

2024 PHARMA 4.0™ as an ESG Catalyst

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How does Pharma 4.0 act as an ESG Catalyst?



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Agenda

- **Pharma 4.0** and current landscape
- Applying **Pharma 4.0 frameworks** towards **ESG strategy**
- Gilead's **ESG Ambitions**
- **Use Cases:** Environmental, Digital Transformation & People
- Looking to the Future and **Final Thoughts**

What is Pharma 4.0?

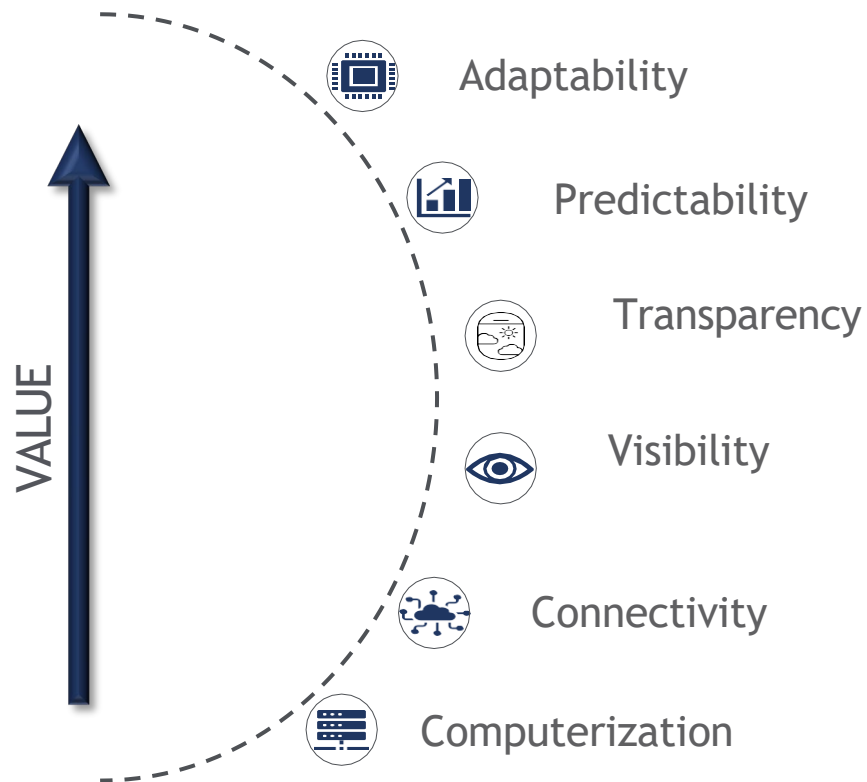
Not a must, but a highly competitive advantage



Pharma 4.0 Principles Applied to ESG

Maturity Model

Small steps make a difference...



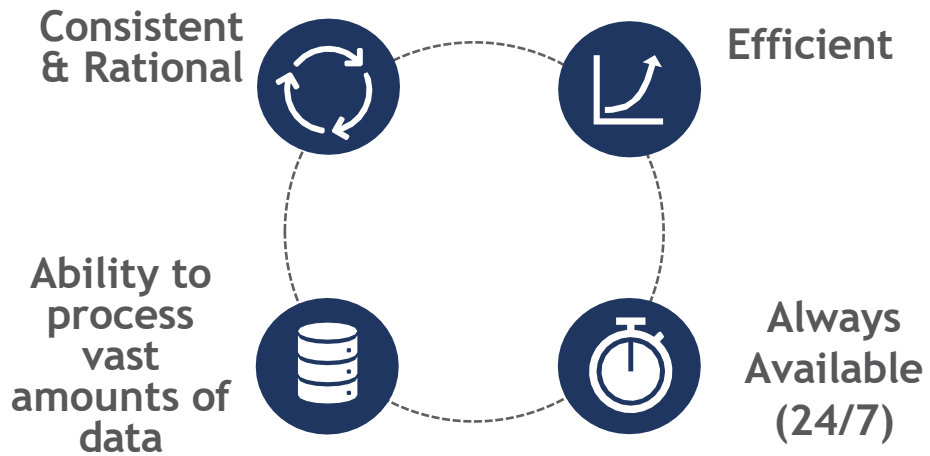
Human Centric

Humans are the core of Pharma 4.0....

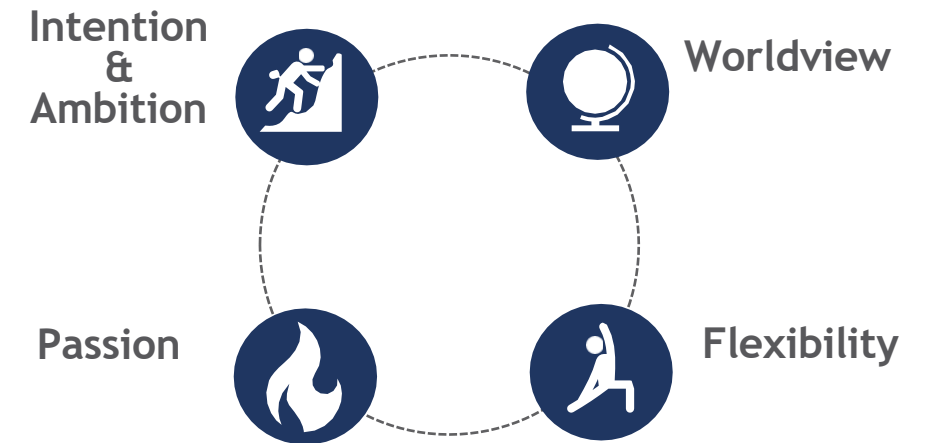


Building on Strengths

Automation



People



**While delivering
our innovative
medicines, we
are committed to
doing what is
right for people
and the planet**



Gilead's ESG Ambitions

Gilead vision: To create a better, healthier world for all people.





LEED PLATINUM

Certification achieved for Employee Wellbeing Center and LEED Silver at two additional U.S. sites



RANKED NO. 1

Overall philanthropic funder of HIV-related programs



DJSI WORLD

Admitted to Dow Jones Sustainability World Index for second consecutive year



45%

of in-scope plastics eliminated



PERFECT SCORE

on Human Rights Campaign Corporate Equality Index for five consecutive years



RANKED NO. 1

Most Sustainable Biotech Worldwide by Corporate Knights



17.9M KWH

of energy saved/avoided through efficiency measures



PATENT FOR HUMANITY

Award received from U.S. Patent and Trademark Office for our COVID-19 efforts



RANKED NO. 9

among Pharma and Biotech companies by Bloomberg/CNBC's JUST Capital



CDP LEADER

Named as a CDP Supplier Engagement Leader for actions to reduce climate risk within our supply chain



\$14M

Committed to Robert A. Winn Diversity in Clinical Trials Award program



ESG IMPACT

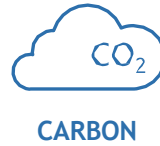
Award received from Corporate Secretary/IR Weekly Magazine

Building on 'E' of ESG: Our Sustainability Journey



Case Studies

Leveraging Pharma 4.0 to further our 'E' ambitions



Net Zero Operations

- ↓ carbon footprint
- ↓ energy use



Water Neutrality

- ↓ potable water use



Zero to Landfill

- ↓ waste generated
- ↓ single use plastics

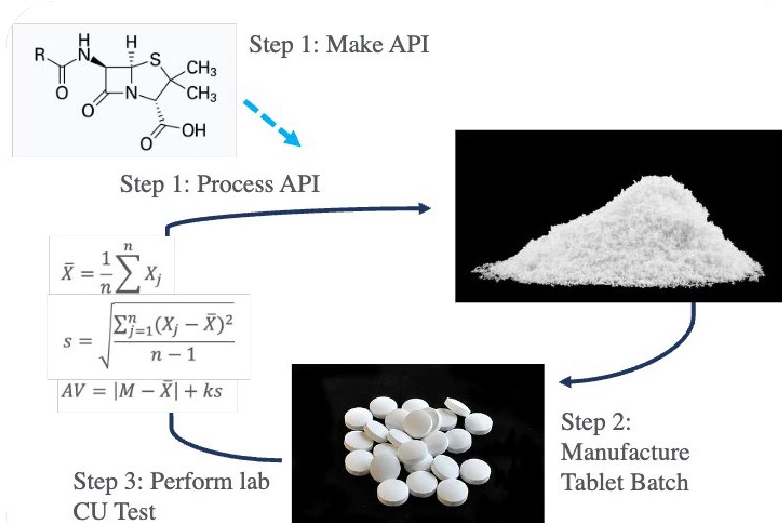


100% widely recyclable or reusable packaging



Case Study #1

Digital Twin for API content uniformity testing



PROBLEM

Content uniformity testing is critical in assessment of dosage performance and determination of suitable API particle size. Currently **time and resource intensive process**



SOLUTION

Using **Monte Carlo simulation**, we predict tablet passing rates, **reducing the number of experiments & material waste**



IMPACT



Lower
Carbon
Emissions



Lower
Energy
Waste



Lower
Material
Waste



Increased
Agility &
Efficiency



Less
Expensive



Case Study #2

Digital Twin for stable energy consumption at FC



PROBLEM

Abnormal energy consumption demand peaks result in low usage predictability and high costs of service



SOLUTION

Machine learning (ML) models to predict optimized energy consumption at building, line and equipment level, based on historical consumption and past/predicted weather data



IMPACT



Lower Carbon Emissions



Lower Energy Waste



Fewer Energy Spikes



Cost Avoidance

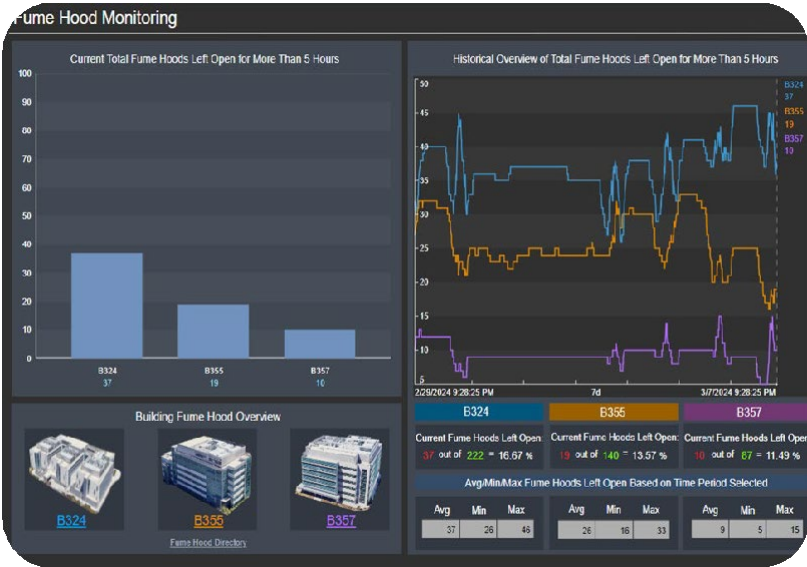


Lower Grid Strain



Case Study #3

Sensor monitoring for optimized energy consumption



PROBLEM

Energy intensive fume hoods can be accidentally left open in our labs



SOLUTION

Installation of sensors programmed to visualize (Pi Vision) & alert researchers with high-use & energy intensive lab instruments



IMPACT



Lower Carbon Emissions



Lower Energy Waste



Lower Gas Usage



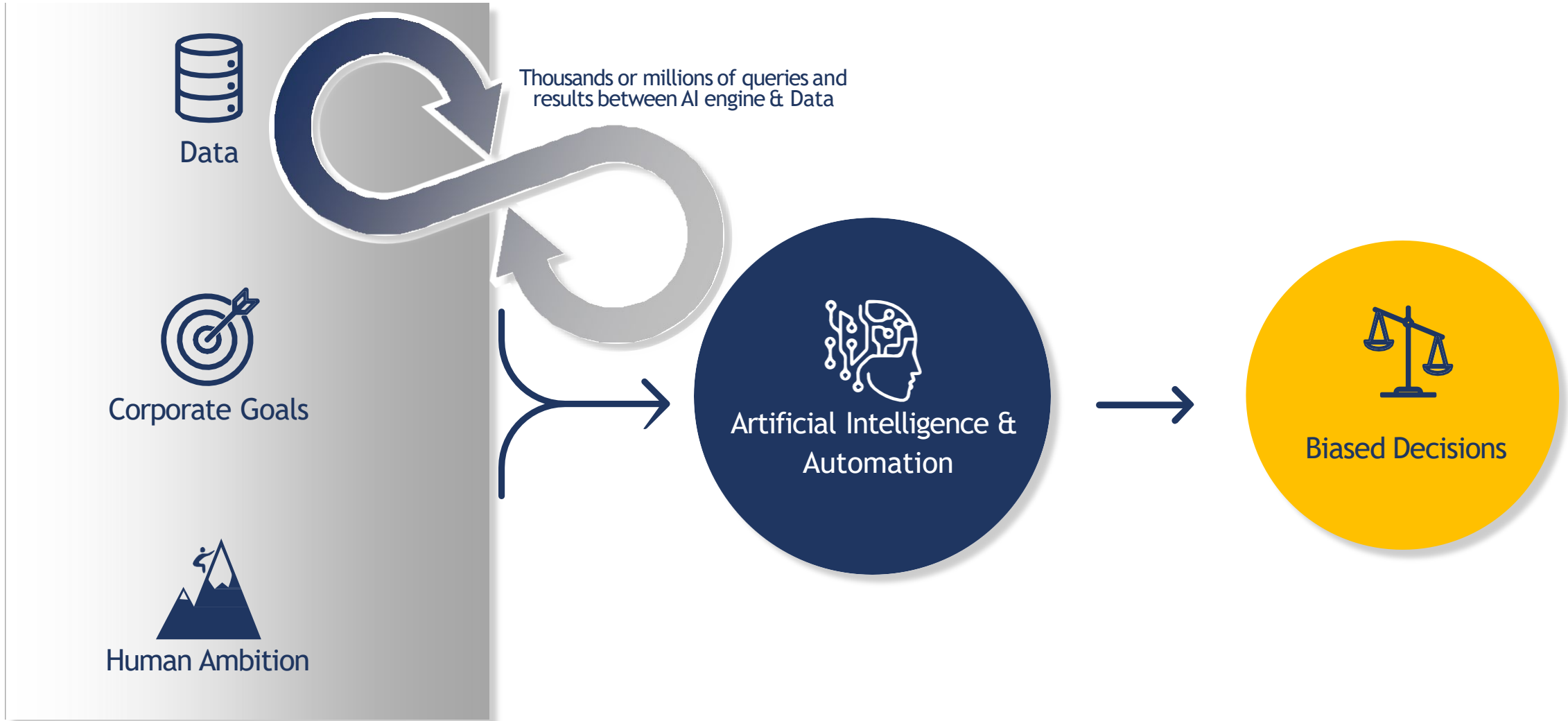
Increased Equipment Life Span



Less Expensive



What Next? Building ESG Bias Into Our Automation



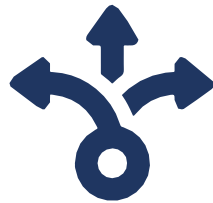
Many Small Choices = Large “Splash”

“Great things are done
by a series of small
things brought
together.”

--Vincent Van Gough

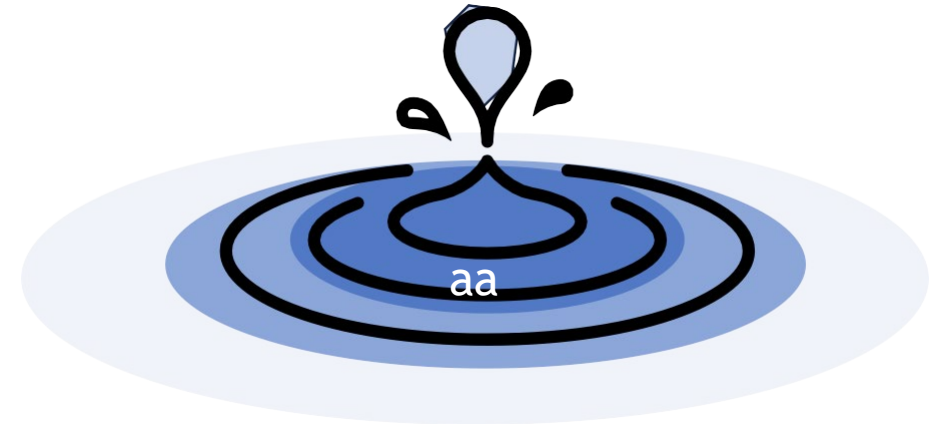


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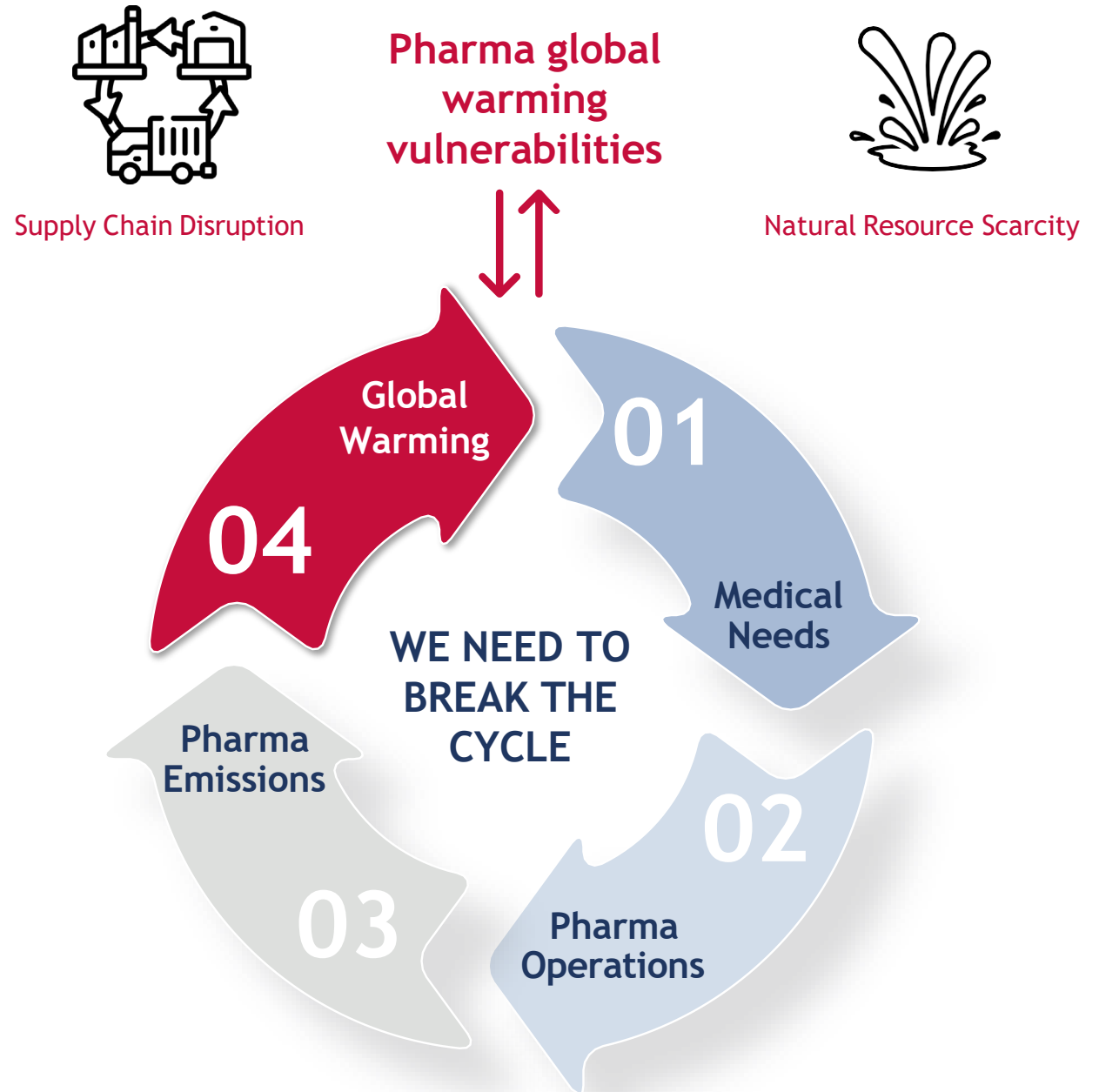
Hundred's,
Thousands or Millions
of Decisions....

=



Final Thoughts

Sustainability
action will define
Biopharma leaders
this Decade





Thank You