workshop 1: Materiality analysis and risk analysis -> Identification of individualised sustainability strategies for the participating companies, based on existing objectives.
b. Workshop 2: Necessary tools for corporate management, employee management, stakeholder communication, ...
c. Workshop 3: Identifying the elements for sustainability reporting in a 360° panorama.
On the implementation of the workshops to date:
For the 1st workshop series, two groups could be assembled. In summer and autumn 2021, these workshops were held on two days each.
In general, it can be concluded that there was great interest in the workshops in the initial phase (> 25 interested companies registered), but due to the pandemic situation and the resulting uncertainties as well as severe economic problems, the time available to companies for the subject, which today is still considered a "luxury topic" by the companies, is currently still very limited. Therefore, the number of actively participating companies was reduced to 8.

The participants:
- The 1st group consisted of 4 companies: 2 from industry, 1 craft company that can be assigned to the construction persona, and 1 IT service provider.
- The 2nd group consisted of 4 companies: 3 from the construction sector and 1 auditor.

The main results from the 1st workshop group:
During the discussion on sustainability it could be worked out that among the participants the aspect of positive social sustainability is seen to have a strong correlation to the identification of a positive ecological impact by these companies. In the inverse case, this relationship is found to be aliquot with regard to negative impacts.

The main results from the 2nd workshop group:
The participants, as can be seen from the compilation, came from very diverse economic sectors, but their perception of the topic of sustainability was strikingly progressive. Here are a few keyword quotations to illustrate this
"Selling benefits and not products"; "Making intangible values assessable" (education, solidarity, ...), "Longevity is in the foreground", "Not exploiting one's own freedoms or profit at the expense of others", "Focusing on the circular economy, people and relationships between people", "Conserving resources", "Organising networks with combinations from as many economic segments as possible", "Selling the low CO2 emissions (=footprint) in all investment products", "Thinking about the disposal of products in the product design",

During the second day of the workshop, the best-known sustainability models in our setting were presented and their background, structure, evaluation options and benefits for the company were discussed:
- SDG - Sustainable Development Goals
- CGBS - Common Good Balance Sheet (in its German language version called "Gemeinwohlbilanz" (GWB or GWÖ Bilanz, also called „the matrix“))
- GRI - Global Reporting Initiative

Together, the reporting standards were discussed with the participants by means of a SWOT analysis. It turned out that the assessment of which reporting procedure is best suited could not have been made by the companies themselves, insofar as this workshop conveyed essential information to the companies.
The second workshop group discussed the three reporting standards presented and commented as follows:
(1) "Each sustainability standard lacks a structuring of the required data and facts, which is seen as necessary, and a simple and ongoing way of collecting the data", (2) The opinion of the participants was that one has to invest more in the direction of implementation and less in the "theory"", (3) currently these procedures are too costly for SMEs to really be able to generate a benefit for corporate management".
In the field of the construction industry - one of the three “personas” which we have chosen - the Ecological Footprint and its importance in the architecture and planning sector is of much less significance than it is when it comes to realisation, i.e. the construction itself. (In the future, it will be important for the building industry that innovative companies become visible here, because only from such companies can it be expected that the ambitious goals that are to be derived from the EU's Green Deal can be achieved).
The discussions in the workshops revealed again that the topic of sustainability is a complex one that is still not based enough on facts, but that these are urgently needed as a basis for the measurability of what sustainability shall mean. (One example of how such a thing can be fact-based and calculated is the "Climate Active Points" propagated in Austria, which have met with relevant approval among the companies, however not further discussed here).
The following discussion statements were made
“What is important about the standards is whether they are safe and whether one can rely on them”
“There are different needs in the company (among the people) - therefore how can it be communicated to the employees / people and how does it reach them?”
“Sustainability reports according to the GRI standard are considered suitable for large companies, as it can only be audited by larger auditing companies”.

From the perspective of the workshop participants, the following requirements arise for a sustainability reporting standard:

An SME-appropriate standard must...

- be usable by "dummies”
- be uncomplicated
- be continuously updated
- be transparent internally & externally
- be up-to-date in terms of content and time
- be supported by work and control tools (adapted to the company)
- provide indispensable basic information for strategic decisions
- enable sustainability controlling
- enable a distinction between "hard" and "soft" data
- show external and internal certifications or listings of the company and its products
- enable interfaces to existing organisational structures, data and processes

- promote trust and find acceptance
- integrate distributed tasks with different responsibilities and competences.

From the group discussions in the workshops it could be clearly deduced that the processing in the application of the standards, but above all to derive from the standards the establishment of a sufficient management system for SMEs currently is not yet possible. Above all, methods and instruments for the so-called materiality analysis are missing, especially in the preparation of reports according to the CGBS / GWB reference, or are considered to be too complex in the preparation of GRI reports.
This aspect of a missing but necessary materiality analysis must be redesigned for effective sustainability management for SMEs.
Based on these findings, a redesign of the upcoming second workshop series was carried out. Here the question of what is material for a sustainability report has an extraordinarily important meaning for the companies and is based on the following questions:

- why is the company concerned with the issue of sustainability in the first place?
- which criteria can the company influence or can it steer according to?
- for whom are these topics relevant and to what extent can the essential topics generate a concrete benefit for the company or/ and the stakeholders?

(Conclusion => without an intensive examination of the topic of materiality analysis, no strategy or individual sustainability management can be realised).

Insights gained:

- The focus on a specific sector (in our case companies from the persona category "construction") is indispensable. This provides the first entry point into the delineation of what is important - alongside other factors such as size, type of activity etc.
- The participants of the first series of workshops declared the focus on the essential aspects to be of greatest benefit, especially from those companies that have already prepared a CGBS/GWÖ balance sheet. In the context of stakeholder-oriented communication, the human factor is given particular attention in the area of
  - o communication within the company between many employees and between employees and management staff
  - o communication with customers and suppliers is given the greatest weight.
- Furthermore, within a sector - in the most concrete case in the NaWiS project the construction sector - it is analysed to what extent the above points are also dependent on the size of the company. The topic for discussion is the difference between agile small companies versus process-driven medium and large companies.
- In addition, questions will be incorporated into the workshops in the future to explore the appropriate use of games and gamification approaches with the aim of increasing motivation and supporting entrepreneurial learning on the one hand, and on the other hand, tool-supported data collection and the expected increase in the effectiveness of company performance.

As the second series of workshops is only just beginning as this report is being written, it is not yet possible already to report consolidated results.

5. A "playful" method for the introduction of sustainability reporting

Already in the specification of the project as submitted to the funding agency, we started from the assumption that a low-threshold application of any method as well as the consecutive development of a tool for sustainability reporting by an SME will be indispensable.
The hypothesis was that in order to motivate small companies in particular for sustainability management and to adopt a sustainability philosophy as a fixed component of their corporate activity, this can be achieved most easily through a playful approach [Meyer et al. Page 15ff].
We succeeded in winning Johanna Pirker from the Institute for Interactive Systems and Data Science GameLab at the Graz University of Technology for the NaWiS project and conducted a workshop with her and five other members of her institute to explore the possibilities that lie in gaming and gamification for our project. [Pirker, J.: Gamification and Game Design Strategy. Technical University of Graz, Austria, October 2021].
The objectives of this initial workshop were: (1) to define relevant problems and challenges, (2) to create a common knowledge base, (3) to introduce game design and potential relevant games and to define game ideas and finally (4) to identify relevant tools.
It became apparent that gaming or gamification can be used for our project for two different occasions and accordingly different applications would have to be developed for this:
1. creating motivation to deal with the topic of sustainability in one's own company,
2. to grasp the necessary parameters and reflect on one's own actions in terms of sustainability in an SME as a basis for decisions in everyday business.
The differences lie in the preparation of the contents or in the way the playful approach is implemented.
Ad 1.: For this part, according to Johanna Pirker and her team, a game approach is suitable that "packs" the effects of one's own sustainability actions into a game and makes them emotionally tangible. Values and attitudes can be provoked by the game and thus emotionalised. Both motivate to deal with the topic intellectually and emotionally in more depth.
Ad 2.: Pursueing the gamification approach in order to enable and organise the collection of data, evaluation and feedback in the company's everyday life, in order to obtain a basis for decisions in the sense of sustainability management in the company.

In a first step, the two applications were tested for feasibility. The general finding was, that from today's point of view, there is still too little information available (e.g. requirements for the game, integration with the reporting system - requirements of the company, the users, generally the stakeholders) to use the game approach for sustainability reporting or an integrated reporting. Moreover, if the requirements were not precise, the development costs (logic, images, etc.) would inevitably be too high. (Homework requirement for NaWiS)

The conclusion from the workshop exercise was therefore that the most realistic approach would be to first create and test a simple mini-prototype for a game in order to first achieve an "onboarding" of interested companies. The conclusive recommendation was to select a tool like "twine" [15], in which a sequence of decision trees can be defined, the compilation of which can then be transferred into scenarios.

6. Specification of the future toolset and its implementation

After the analysis of the Austrian Chamber of Commerce, in SMEs of less than ~ 30 employees, digitalization is in the state of incompleteness; much less than 40% of the SMEs have already taken measures to become digital [16]. Business processes conforming to the requirements of a digital based organisation need to be adapted to new technological provisions. Many companies have mapped their business processes using different tools in a piecemeal style, i.e. they lack a consistent and even less an integrated ERP (Enterprise Ressource Planning) system.

Merging digitized sustainability management with classical digital management systems in SMEs currently cannot be achieved through impositions of standards and even less through the installations of oversized large software systems claiming to cover the identified needs. It is obvious that SMEs who already find it difficult to measure certain KPIs (Key Performance Indicators) and which currently run their business on the basis of “gut-made” decisions must be enabled to introduce sustainability management by means of methods and tools which can be easily installed and be used in a playful style.

SMEs must be enabled to start with a set of few individualised tools in a step by step approach thus increasing their acceptance. Heavy ERP or BI (Business Intelligence) tool systems are not considered to offer an SME-adequate basis for implementing sustainability toolsets.

Two different approaches to install as toolset are under research by NaWiS:

a) Inter-company exchange of classical "analogue" methods: We could identify that each company has experience and derived recipes for success in turning towards sustainability philosophy and makes this experience available to other companies. By such common effort knowledge can be generated which method applies best in a given situation.

b) Digital tools easy and funny to apply in order to collect data on both scientific and on social aspects. One of such tool immediately coming to mind are those for calculating the CO2 footprint and in sequence optimizing the related business processes. Further, relatively simple digital tools as e.g. spreadsheets may support and improve existing "analogue" and even “paper and pencil” methods. Like dashboards as offered by BI systems, a graphic version of any digital sustainability compass could visualize the results

As experienced, for exchanging knowledge on the use of analogous methods an exchange platform needs to be organised. Deriving from a Wikipedia knowledge base, a so called *Mediawiki* [17] based platform offers an ideal basis for both entrepreneurs and consultants on which information in terms of a „Sustainability-Wiki“, preferably based on open source can be exchanged between the participants. Every member using this exchange platform (entrepreneurs, employees, consultants) can publish experiences and methods both theoretical or gained in practice. The methods can be compiled into meta documents and thus enable a structural search. Representative categorizations as given by the SDGs or the Economy for the Common Good matrix can be used as first instance references.

In addition to such basic system, the usage of digital tools require guidelines for data exchange, documentation and deployment. It goes without saying that in the course of the

continuous maturation towards a true integrated tool system, already existing OpenSource based ERP systems are best suitable for serving as a basic system, since such software equipment would also enable the merging of the built-up sustainability reporting with the classic reporting system. In this way, a smooth convergency between different reporting systems can be achieved.

In order to keep entry barriers for building or acquiring toolsets low, the use of a so called container system (e.g. Docker [18]) and web-based interfaces [19] has to be given preference. The main and core system plus the individual digital tools are due to be published via public, independent repositories such as GitLab [20].

In addition to the repository of „Sustainability-Wikis“ as mentioned before, the description, documentation, areas of application of the toolset as well as the use cases will be advertised publicly.

In summary, NaWiS will follow these principles for tool implementations:

- OpenSource: developing standards by generating and trying them out in practice. This enables several variants of a tool that better suits the individual needs of the company than standards of the type of “one size fits it all”.
- Each tool of the toolset should be designed such that it can also run independently from a master system (e.g. an ERP-System) and it should run upon as many different platforms as possible.
- In order to enable also the integration of social and ecological KPIs as required by sustainability criteria, combined with other factors operated in an ERP system, each tool to be integrated must provide uniform interfaces for data exchanges.
- If valuable information has to be exchanged between companies, the integration of GAIA-X standards [21] should be given preference. (Gaia-X was initiated to enable a secure, open, and sovereign use of data. It facilitates the interlinking of all participants in the digital economy – in accordance with European values and standards).

7. Project communication and stakeholder communication

A general deficit that was identified by our research is the question of how to communicate sustainability management to the outside, i.e. to the external stakeholders of a company, as well as to the inside, i.e. to the employees. In the NaWiS project it was therefore decided to participate in a course entitled "Industry Projects", which was held at the University of Applied Sciences at Wiener Neustadt, Austria. Within the framework of this course, students are obliged to work in teams on concrete tasks that are presented to the University of Applied Sciences from outside business, i.e. “customers”. NaWiS seized the opportunity and recruited two groups to work on the two topics of external and internal stakeholder communication.

The task for the first group, the one of which the results are reported here, was to develop a value proposition for SMEs on the topic of sustainability, with the aim of sensitising a larger circle of SMEs to the subject. The work was divided into two parts (a) theoretical foundations and (b) their applications The starting point was a segmentation of potential companies that could be made interested in the NaWis project. Based on this, the three personas have been

used as mentioned before i.e.three fictitious template companies that represent typical "customers". By this a sample set of stakeholders have been identified as target groups

After this first part a large set of possible communication channels were selected and evaluated w.r.t which would be best suitable for the organisation running the NaWiS project, i.e. the Research Association of the Economy for the Common Good running the NaWiS project. The focus was directed towards social media channels such as LinkedIn, Facebook and the like. In a next step, a draft manual for how to share posts were created for each of the three persona. The final step was a test run for which a play (and fake) Facebook account was created and actively promoted in complementary Facebook groups, in order to investigate on the acceptance of the approach chosen. By exploiting the feedbacks a consolidated introduction and a guidebook has been compiled that is recommended to be used in future on Internet platforms.

Findings of the students' project in a nutshell: When it comes to creating a value proposition that is intended to bring SMEs closer to the topic or even motivate them to actively participate in sustainability reporting, some special features of these companies turn out to be critical for the success of communication:

1. To be aware of the extreme heterogeneity of SMEs: number of employees, sectors and concrete business activities differ greatly. Thus messages must be shaped towards each of the different target groups.

2. In consequence each marketing measure requires a very specific segmentation of the target groups in the classical understanding of marketing - this is in obvious contradiction to the goal of the value proposition which would require a common understanding and acceptance of sustainability reporting.

3. The companies – them being exemplified by the defined three personas - have different habits according to their industries or market segments as to which media are used for information and for networking.

Therefore it shows that the personas approach as developed for our project turned out to be most useful and the personas as model SMEs could be used as a basis to exemplify opportunities and obstacles and to enable a first trial run in concretely selected media for the purpose of stakeholder communication.

8. Summary and Learnings

New subjects partly deviating from the original hypotheses

As might be expected, insights were gained in the course of the project that will have an impact on the continuation of the project as well as on potential future follow-up projects. The topics that emerged as more essential than originally assumed and that can not be dealt with within the project in further detail, but should certainly become part of the programmatic work of the Research Association in the future, are:

* The analysis of materiality, i.e. all items for a presentation in the sustainability report that are relevant to the company concerned and only to that company. (In the discussion on the future combined report with a financial and a non-financial part, there is also talk of "double materiality").

* The integration of sustainability data into the financial report, i.e. the steps towards Integrated Accounting.

* The question of how reporting can be made attractive to even non-expert employees by means of gamification, so that a high level of motivation is generated to continuously collect sustainability data.

* Digital support, in practice: the creation of an open and at the same time interface-compatible platform for tools for the customised generation of sustainability reports. Also to be solved within this complex are questions of the use of a Data Cloud, especially GAIA-X, which should enable the exchange of data between the tools.

An interim assessment of the benefits achieved for SMEs

A fundamental finding is that the approach we chose of a bottom-up study on the introduction of SME-compliant sustainability management was (and is) far more complex than we had expected. The obvious reason is that SMEs are characterised by a diversity that is hard to keep track of. This is not only a matter of economic classifications according to criteria of size, sector, regionality, market position or supplier and customer relations etc. The actual complexity driver is much more the different corporate philosophies. Small and family businesses are almost entirely shaped by the convictions and values of their owners or their leading management - and these are individual, context- and culture-dependent. (Excursion: In very past times, especially in places of trade, the concept of the “Honourable Merchant” served as a well accepted moral reference to act seriously, predictable and customer friendly – however their rules applied to a very restricted scope of subjects, by far not comparable to today’s much more complex business relationships).

However: despite all the diversity, we noticed that SMEs in particular are intrinsically highly motivated to contribute to improving their material and social environment. While hardly any companies today are aware of what is in store for them in terms of future commitments to sustainability business, at the same time most are highly inventive in the details of what they can contribute to sustainability. Such invention can consist of trying out their own ideas on circular economy, or paying attention to environmentally compatible menus in the company's own canteen food, or be it that they provide "package information" as a sales argument for their products for their customers helping them to calculate e.g. for their own ecological footprint. In other words, SMEs, as they have always been in the pre-ecological economy, are actually the innovative drivers for practical forms of successful sustainability management, without being well aware of the fact that they themselves are already making partial contributions to this and at what extent they are making these.

Ultimately, the aim of NaWiS was and is to enable the companies for which the project was set up to become knowledgeable and competent within the current proliferation of ideas and regulations for sustainable management and to put themselves in a position to understand their own contribution and their own approach to their sustainability management with regard to the regulations that are coming their way and, above all, to represent themselves competently to their stakeholders, to society and to politics.

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