Data Stewardship for Chemical Companies

16 November 2022

Agenda

- Introductions
- What is Data Stewardship
- Know Your Data
- Maintain Your Data
- Use Your Data
- Use Cases
- Q&A

Today's Speaker

Laura Patrick
Senior Solution Manager,
Chemical Management

Our Mission

Sphera is a leading global provider of Environmental, Social and Governance (ESG) performance and risk management software, data and consulting services with a focus on **Environment, Health, Safety & Sustainability (EHS&S), Operational Risk Management** and **Product Stewardship**.

Environment, Health, Safety & Sustainability

Operational Risk Management

Product Stewardship

To create **a safer, more sustainable** & **productive world**.

Poll Question #1

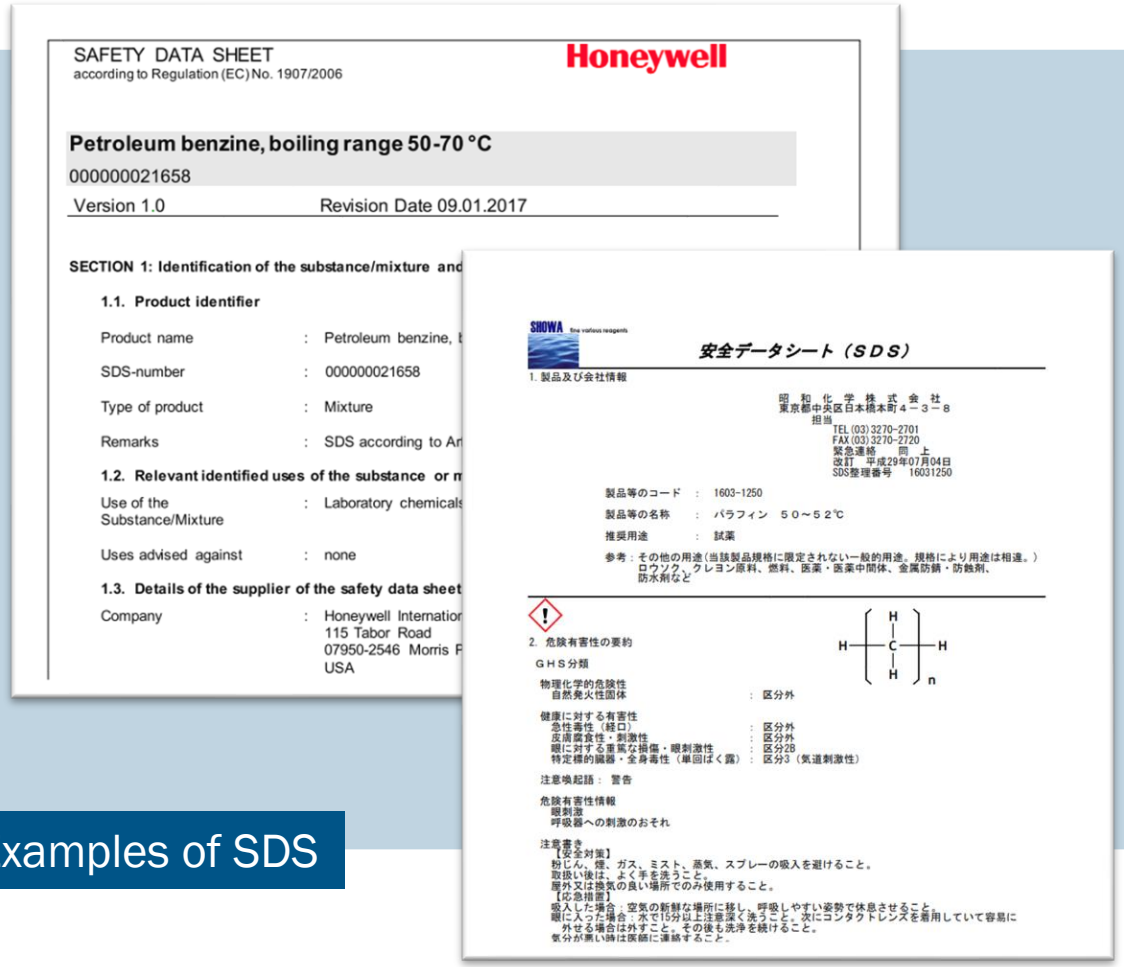
Poll Question #2

Do you have a Data Steward that supports you in maintaining your Product Stewardship data?

Poll Question #3

Do you know what a Data Steward is?

Product Stewardship Data



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Honeywell

Petroleum benzine, boiling range 50-70 °C

000000021658

Version 1.0 Revision Date 09.01.2017

SECTION 1: Identification of the substance/mixture and

1.1. Product identifier

Product name : Petroleum benzine,

SDS-number : 000000021658

Type of product : Mixture

Remarks : SDS according to Ar

1.2. Relevant identified uses of the substance or m

Use of the Substance/Mixture : Laboratory chemicals

Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company : Honeywell Internatior
115 Tabor Road
07950-2546 Morris F
USA

SHOWA fine various reagents

安全データシート（ＳＤＳ）

1. 製品及び会社情報

昭和化学株式会社
東京都中央区日本橋本町４－３－８
担当
TEL (03) 3270-2701
FAX (03) 3270-2720
緊急連絡　同上
改訂　平成29年07月04日
SDS整理番号　16031250

製品等のコード　：　1603-1250

製品等の名称　：　パラフィン　５０～５２℃

推奨用途　：　試薬

参考：その他の用途（当該製品規格に限定されない一般的用途。規格により用途は相違。）
ロウソク、クレヨン原料、燃料、医薬・医薬中間体、金属防錆・防蝕剤、
防水剤など

2. 危険有害性の要約

GHS分類

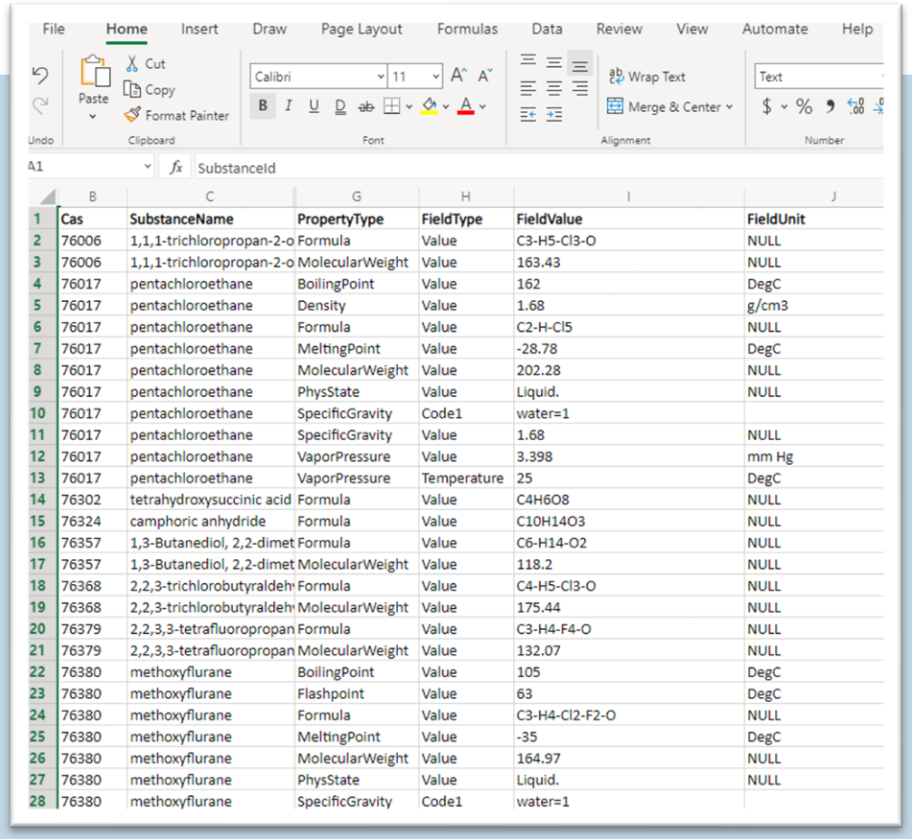
物理化学的危険性
自然発火性固体　：　区分外

健康に対する有害性
急性毒性（経口）　：　区分外
皮膚腐食性・刺激性　：　区分外
眼に対する重篤な損傷・眼刺激性　：　区分2B
特定標的臓器・全身毒性（単回ばく露）　：　区分3（気道刺激性）

注意喚起語：　警告

危険有害性情報
眼刺激
呼吸器への刺激のおそれ

注意書き
【安全対策】
粉じん、煙、ガス、ミスト、蒸気、スプレーの吸入を避けること。
取扱い後は、よく手を洗うこと。
屋外又は換気の良い場所でのみ使用すること。
【応急措置】
吸入した場合：空気の新鮮な場所に移し、呼吸しやすい姿勢で休息させること。
眼に入った場合：水で15分以上注意深く洗うこと。次にコンタクトレンズを着用していて容易に
外せる場合は外すこと。その後も洗浄を続けること。
気分が悪い時は医師に連絡すること。



File Home Insert Draw Page Layout Formulas Data Review View Automate Help

Undo Paste Cut Copy Format Painter Clipboard Calibri 11 Font Wrap Text Merge & Center Alignment Text Number

A1 SubstanceId

	B	C	G	H	I	J
1	Cas	SubstanceName	PropertyType	FieldType	FieldValue	FieldUnit
2	76006	1,1,1-trichloropropan-2-o	Formula	Value	C3-H5-Cl3-O	NULL
3	76006	1,1,1-trichloropropan-2-o	MolecularWeight	Value	163.43	NULL
4	76017	pentachloroethane	BoilingPoint	Value	162	DegC
5	76017	pentachloroethane	Density	Value	1.68	g/cm3
6	76017	pentachloroethane	Formula	Value	C2-H-Cl5	NULL
7	76017	pentachloroethane	MeltingPoint	Value	-28.78	DegC
8	76017	pentachloroethane	MolecularWeight	Value	202.28	NULL
9	76017	pentachloroethane	PhysState	Value	Liquid.	NULL
10	76017	pentachloroethane	SpecificGravity	Code1	water=1	
11	76017	pentachloroethane	SpecificGravity	Value	1.68	NULL
12	76017	pentachloroethane	VaporPressure	Value	3.398	mm Hg
13	76017	pentachloroethane	VaporPressure	Temperature	25	DegC
14	76302	tetrahydroxysuccinic acid	Formula	Value	C4H6O8	NULL
15	76324	camphoric anhydride	Formula	Value	C10H14O3	NULL
16	76357	1,3-Butanediol, 2,2-dimet	Formula	Value	C6-H14-O2	NULL
17	76357	1,3-Butanediol, 2,2-dimet	MolecularWeight	Value	118.2	NULL
18	76368	2,2,3-trichlorobutyraldeh	Formula	Value	C4-H5-Cl3-O	NULL
19	76368	2,2,3-trichlorobutyraldeh	MolecularWeight	Value	175.44	NULL
20	76379	2,2,3,3-tetrafluoropropan	Formula	Value	C3-H4-F4-O	NULL
21	76379	2,2,3,3-tetrafluoropropan	MolecularWeight	Value	132.07	NULL
22	76380	methoxyflurane	BoilingPoint	Value	105	DegC
23	76380	methoxyflurane	Flashpoint	Value	63	DegC
24	76380	methoxyflurane	Formula	Value	C3-H4-Cl2-F2-O	NULL
25	76380	methoxyflurane	MeltingPoint	Value	-35	DegC
26	76380	methoxyflurane	MolecularWeight	Value	164.97	NULL
27	76380	methoxyflurane	PhysState	Value	Liquid.	NULL
28	76380	methoxyflurane	SpecificGravity	Code1	water=1	

Examples of SDS

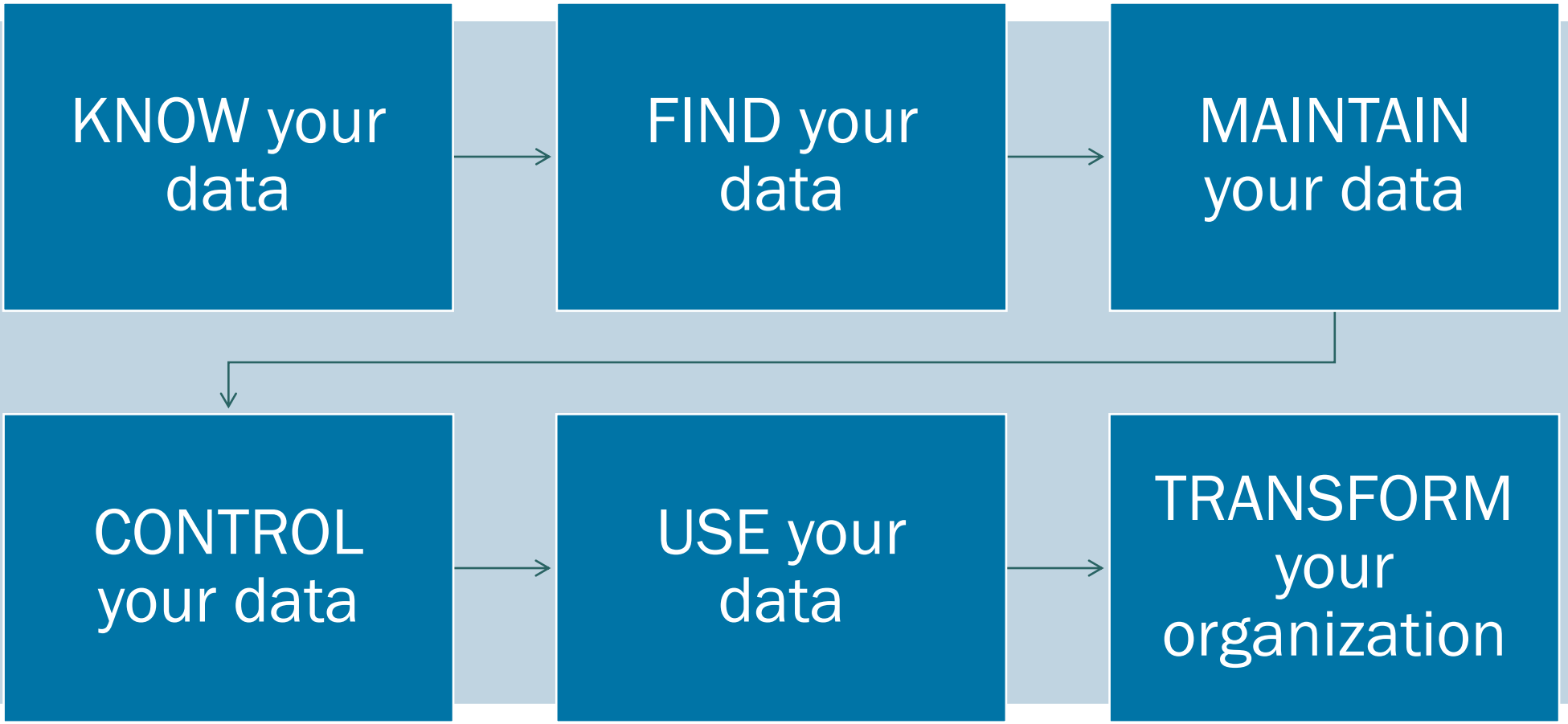
Examples of raw data being stored in Excel

What is Data Stewardship?

*"all activities that **preserve** and **improve** the information content, accessibility, and usability of **data and metadata**"*

For more information about the concept of Data Stewardship, please see Environmental Data Management at NOAA: Archiving, Stewardship, and Access by the National Research Council

Elements of Data Stewardship



3 Data Stewardship Keys for Product Stewards

Know Your Data

Maintain Your Data

Use Your Data

sphera®

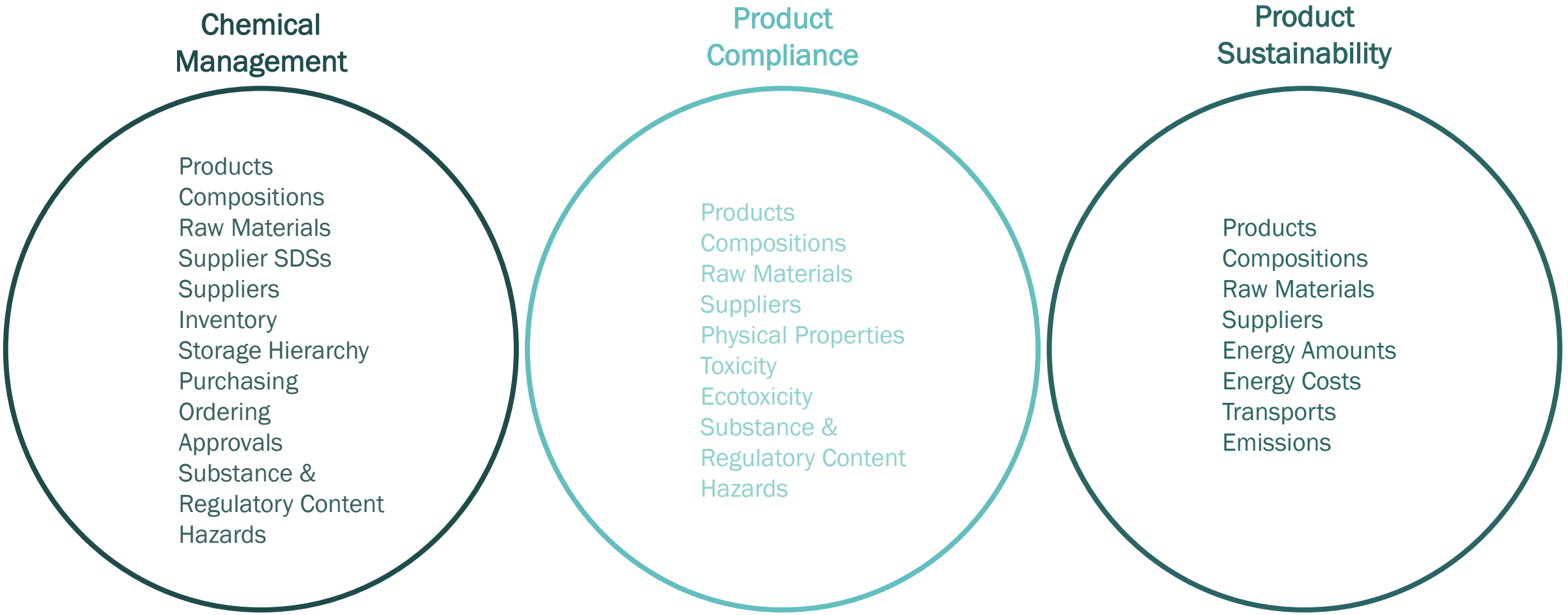
Why Data Stewardship

Why do you need data stewardship?

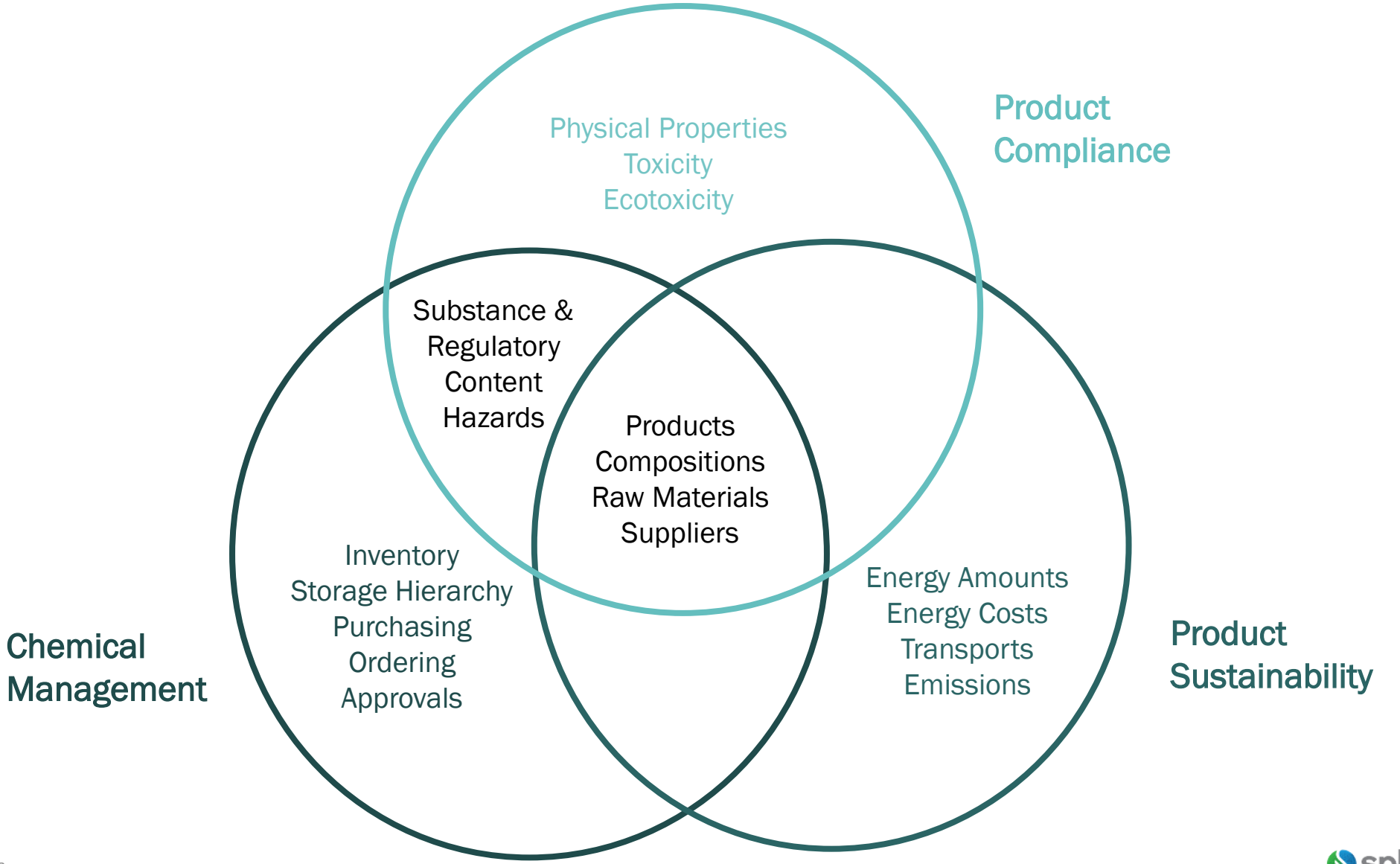
What exactly are you trying to accomplish?

sphera

Product Stewardship Data



Product Stewardship Data



Know Your Data

1. Understand your company and product stewardship goals

2. Determine what types of data are required to meet these goals

3. Determine what data you currently have and perform a gap analysis to identify missing data

Product Stewardship Regulatory Changes

Candidate List updated with eight hazardous chemicals

05/07/2021

The Candidate List of substances of very high concern now contains 219 chemicals that may harm people or the environment.

Upcoming changes to REACH information requirements

REACH

29/06/2021

The European Commission has revised certain information requirements for registering chemicals under REACH. The changes will start to apply in early 2022 and companies need to start preparing. ECHA will publish more advice in late 2021.

Glyphosate: EU regulators begin review of renewal assessments

CLP

15/06/2021

ECHA and the European Food Safety Authority (EFSA) have received a draft assessment of glyphosate carried out by four EU Member States and will now begin to consider the findings. Glyphosate – the most widely used herbicide in the world – is currently authorised for use in the EU until

Updates

Clarification to degradation and mutagenicity testing under REA

Alternatives to animal testing u REACH

Guidance on registration updat

Call for information on PFAS on website

Intention to restrict all PFAS in

OSHA's Proposed Rulemaking to Amend the Hazard Communication Standard

U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) has issued a proposed rule to update the agency's Hazard Communication Standard (HCS).

OSHA is issuing a notice of proposed rulemaking (N modify the HCS to maintain conformity with the Unit Labeling of Chemicals (GHS) (revision 7), align certa issues that have developed since implementation of

The HCS, first finalized in 1983, provides a standard with exposure to hazardous chemicals. The standar a common and coherent approach to classifying che

OSHA expects the proposed updates to the HCS wil related occupational illnesses and injuries by further for hazardous chemicals. The agency has preliminar ard by improving dissemin the chemical hazards to w

European Commission WTO

18th ATP of CLP

Notification

NITE-CHRIP

NITE 化学物質総合情報提供システム（NITE Chemical Risk Information Platform)

NITEトップ> 化学物質管理分野> NITE 化学物質総合情報提供シ

FAQ（よくあるご質問） | 更新履歴

NITE-CHRIP（ナイトクリップ）では国内外における
化学物質の法規制・有害性情報等を提供しています

お知らせ

- 2021/07/30 NITE-CHRIPを更新しました。
- 2021/03/09 FAQページをリニューアルし、マニュアルのページの内容を充実しました。
- 更新情報はメールマガジン【NITEケミマガ】で配信しています。登録はこちら。
- ご質問・内容訂正・追加収載リクエストなどのお問い合わせはこちら。
- マニュアルはこちら。トップページのフッターからもご覧頂けます。

検索メニュー

ただいま 22 ユーザが当サイトを利用しています。

化学物質から調べる ▶

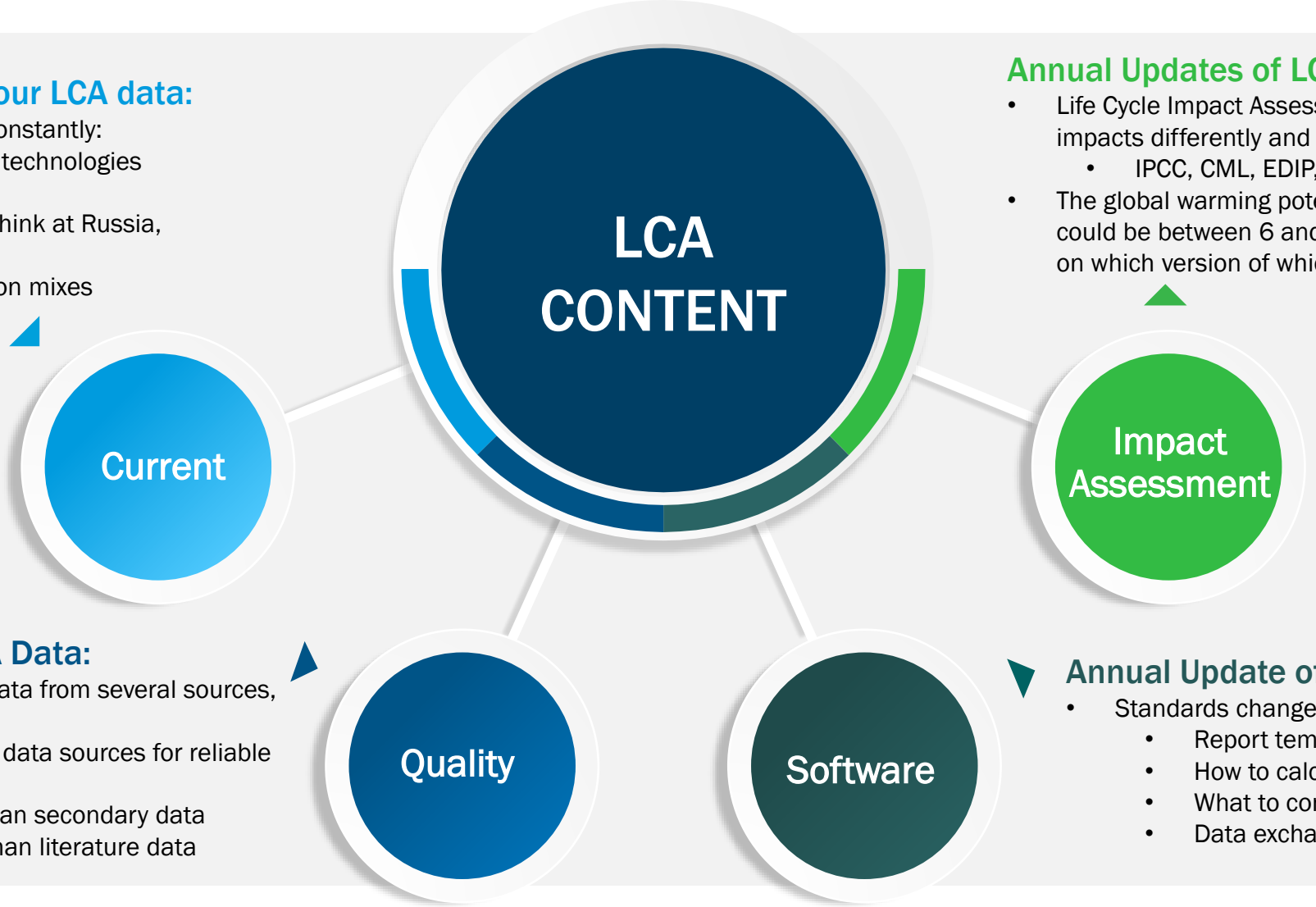
法規制等から調べる ▶

Keeping Data Current

Over 20% of regulatory lists are updated every quarter.

A team of 40+ experts is required to monitor & keep 600+ regulatory lists up to date.

Case Study: Maintenance of LCA Content



Annual Updates of your LCA data:

- LCA datasets change constantly:
  - New production technologies
  - New materials
  - Supply chains (think at Russia, China)
  - Energy production mixes

Annual Updates of LCIA Methods:

- Life Cycle Impact Assessment methods (LCIA) calculate impacts differently and the numbers change over time
  - IPCC, CML, EDIP, ReCiPe, EF …
- The global warming potential of methane emissions could be between 6 and 87 CO2 Equivalents, depending on which version of which method you use

Ensure Quality of LCA Data:

- Don't mix old and new data from several sources, that you cannot update.
- Use trusted and reliable data sources for reliable results
- Primary data is better than secondary data
- Industry data is better than literature data

Annual Update of Software:

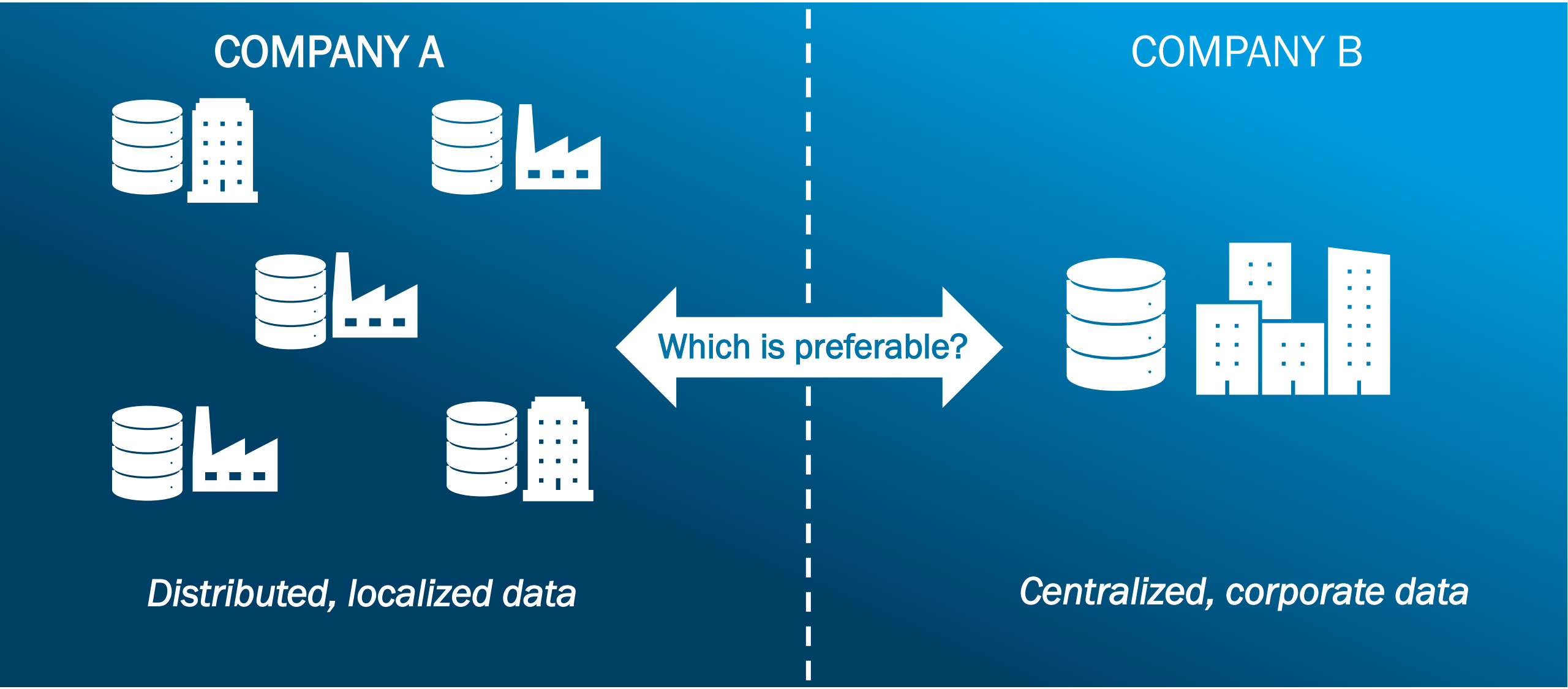
- Standards change
  - Report templates
  - How to calculate results
  - What to consider, what not
  - Data exchange formats

Maintain Your Data

1. Know what data has the highest value to your organization

2. Find a trusted partner to support you in maintaining common data (ie data not specific to your organization)

3. Establish high quality processes for your systems so when data is collected it is formatted properly and accurately


COMPANY A
COMPANY B
Which is preferable?
Distributed, localized data
Centralized, corporate data

Use Your Data

1. Encourage your organization to centralize your product stewardship data, processes and software

2. If centralization seems overwhelming, partner with a services or software organization to support you through the process

3. Make sure your data is accessible from wherever it resides

Use Cases

Use Case: Ingredient & Substance Management

Know Your Data

1. Data Goals

- Accurate understanding of composition of materials coming from suppliers and properties of the substances that make up materials (large technology company)
- Why? Major accident with chemical at a plant. I need to know quickly where the chemical is located in every single other plant (Large auto manufacturer)

Use Case: Ingredient & Substance Management

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2. Data Required

- Accurate, verified composition data of supplier purchased materials
- Master substance reference library

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3. Data Gap Analysis

- Have composition information taken from SDS documents
  - Inaccurate data on SDS documents
  - Non-standardized method of data delivery on SDSs
  - Incomplete data (i.e. CAS/name missing) on SDS documents
  - Many sources of substance data
  - Have a maintained substance reference library

Use Case: Ingredient & Substance Management

Maintain Your Data

4. Highest Value Data

- Curated and normalized composition data for reg list matching and identification

Use Case: Ingredient & Substance Management

Maintain Your Data

4. Highest Value Data

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5. Common Data

- A substance library is maintained by 3rd party

Use Case: Ingredient & Substance Management

Maintain Your Data

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5. Common Data

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6. Data Validation

- Utilize substance reference library to verify SDS data and flag substances that might need more scrutiny
- Supplement data from SDS with data from substance reference library

Use Case: Ingredient & Substance Management

Use Your Data

7. Push to Centralize

- All material data and composition data in one system
- Reduces data duplication and errors

Use Case: Ingredient & Substance Management

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8. Partner

- If needed, partner with an organization to help

Use Case: Ingredient & Substance Management

Use Your Data

7. Push to Centralize

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9. Accessible

- Utilize substance reference library to verify SDS data and flag substances that might need more scrutiny
- Supplement data from SDS with data from substance reference library

Use Case: Regulatory Impact Assessment

Know Your Data

- Understand impact of regulatory changes to product portfolio.
- Critical Data
  - Product information and formulations
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- Accurate Product and formulation data from systems
- Need regulatory content continually maintained

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Use Your Data

- Tools that utilize formulations and regulatory data to provide critical insight as regulations and products change over time
- Take action on the changes!

Is the data available for all the green claims → probably not

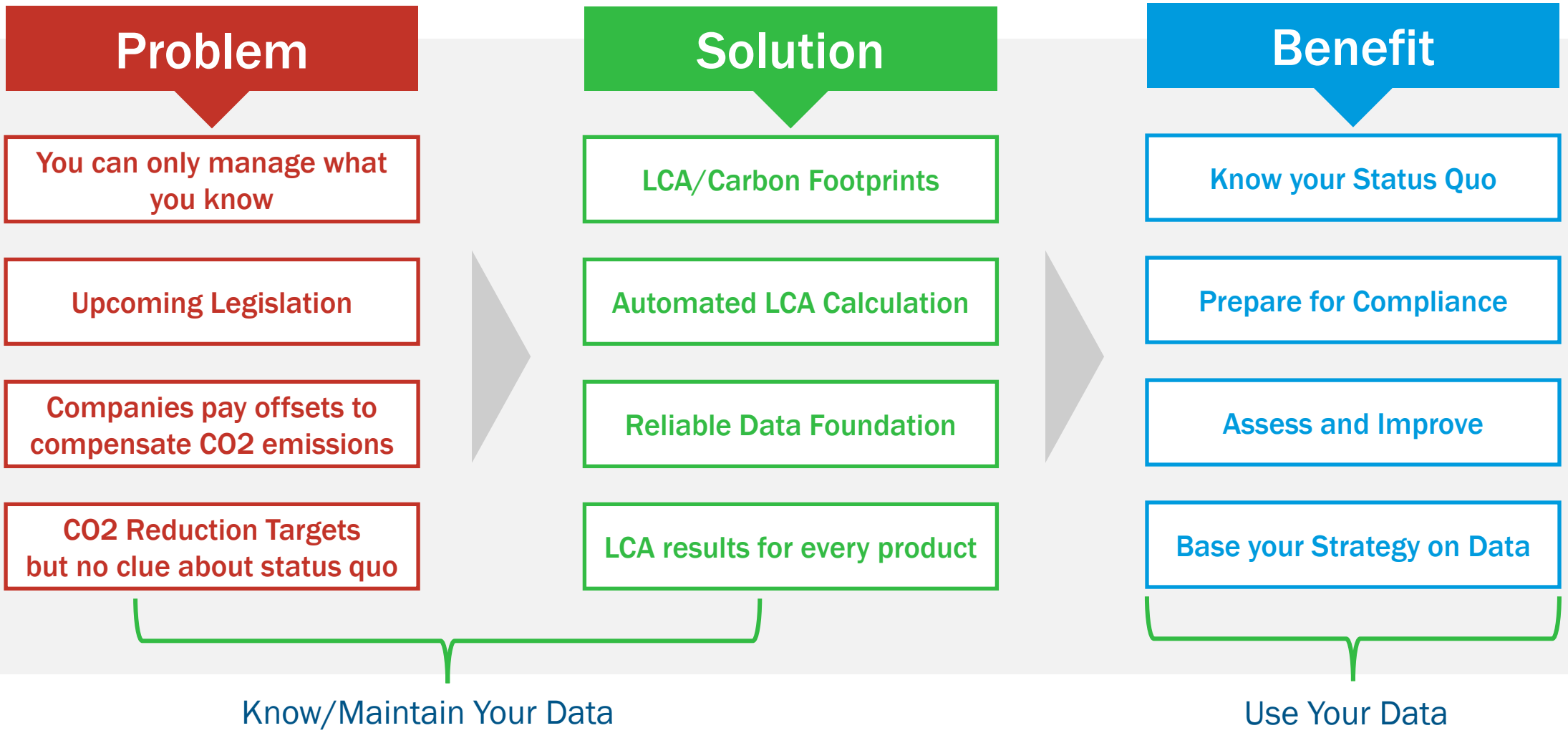
87%
commitment from senior management

70%
communicate sustainability information publicly

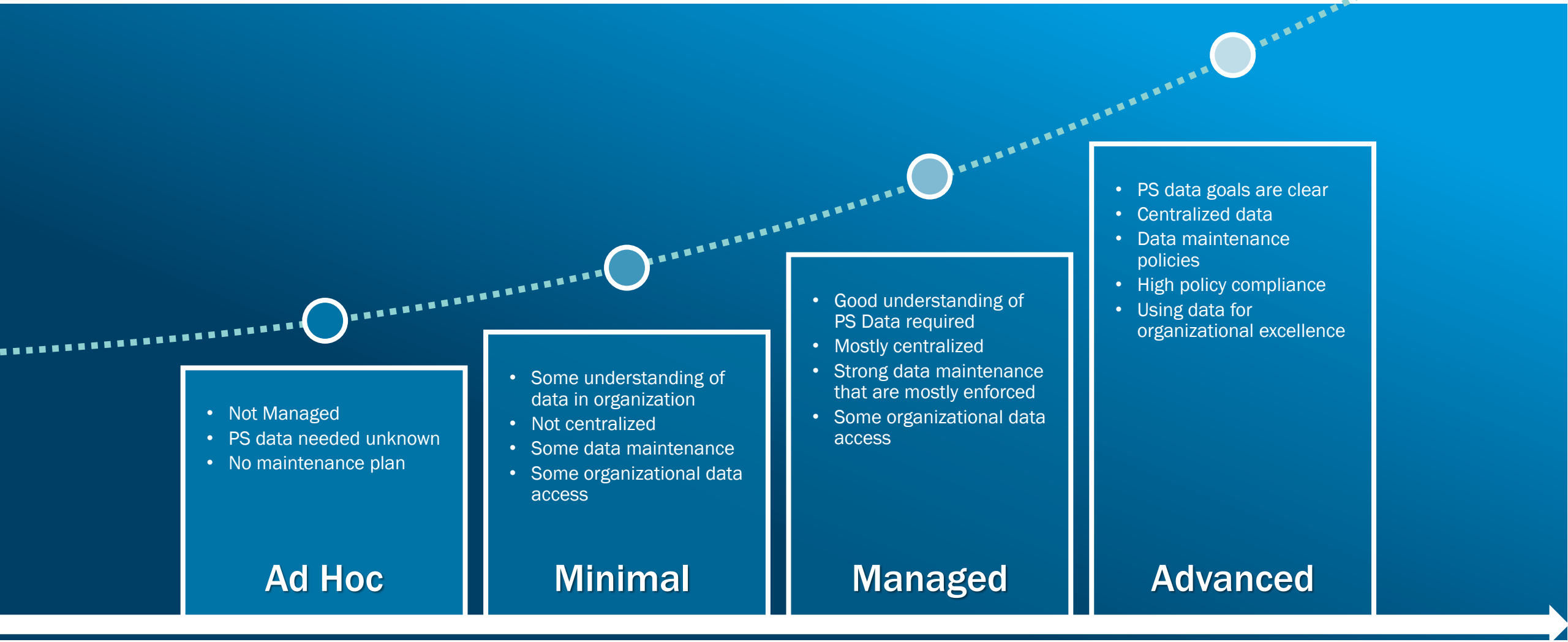
>50%
are in the process of submitting an SBT

Only 26%
use a dedicated system to manage sustainability performance

How to use LCA results



PS Data Stewardship Maturity Model



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Questions?

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