IMDS and GADSL

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Outline

- **International Material Data System (IMDS) background**

- **IMDS Current Status and Data Utilizations**

- **Global Automotive Declarable Substance List (GADSL) and Its Process**

- **IMDS Tomorrow**

Background: Typical Auto Info

- \>2,000 end-item part numbers, bumper, engine, lighting, etc., in a typical vehicle

- \>10,000 components, bulbs, screws, electronic modules, etc., in a typical vehicle

- \>1,000 different materials used in auto industry, cast irons, polypropylene, Nylons, solders, e-coat, etc.

- \>10,000 chemicals used in automotive industry, vehicles/plants, etc.

- \>1,000 tier 1 suppliers for a typical OEM

- ~100,000 all tiers of suppliers in auto industry globally…

- …

Background Info: IMDS & Statistics

- **In 1998, Audi, BMW, DaimlerChrysler, Ford, Opel, Porsche, VW and Volvo contracted with EDS(HP) to develop IMDS to meet the incoming EU End of Life Vehicle Directive.**

- **Current OEMs joining the IMDS >30**

- **IMDS is a web-based system which is used to track all the materials in vehicles. IMDS went online in June of 2000 when ELV enacted.**
  - Over 180,000 active users, from >70,000 companies and > 30 global car manufactures (OEMs) worldwide, have registered and are using IMDS.
  - >30,000,000 IMDS sheets have been submitted to IMDS system (Tier 2, Tier 3 submitted to Tier 1, and Tier 1 submitted to OEMs, etc.)
  - >3,000,000 datasheets were submitted to OEMs
  - Industrial substance list—Global Automotive Declarable Substance List (GADSL) was developed and used by all auto OEMs/suppliers within IMDS.
  - It covers all major continents--Asia, Europe, Americas and Africa with help centers as well.

Process Scheme

Supplier 1

Supplier 3

Supplier 2

Car manufacturer

NH

1

2

3

4

5

6

Central Database
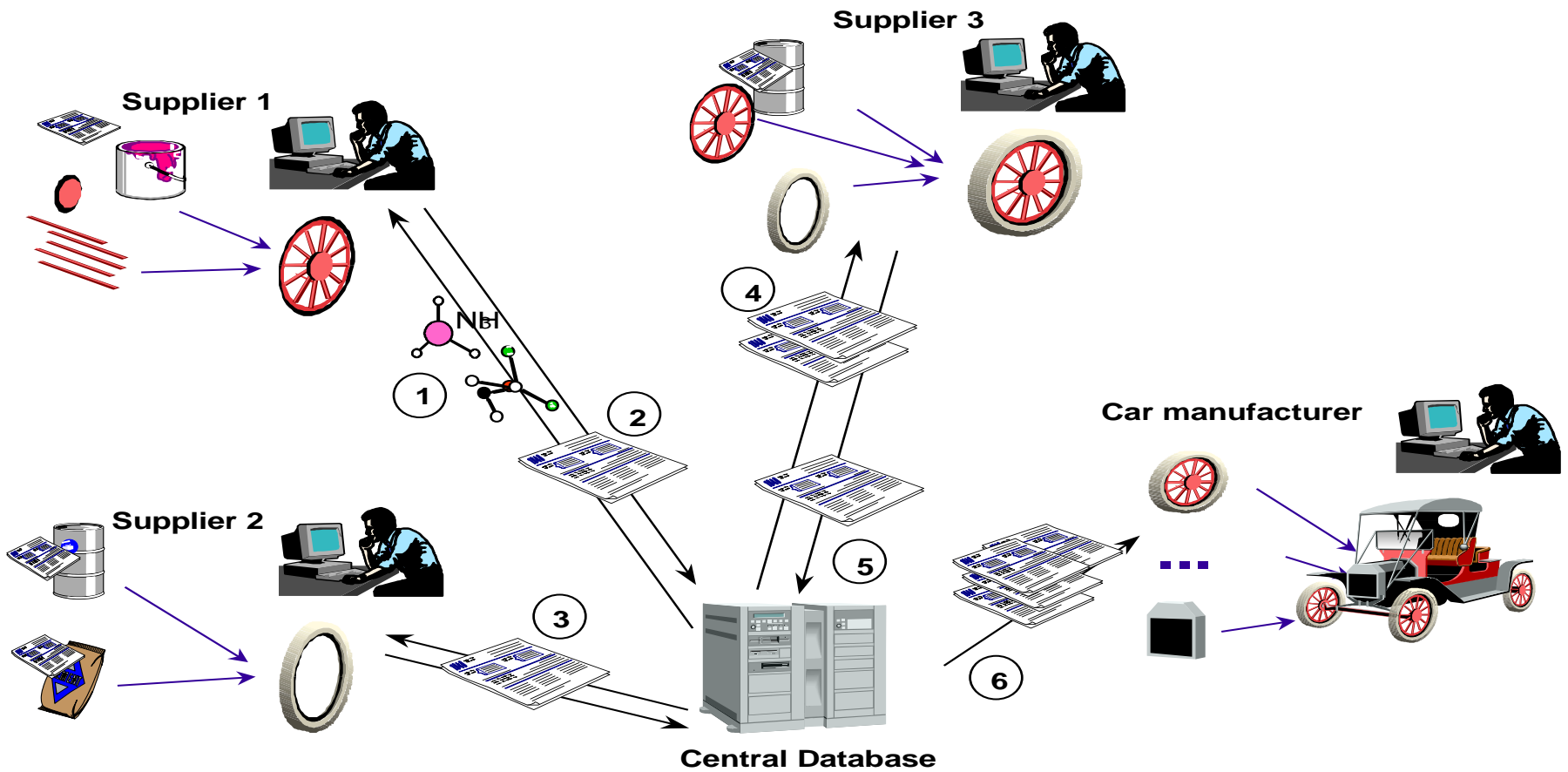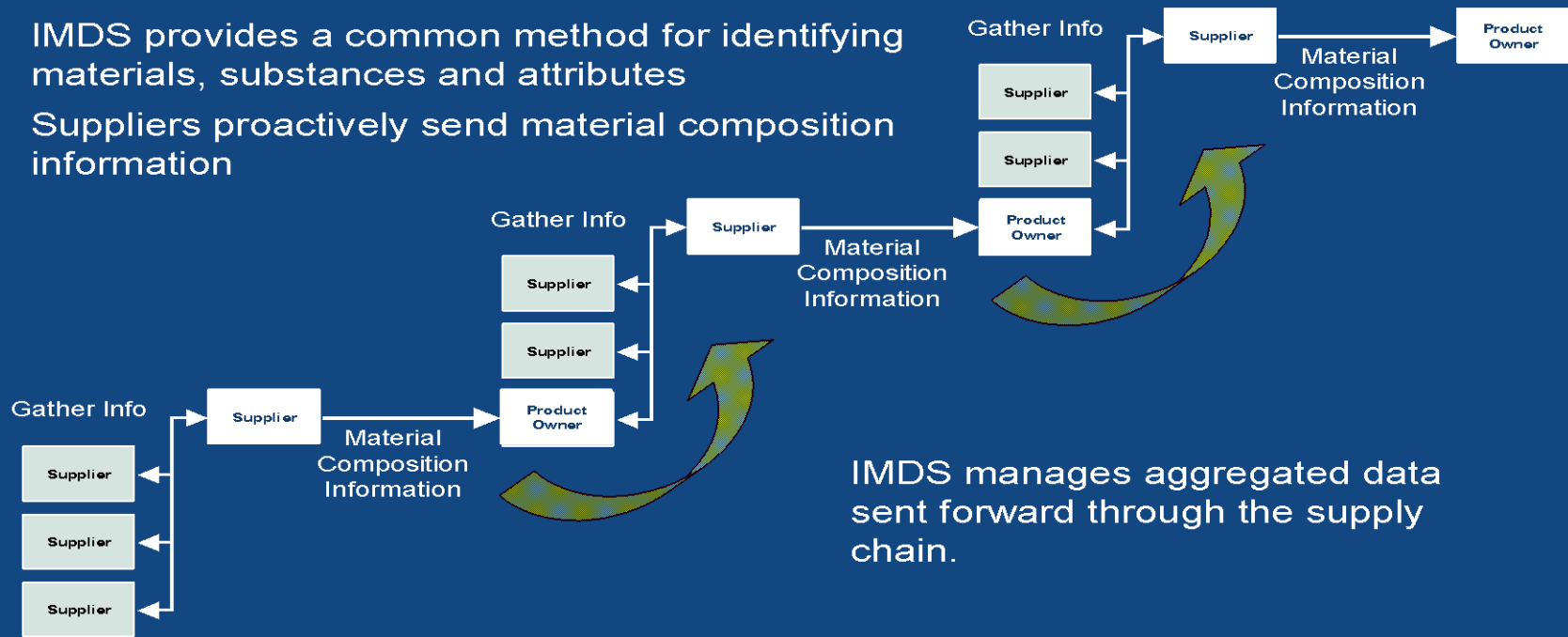
Supplier Chain information flow
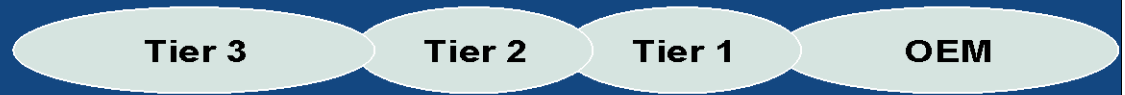
IMDS provides a common method for identifying materials, substances and attributes

Suppliers proactively send material composition information

IMDS manages aggregated data sent forward through the supply chain.

Tier 3 | Tier 2 | Tier 1 | OEM

How IMDS Datasheets Used by OEMs

- Information/datasheets are downloaded from IMDS to customers' (including OEMs) specific systems in order to:
  - Run calculations to determine the range of recoverability and recyclability percentages
  - Compile documentation to be submitted for Type Approval and substance compliance
  - Create pretreatment and dismantling manuals for each RRR type approved model
  - Phase out restricted substances
  - Assess impact and develop plan to minimize cost

How IMDS Supports to Meet Regulations

- Development of database for materials and substances is a key enabler to meet current and future environmental regulations
  - Receipt & review of IMDS information prior to PPAP enables OEMs to know the reportable and regulated substances used in our vehicles.
  - When environmental regulations change, IMDS reports provide information on parts with reportable & regulated substances. OEMs and suppliers can then work efficiently to eliminate the substances, modify the products, meet ELV->REACH-> etc.
  - Lessons learned from current parts can be used for future programs
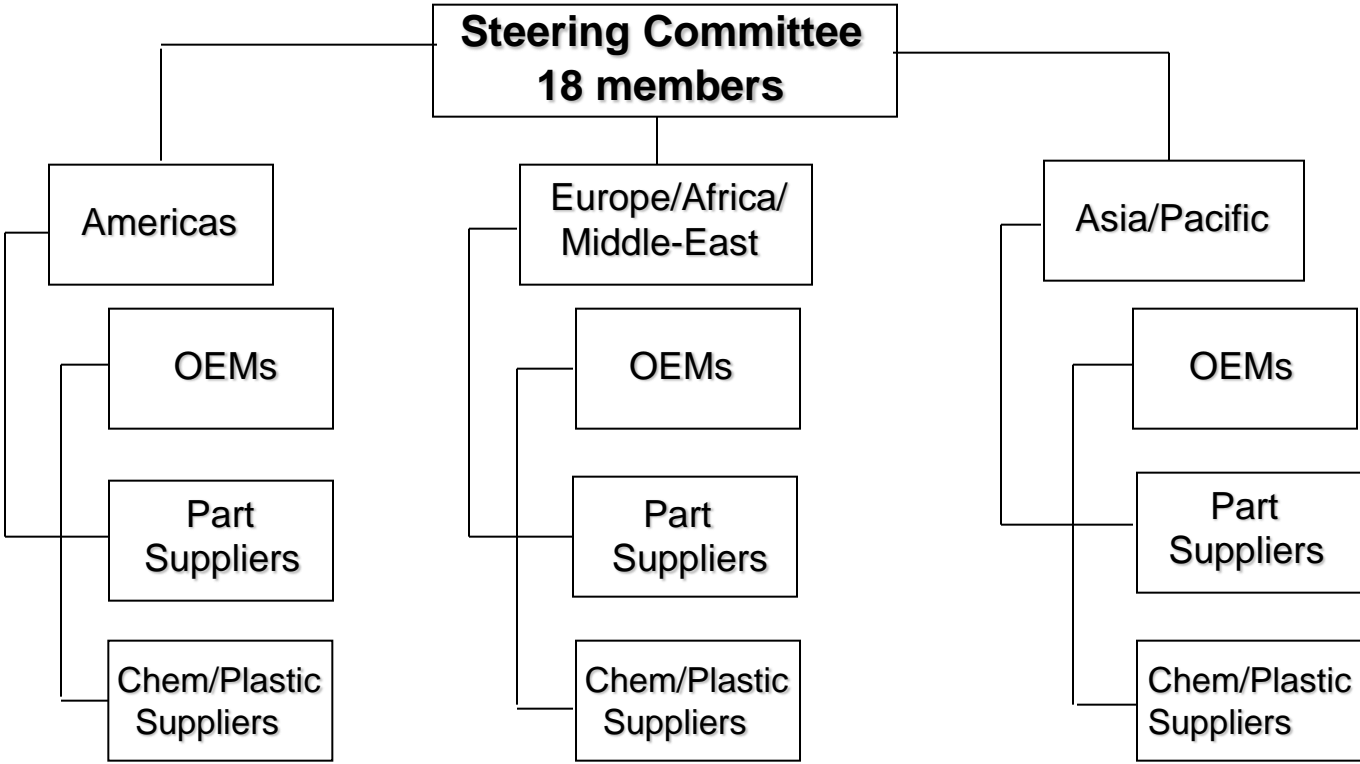
Global Automotive Declarable Substance List GADSL (ILRS before 2005)

- Developed by the Global Auto Stakeholders
  - Complete supply chain involved!
  - Americas
  - Asia/Pacific
  - Europe/Africa/Middle East
- Single common list for reporting substances in IMDS within auto industry
- Voluntary, criteria driven list, to assure environmental and health regulation compliance
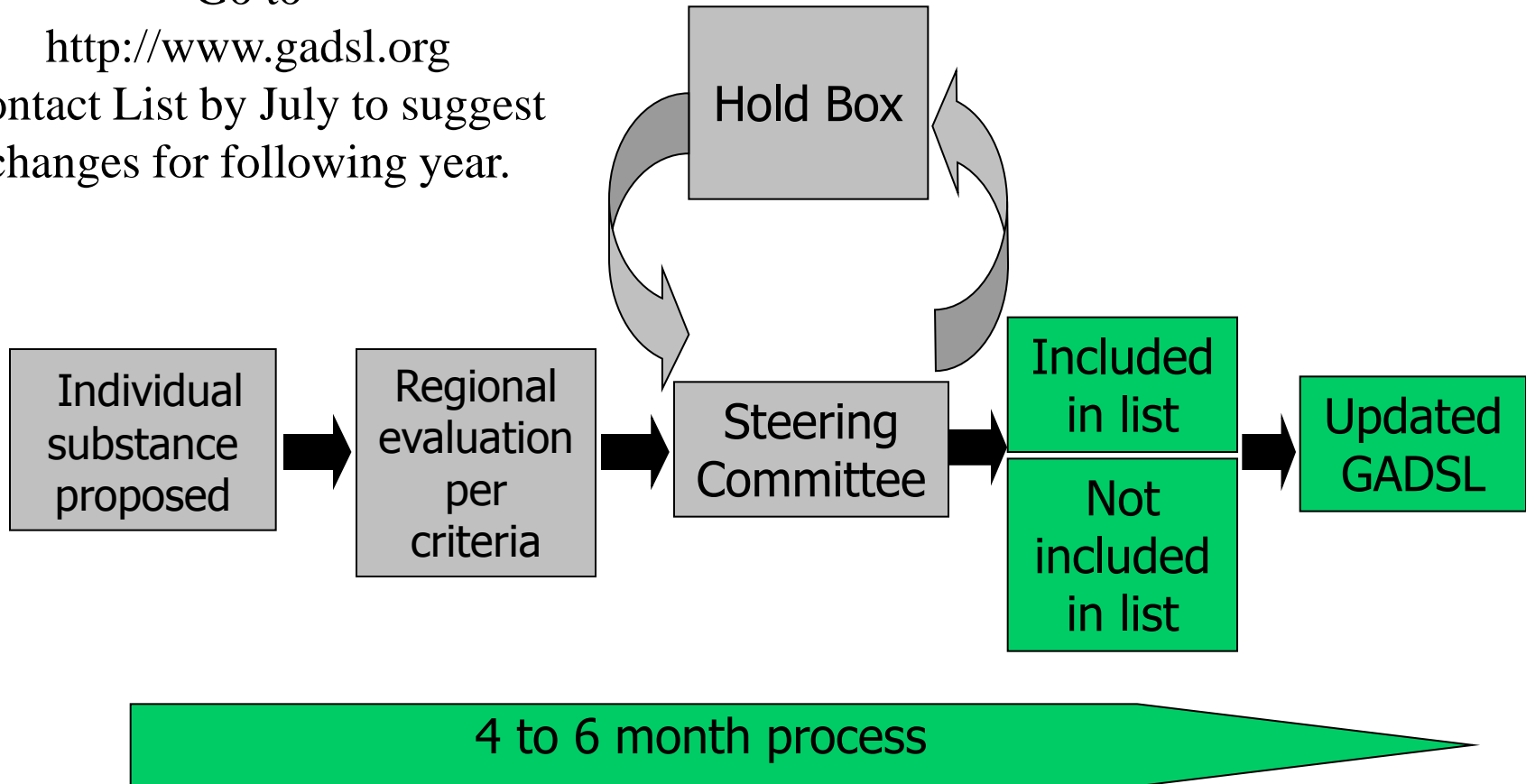
GADSL Governance Structure

Governance Structure

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                    ┌──────────────────────────┐
                    │   Steering Committee     │
                    │       18 members         │
                    └──────────────────────────┘
         ┌──────────────────┼──────────────────┐
┌────────────────┐  ┌────────────────┐  ┌────────────────┐
│    Americas    │  │ Europe/Africa/ │  │  Asia/Pacific  │
│                │  │  Middle-East   │  │                │
└────────────────┘  └────────────────┘  └────────────────┘

┌────────────────┐  ┌────────────────┐  ┌────────────────┐
│     OEMs       │  │     OEMs       │  │     OEMs       │
└────────────────┘  └────────────────┘  └────────────────┘

┌────────────────┐  ┌────────────────┐  ┌────────────────┐
│     Part       │  │     Part       │  │     Part       │
│   Suppliers    │  │   Suppliers    │  │   Suppliers    │
└────────────────┘  └────────────────┘  └────────────────┘

┌────────────────┐  ┌────────────────┐  ┌────────────────┐
│  Chem/Plastic  │  │  Chem/Plastic  │  │  Chem/Plastic  │
│   Suppliers    │  │   Suppliers    │  │   Suppliers    │
└────────────────┘  └────────────────┘  └────────────────┘
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OEMs from Korea and China will be contacted & included under Asia/Pacific regional structure.

GADSL Process Overview

Go to
http://www.gadsl.org
Contact List by July to suggest
changes for following year.

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Hold Box
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| Individual substance proposed | → | Regional evaluation per criteria | → | Steering Committee | → | Included in list | → | Updated GADSL |

Not included in list

4 to 6 month process

IMDS Tomorrow

- Continuous improvements on data quality and user friendliness of the system

- With upcoming regulations IMDS may require modifications to handle additional chemicals, avoid "Conflict Mineral" regions, etc.

- These will be addressed in a strategic planning project called – IMDS 2020, which was started last year

- Collaborate with/help other industries for similar processes and systems, electronic, aerospace industries, etc.