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## Article

# KPIs for sustainability: Defining the strategy for a sustainable future in the insurance industry

Junior Management Science (JUMS)

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## **Online-Appendix**

# **„KPIs for Sustainability: Defining the Strategy for a Sustainable Future in the Insurance Industry“**

Lea Wedel

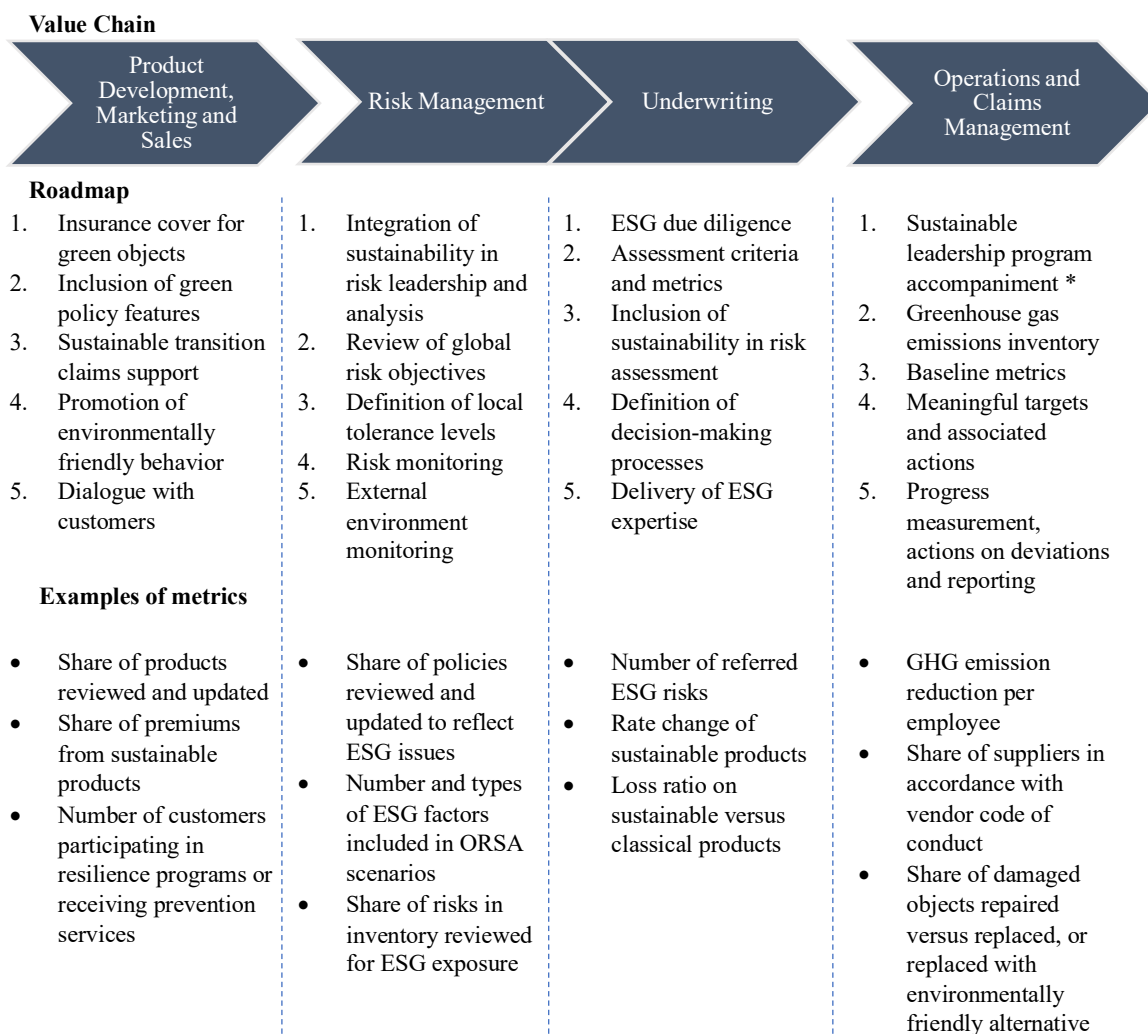
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## Appendix

| Environmental                                                    |                                                                                                                                              |                                                                                                                                                              |        |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Strategic Goal                                                   | KPI                                                                                                                                          | Measurement                                                                                                                                                  | Target |
| To improve the use of renewable sources                          | Renewable sources                                                                                                                            | Renewable sources/other sources                                                                                                                              |        |
| To reduce superfluous resources consumption                      | Efficiency resources rate                                                                                                                    | Energy used per thousand product units (kWh/1000 product units), total consumption of water and other resources per thousand products (1/1000 product units) |        |
| To reduce greenhouse gas emissions                               | Total direct or indirect emissions of greenhouse gases by weight                                                                             | CO <sub>2</sub> /1000 products units                                                                                                                         |        |
| Environment's safeguard                                          | Waste reduction rate                                                                                                                         | Percentage of waste generated per thousand product units                                                                                                     |        |
| To improve the effort of green-ness                              | Percentage of reusable/recycled material                                                                                                     | Recycled material used/total material used                                                                                                                   |        |
| Social                                                           |                                                                                                                                              |                                                                                                                                                              |        |
| Strategic Goal                                                   | KPI                                                                                                                                          | Measurement                                                                                                                                                  | Target |
| Inclusion of all society members in developing sustainable goals | Integration rate                                                                                                                             | Questionnaire                                                                                                                                                |        |
| Stakeholders' relationship                                       | Stakeholders' satisfaction rate                                                                                                              | Questionnaire                                                                                                                                                |        |
| To participate at the social initiatives                         | Number of social initiatives at national and local level                                                                                     | Total social initiatives at national and local level                                                                                                         |        |
| To increase employees' satisfaction                              | Employee satisfaction rate                                                                                                                   | Questionnaire                                                                                                                                                |        |
| Social marketing policies                                        | Customer satisfaction rate                                                                                                                   | Cost analysis                                                                                                                                                |        |
| Economic                                                         |                                                                                                                                              |                                                                                                                                                              |        |
| Strategic Goal                                                   | KPI                                                                                                                                          | Measurement                                                                                                                                                  | Target |
| To increase return of investment                                 | ROI related to environmental protection                                                                                                      | Cost analysis                                                                                                                                                |        |
| To increase the revenues associated to sustainability dimensions | % additional revenue (additional price premium brand differentiation, income from recycling / closed loop programs, sustainable innovations) | Financial reporting                                                                                                                                          |        |
| To enhance technology process                                    | % of investments in environmental technology                                                                                                 | Investments in environmental technology / total investments                                                                                                  |        |
| To guarantee the quality of the process                          | % production sites with environmental certification, environmental information accuracy rate, environmental information availability rate    | survey                                                                                                                                                       |        |

Appendix 1: The sustainability perspective based on Hristov and Chirico (2019, p. 12)



\* Note: Sustainable leadership is an overarching theme in all steps of the value chain

Appendix 2: Roadmap towards a sustainable insurance industry for executive management (cf. Stricker et al., 2022, p. 14)

|                      | KPI                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                       |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental</b> | <ul style="list-style-type: none"> <li>- Emission of ozone-depleting substance rate</li> <li>- Emission of greenhouse gases rate</li> <li>- % of emission other environmentally affecting gases</li> <li>- Carbon footprint rate</li> <li>- Sulphur dioxides (SOx emissions)</li> <li>- Nitrogen oxides (NOx emissions)</li> </ul> | <ul style="list-style-type: none"> <li>- % of waste generated per thousand product units</li> <li>- Dangerous waste generated rate</li> <li>- % of hazardous material over total waste</li> <li>- % of reuseable/recycled material</li> <li>- % of waste recycled off/on site</li> <li>- Waste reduction rate</li> <li>- % of waste reduced off/on site</li> <li>- % pollution indicators</li> </ul> | <ul style="list-style-type: none"> <li>- Energy intensity (energy used by thousand product units)</li> <li>- Electricity consumption (total consumption per thousand products)</li> <li>- Gas consumption rate</li> <li>- Soil use rate</li> <li>- Water use rate (total consumption of water and other resources per thousand products)</li> </ul>                             | <ul style="list-style-type: none"> <li>- Renewable energy rate</li> <li>- Reusable/recycled material rate</li> <li>- Renewable energy rate</li> <li>- Renewable electric sources rate</li> <li>- Sustainable water use rate</li> </ul>                                                                                |
| <b>Goals</b>         | ✓ Reduction of gas emissions                                                                                                                                                                                                                                                                                                       | ✓ Improvement of use of renewable sources                                                                                                                                                                                                                                                                                                                                                            | ✓ Reduction of natural resources consumption                                                                                                                                                                                                                                                                                                                                    | ✓ Reduction of waste and improvement of efforts to address “green-ness”                                                                                                                                                                                                                                               |
|                      | KPI                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                       |
| <b>Social</b>        | <ul style="list-style-type: none"> <li>- Employee satisfaction rate</li> <li>- Employee turnover rate</li> <li>- Number of training hours per employee</li> <li>- Rate of employees that are shareholders</li> <li>- Support employee rate (physical activity, health, care and medicare)</li> </ul>                               | <ul style="list-style-type: none"> <li>- Employment rate</li> <li>- Internal relation rate</li> <li>- Health and safety rate</li> <li>- Training rate</li> <li>- Diversity rate</li> <li>- Opportunity rate</li> <li>- Employee satisfaction rate</li> </ul>                                                                                                                                         | <ul style="list-style-type: none"> <li>- Equality rate (male to female rate)</li> <li>- Child labor rate</li> <li>- Forced labor rate</li> <li>- Number of disciplinary actions</li> <li>- Social security rate</li> </ul>                                                                                                                                                      | <ul style="list-style-type: none"> <li>- Charity donations rate</li> <li>- Number of social initiatives at national and local level</li> <li>- Total expenses for social initiatives</li> <li>- % participations in social initiatives</li> <li>- Consumer, supplier and employees’ satisfaction rate</li> </ul>      |
| <b>Goal</b>          | ✓ Employees’ acceptance of organizational change                                                                                                                                                                                                                                                                                   | ✓ Guaranteeing the quality of environmental and working conditions                                                                                                                                                                                                                                                                                                                                   | ✓ Guaranteeing the respect of the human rights                                                                                                                                                                                                                                                                                                                                  | ✓ Participation at the social initiative and maintaining a high level of responsibility                                                                                                                                                                                                                               |
|                      | KPI                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                       |
| <b>Economic</b>      | <ul style="list-style-type: none"> <li>- Cost of ownership linked to energy, cost consumption, environmental tax</li> <li>- Growth of gross margin</li> <li>- Total costs and investments relating to environmental protection</li> <li>- Environmental cost savings</li> <li>- Amount of environmental penalties</li> </ul>       | <ul style="list-style-type: none"> <li>- % of additional revenue</li> <li>- % additional price premium brand differentiation</li> <li>- % of income from recycling / closed loop programs</li> <li>- Sustainable innovations rate</li> </ul>                                                                                                                                                         | <ul style="list-style-type: none"> <li>- Investments in technology rate</li> <li>- Environmental technology levels</li> <li>- % of new environmentally sound product development</li> <li>- Response to environmental product request rate</li> <li>- Response to environmental programs rate (for suppliers)</li> <li>- Amount of environmentally safe alternatives</li> </ul> | <ul style="list-style-type: none"> <li>- % of production sites with environmental certification (ISO 9001, ISO 14001, ISO 50001, UNE 166002 and OHS AS 18001)</li> <li>- Environmental information accuracy rate</li> <li>- Environmental information availability rate</li> <li>- Supplier rejection rate</li> </ul> |
| <b>Goal</b>          | ✓ Increasing return of investment                                                                                                                                                                                                                                                                                                  | ✓ Increasing the revenues associated to sustainability dimensions                                                                                                                                                                                                                                                                                                                                    | ✓ Enhancing technology process                                                                                                                                                                                                                                                                                                                                                  | ✓ Guaranteeing the quality of the process                                                                                                                                                                                                                                                                             |

Appendix 3: Sustainability Key Performance Indicators based on Hristov and Chirico (cf. 2019, p. 8)