Data Driven Decision Making Towards Sustainable Process Development

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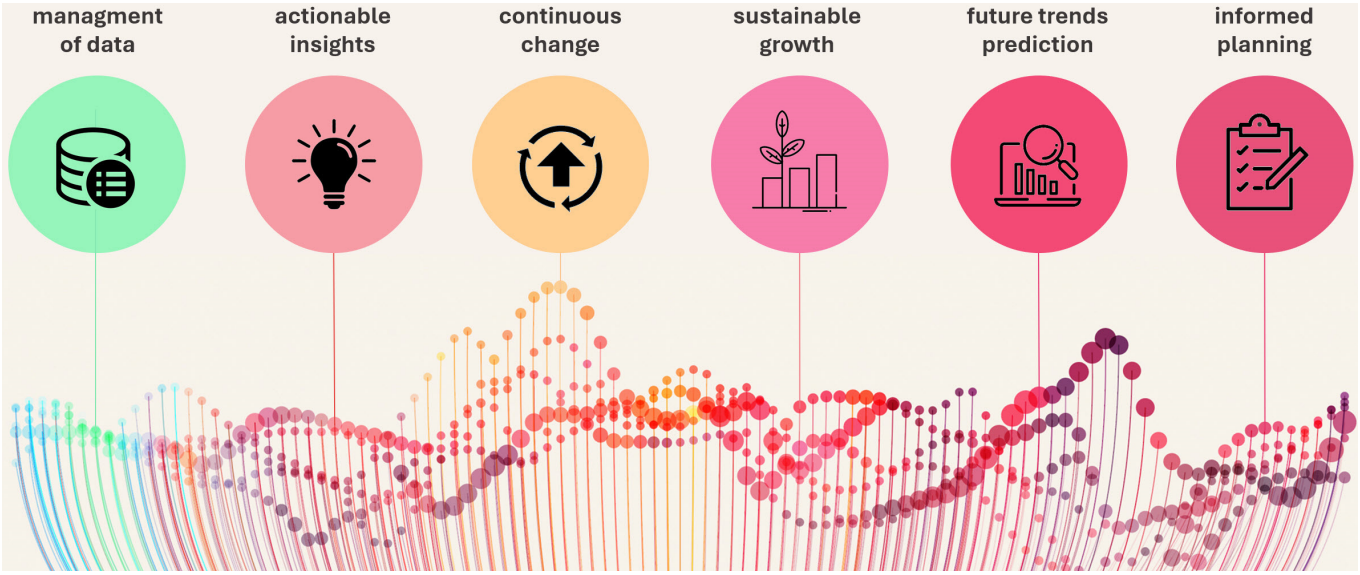

Phasing out actual emissions is the goal but, in the meantime, targets and metrics to guide, define, and measure progress are needed. Transparent metrics and procedures ensure that efforts are based on consensus of the best available evidence – and that carbon-accounting methodologies and accepted data sources are included to communicate and present data.

The integration of more detailed, unified (standardized) metrics, and indicators is key to a sustainable chemical industry. To sustainably address environmental hotspots, assessments should be possible at earliest stages of projects. The question then becomes how a quantification of environmental impacts can be obtained and how to best detect and display environmental hotspots to key stakeholders.

Facing the challenge of data availability, data acquisition, or data accuracy, we propose a simple and standardized procedure based on selected metrics and footprint indicators to assess and report the environmental footprints of entire processes or isolated steps. The output then focuses on data representation and decision taking, making it easier to communicate in cross-functional environments. All the more as such analyses are meant to guide research and should not be mere reporting tools.