



Data Driven Software to Increase Chemical R&D Efficiency  
Accelerate Development of Sustainable Chemical Products & Processes



Let's innovate together for a sustainable future with a greener chemical industry

- ▶ Increase output from your R&D investment
- ▶ Innovate faster and gain competitive advantage by developing feasible and sustainable chemical processes
- ▶ Gain actionable insights for objective decision making with quality data and advanced analytics
- ▶ Seamlessly incorporate sustainability in the early stages of R&D



[www.sustanalyze.com](http://www.sustanalyze.com)

## Sprinting towards sustainable chemicals

Target: Biobased (Catalytic & Biotech), Fossil based but with clear advantages compared with conventional, Chemicals from CO<sub>2</sub>

### Pike Research on Green Chemistry 2014

"Market opportunity for greener chemicals is expected to grow from \$2.8 billion in 2011 to \$98.5 billion in 2020"

"Adoption of greener alternatives for existing large chemical markets is limited less by market development issues than and more by the ability to feed extant markets at required levels of cost and performance"

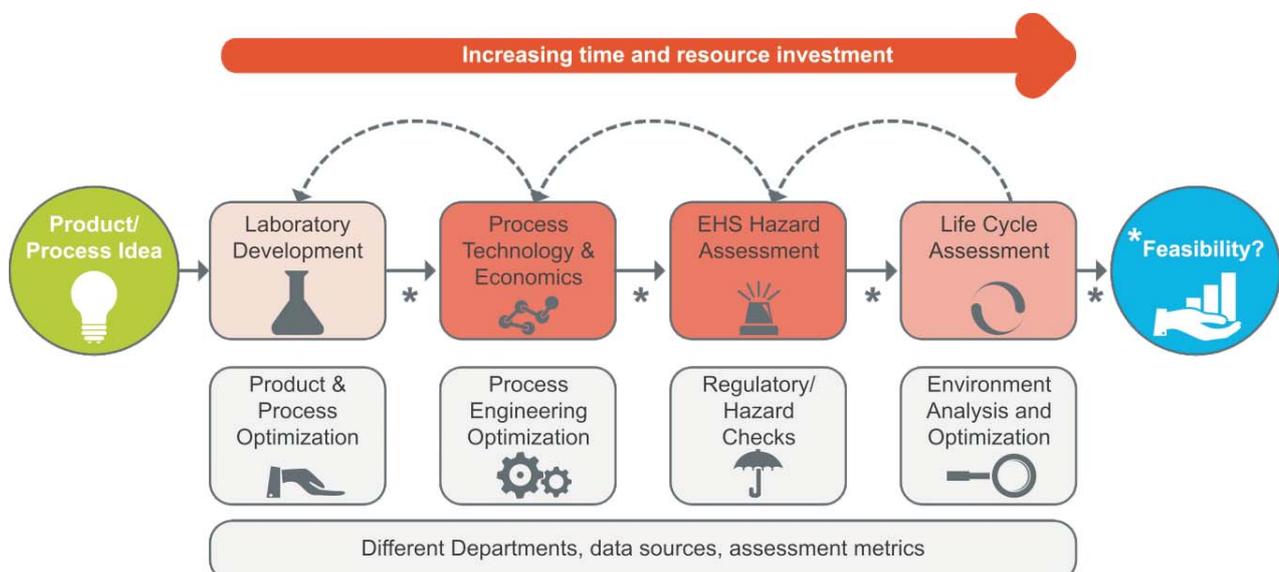
"With green chemistry, the chemical industry will see \$65 billion in direct and indirect cost savings by 2020"

### Key innovation themes

- Increase efficiency and safety of chemical production processes
- Shift to alternative renewable (non-petroleum) feedstocks
- Reduce carbon emissions
- Replace existing products with less toxic alternatives

## Challenges

1. Chemical industry is evolving with demands for
  - Increasingly profitable solutions
  - Safer chemical production processes
  - Sustainable (economical, environmental, social) innovations
  - Higher R&D outputs and faster innovation
2. Speeding up core R&D activities of idea generation, feasibility evaluation and iteration
3. Achieving greater returns on every R&D dollar that is spent on feasibility evaluation and iteration of chemical process & product ideas
4. Inefficiencies in siloed R&D approach with linear chain of information handovers for decision making
5. Conventional approach brings in information from different departments in a stage-wise manner and leads to:
  - Delayed red flag identification with loss of time and resources
  - A very long or absent iteration loop to experiment with idea variations
  - Very high costs for idea evaluation and iteration
  - Non-consideration of interesting ideas
  - One-off idea evaluations with limited scope for re-discovery in new contexts
6. Extremely difficult and cost prohibitive to innovate with a holistic sustainability perspective
7. Limited scope for objective selection and decision making in early R&D



## Our offerings

### Sustainability Software

An easy to use and intuitive web application powered by a scientific methodology that enables faster and objective decision making in R&D. Increases ROI with actionable early stage inputs from sustainability (technical, economic, environmental, safety, risk) perspective. Methodology has been proven as a suitable means to engage chemical researchers in strategic thinking and spark interest in sustainable chemicals

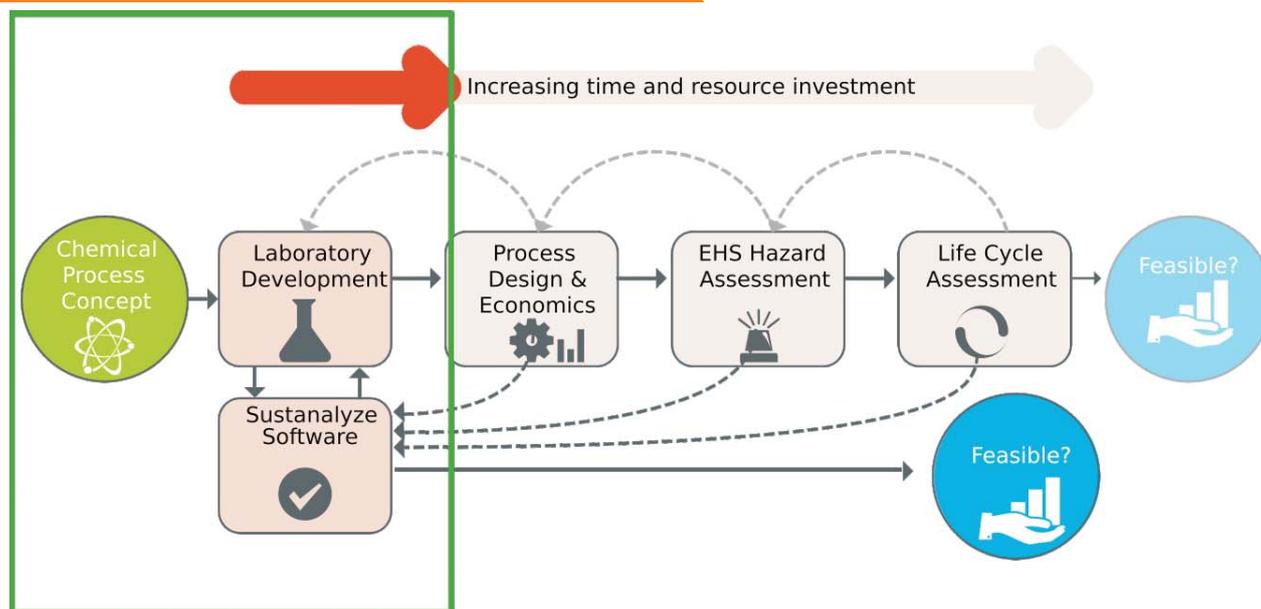
### Data-as-Service

A data support service that is designed to meet the high quality and accurate data requirements of R&D team for their process and product evaluation. With all the required data in one place you can focus on technical innovation

### Sustainability Consulting

A sustainability consulting offering that is designed to work with you to understand and shape your specific sustainability goals to achieve business value. Benefit from our high quality tailored assessments and training solutions

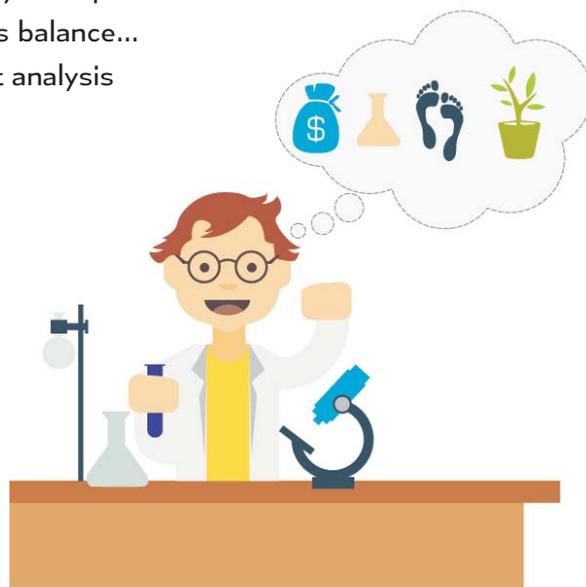
## The SustAnalyze way



### Features and benefits of our early-stage approach delivered through our offerings

1. Analyze chemical process and product ideas at an early stage in R&D with a scientific assessment methodology
2. Speed up chemical innovation while incorporating economic, environmental and EHS hazard analysis
3. Quickly generate advanced output reports with rich analytics
4. Prioritize chemical processes, products and R&D resource allocation based on quantitative and objective data based analysis

5. Iterate process and product configurations faster to make the most optimal use of your ingenious human talent
6. Quickly access all the past process and product ideas generated in your organization
7. Optimize your R&D investment by enhancing researcher productivity
8. Ensure effective and ongoing collaboration between personnel from different departments (e.g. between process chemists and EHS experts)
9. Harmonize data collected and used for analysis across the organization
10. Address data bottlenecks with on-demand, quality assured and cost effective data support
  - o Chemical data: Properties, Prices, Hazards, Life cycle impacts...
  - o Process data: Technical process information, mass balance...
11. Benefit from tailored sustainability consulting and expert analysis
  - o Early-stage process and product intelligence
  - o Techno-economic analysis
  - o Life cycle analysis
  - o Integrated sustainability analysis

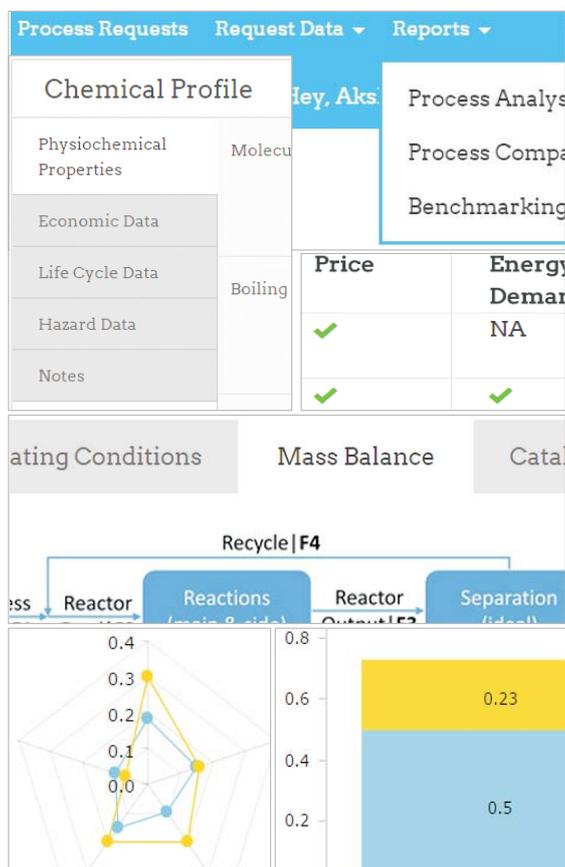


## SustAnalyze ROI

Through cost savings and improved efficiency in early R&D stages SustAnalyze provides you an extremely attractive Return on Investment. For a mid-size R&D team with a budget of \$3 million per year, SustAnalyze delivers

- o 5-6 fold increase in R&D productivity
- o corresponding cost reductions
- o increased speed of innovation

and all of this is achieved for less than 1% of the annual R&D budget.



info@sustanalyze.com



www.sustanalyze.com



@sustanalyze



+31 308080139



Netherlands Office : Utrecht Science Park,

Padualaan 8, 3584 CH, Utrecht. Ph.: +31 308080139

India Office : 4-5-5, Gulmandi, Aurangabad - 431001.

(Maharashtra) Ph.: +91 7722008002