

HOLISTIC ENVIRONMENTAL MANAGEMENT

Toyota's Journey

AAPA Seminar

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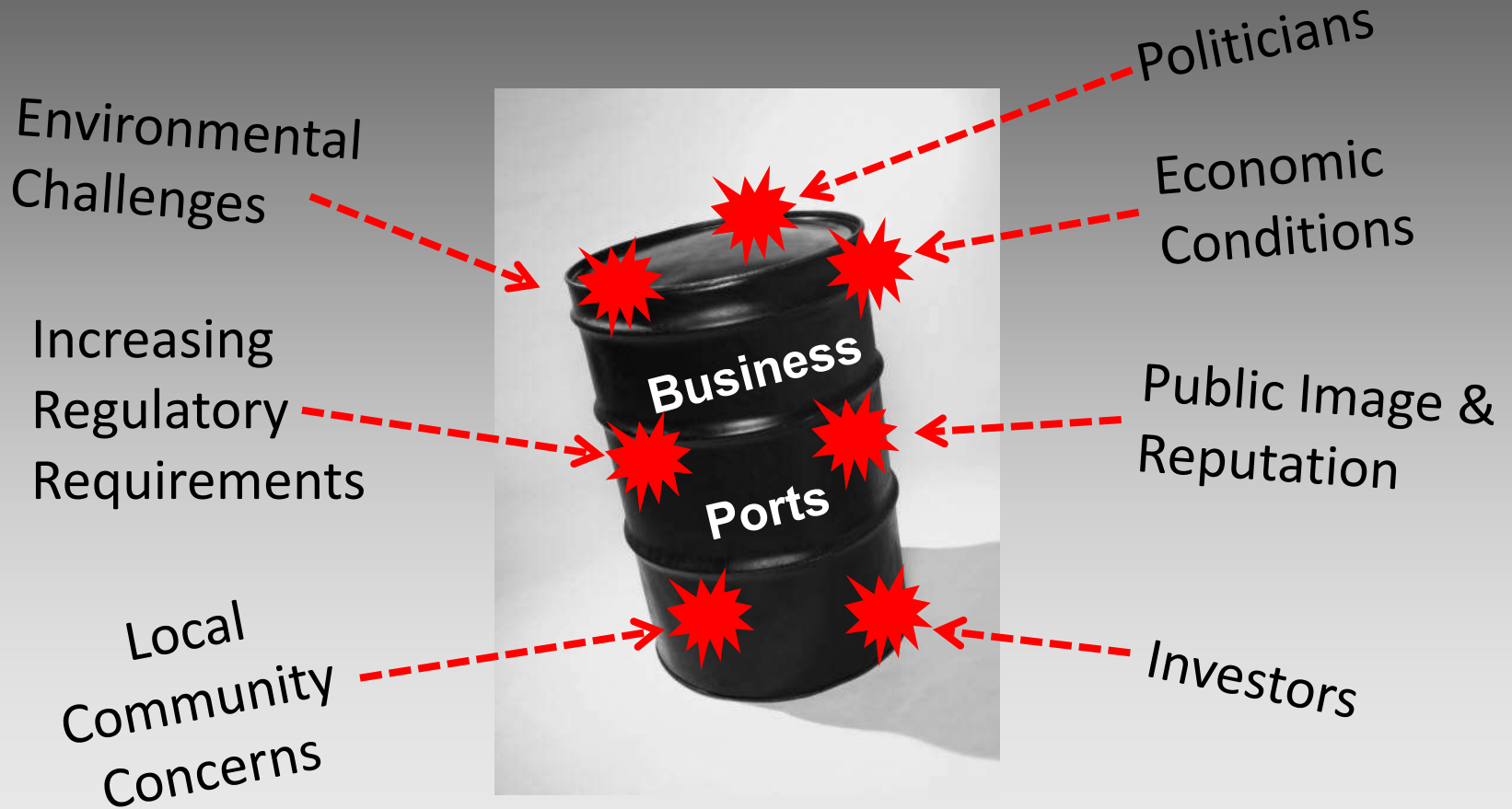
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WE'RE ALL IN THE SAME BARREL!



WHAT WILL IT TAKE TO GET US OUT?

A “holistic” solution . . .

1. Comprehensive and enterprise-wide;
2. Imbedded in the business;
3. Clear vision, leadership & management commitment; and
4. Associate engagement.

One that is . . . “sustainable”.



HOW DO WE DO IT?

The Toyota Motor Sales approach:

- 1. Foundation** - The Toyota Integrated Management System (TIMS)
 - Environmental plus hazmat and safety
 - Grounded in PDCA
 - ISO 14001, OHSAS 18001 certifiable
 - In “Toyota speak”
 - Embraces chronic malcontents (e.g., kaizen)
 - Common suite of IT support tools (Intelex)
- 2. The Plan** -Toyota Environmental Action Plan



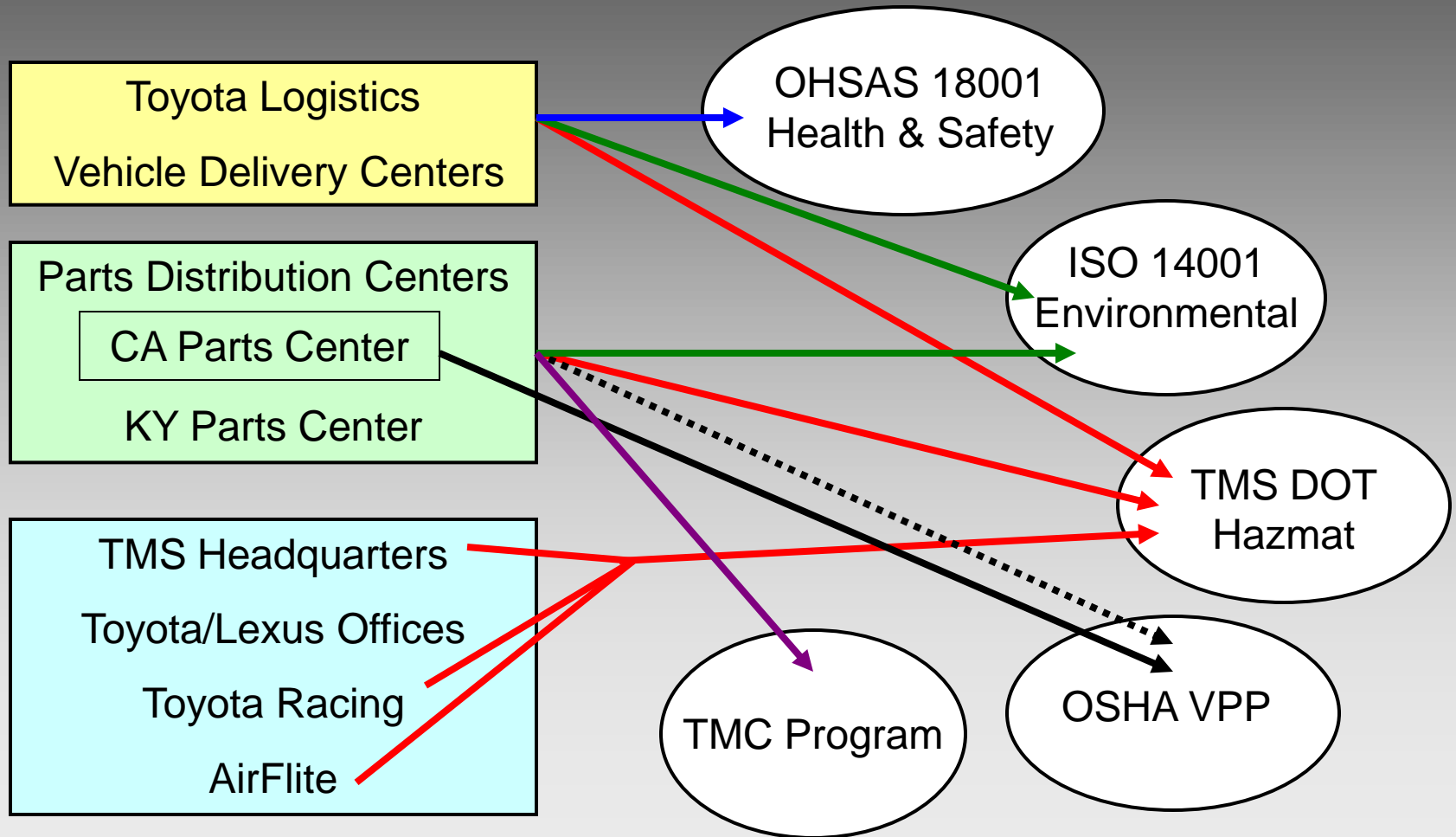
TMS EH&S – 2008:

POLICIES, PROGRAMS & COMPLIANCE REVIEWS

- Corporate EH&S policies
 - Environmental – enterprise-wide policy
 - Hazmat, health & safety – no TMS corporate policies
- Programs
 - Environmental & hazmat – consistent program, but not enterprise-wide coverage
 - Health & safety – inconsistent content & coverage
- Compliance Verification
 - Environmental & hazmat – annual reviews at operational facilities, but not at all office facilities
 - Health & safety – periodic reviews at some facilities, but no standard protocols



TMS EH&S – 2008: MANAGEMENT SYSTEMS & CORE PROGRAMS



TMS EH&S – 2008: ASSESSMENT

- Need for better governance, clear roles and responsibilities & accountability
- Need for centralized compliance (a “clear line of sight”)
- Need for consistent policies, management systems & programs, with facility-specific flexibility
- Compliance risks compounded by increasing regulatory requirements at the federal, state and local levels



COUNTERMEASURE & EH&S FUTURE STATE

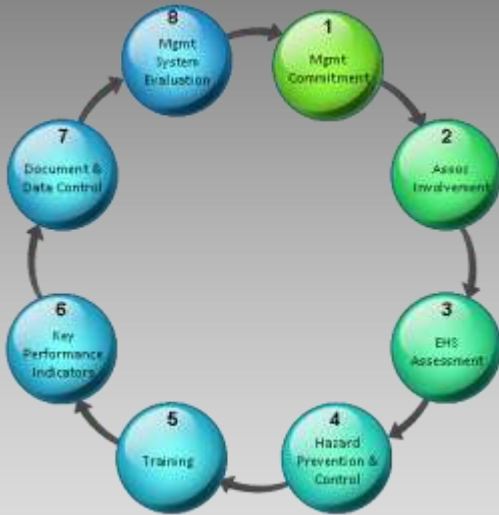
- Develop and implement a TMS enterprise-wide, integrated environmental, hazmat & safety management system, including:
 - Formalized governance process
 - Management engagement
 - Centralized compliance responsibility
 - Standardized policies, processes, programs and training
- Develop and implement standardized IT tools to support the management system



WHAT DOES IT LOOK LIKE?

TOYOTA ENVIRONMENTAL, HAZMAT, & SAFETY INTEGRATED MANAGEMENT SYSTEM

STANDARDS & CORE PROCEDURES: What We're Going to Do



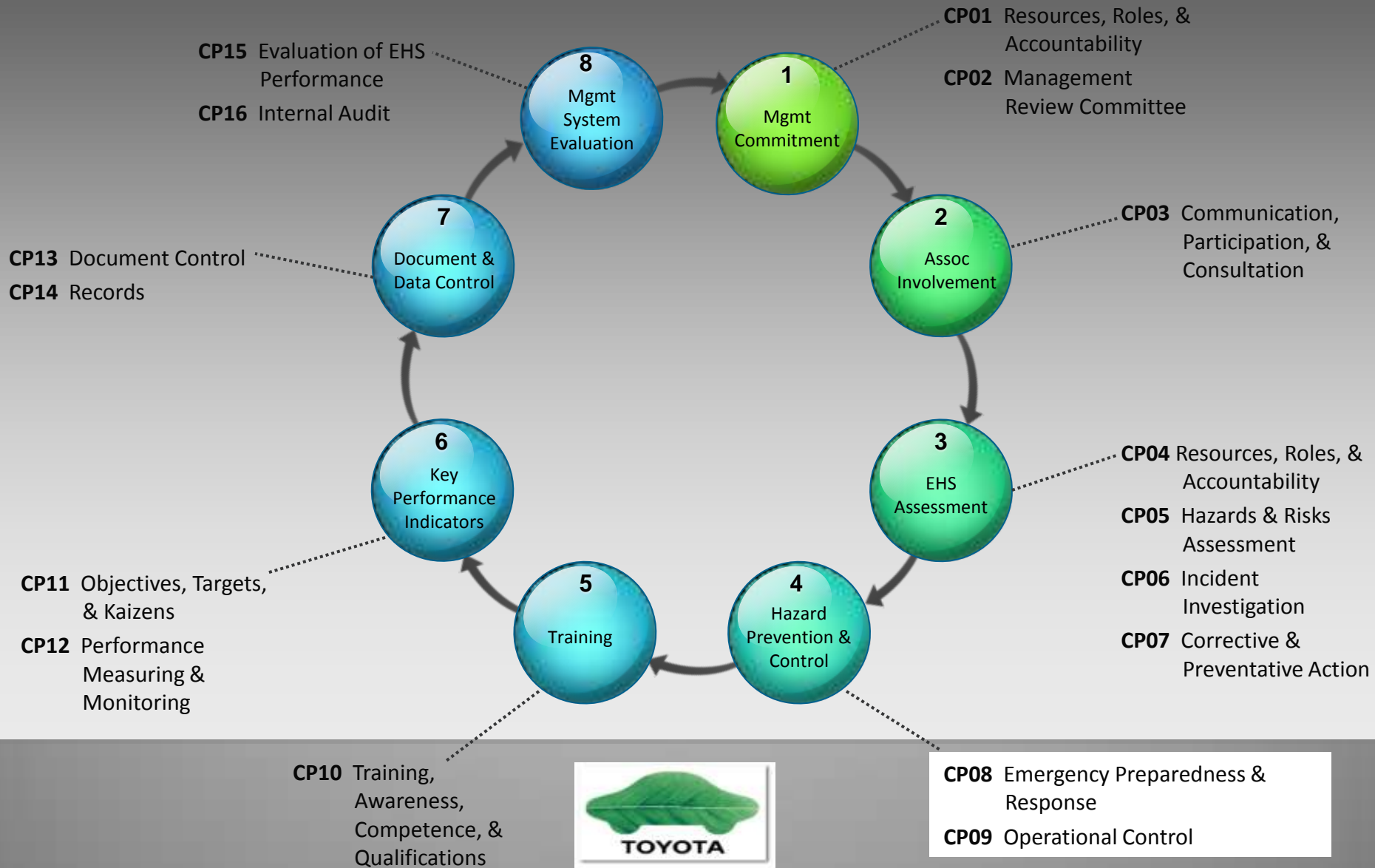
PROGRAMS: How We're Going to Do It



INTELEX: The Tool to Get It Done

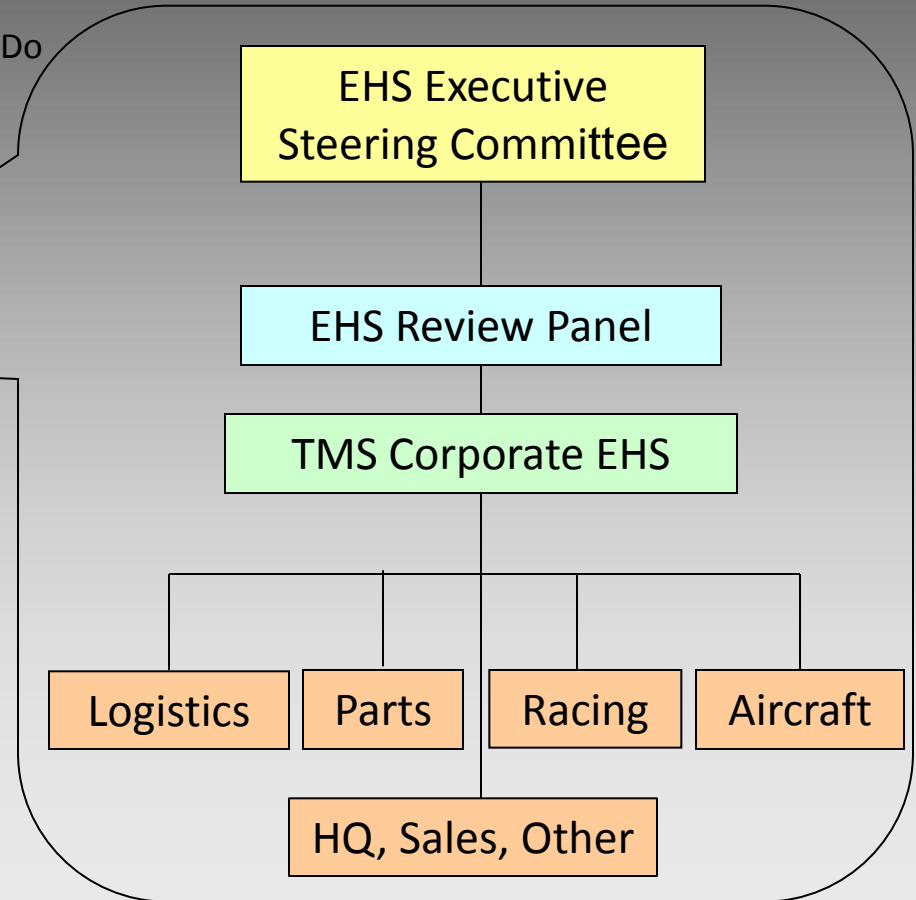
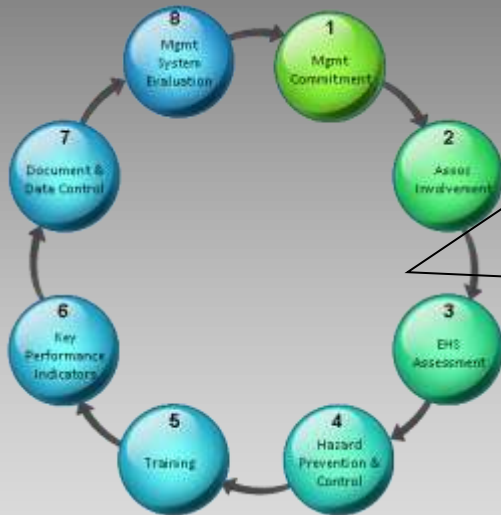


WHAT DOES IT LOOK LIKE? Standards & Core Procedures



GOVERNANCE & ROLES IMBEDDED IN TIMS

STANDARDS & CORE PROCEDURES: What We're Going to Do



WHAT DOES IT LOOK LIKE? PROGRAMS



Environmental Programs



HazMat Programs



Safety Programs



Cross-EHS Programs



WHAT DOES IT LOOK LIKE? INTELEX

1. Current Modules

- 6 modules, launched in 3 Phases

2. Future Modules

- Will evaluate replacement of other systems
- Image is to become “one-stop shop”



ELEMENTS OF



- ➔ Enterprise-wide program
- ➔ Formalized governance
- ➔ Clear & transparent roles & responsibilities
- ➔ Clear “line of sight” on compliance
- ➔ Standardization, with customization
- ➔ Accountability & stewardship
- ➔ Platform for compliance & sharing BMP’s



PART 2 TO “HOW DO WE DO IT” – THE PLAN

The Toyota Motor Sales approach:



1. **Foundation** - The Toyota Integrated Management System (TIMS) and Intelelex
2. **The Plan** -Toyota Environmental Action Plan
 - Vision – from the top
 - Process - PDCA and “Hoshin Kanri”
 - Accountability and report results



ENVIRONMENTAL ACTION PLAN STRUCTURE

Toyota's Guiding Principles

Global Earth Charter
Policies & Action Guidelines

Toyota Global 5-Year EAP

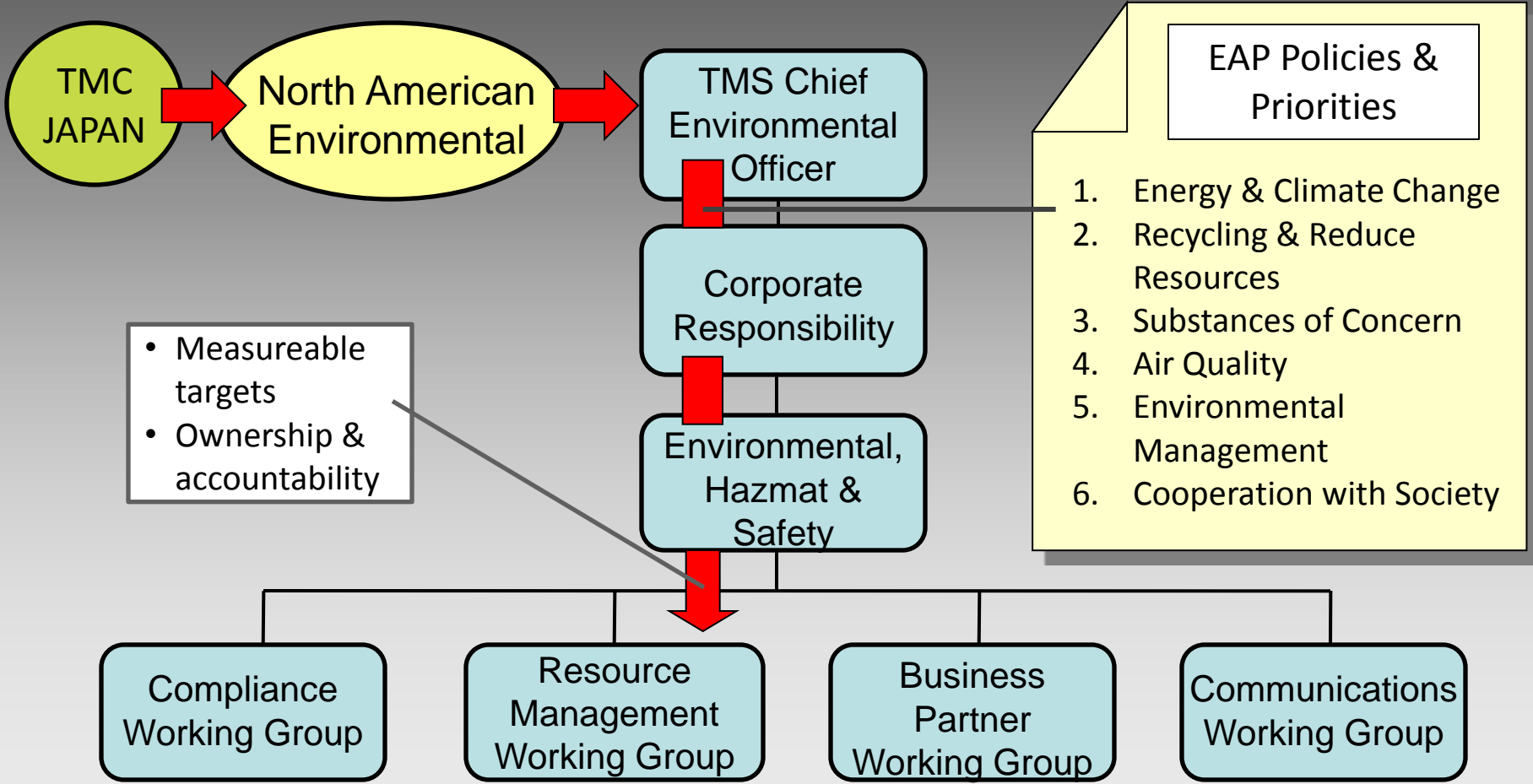
Global Environmental Report

North American
Environmental Report

TMS Environmental Action Plan



NORTH AMERICA & TMS: TARGET SETTING



THE PLANNING PROCESS: HOSHIN KANRI + PDCA

Earth Charter Policy
Earth Charter Action Guide
TMS Policy
5-Yr Action Plan (EAP)
1-Yr. EAP
Site Target
Kaizen Project
Kaizen Results
Site Performance
1-Yr. EAP Results
5-Yr. EAP Results
Review TMS Progress
Review Global Progress

Plan

Do

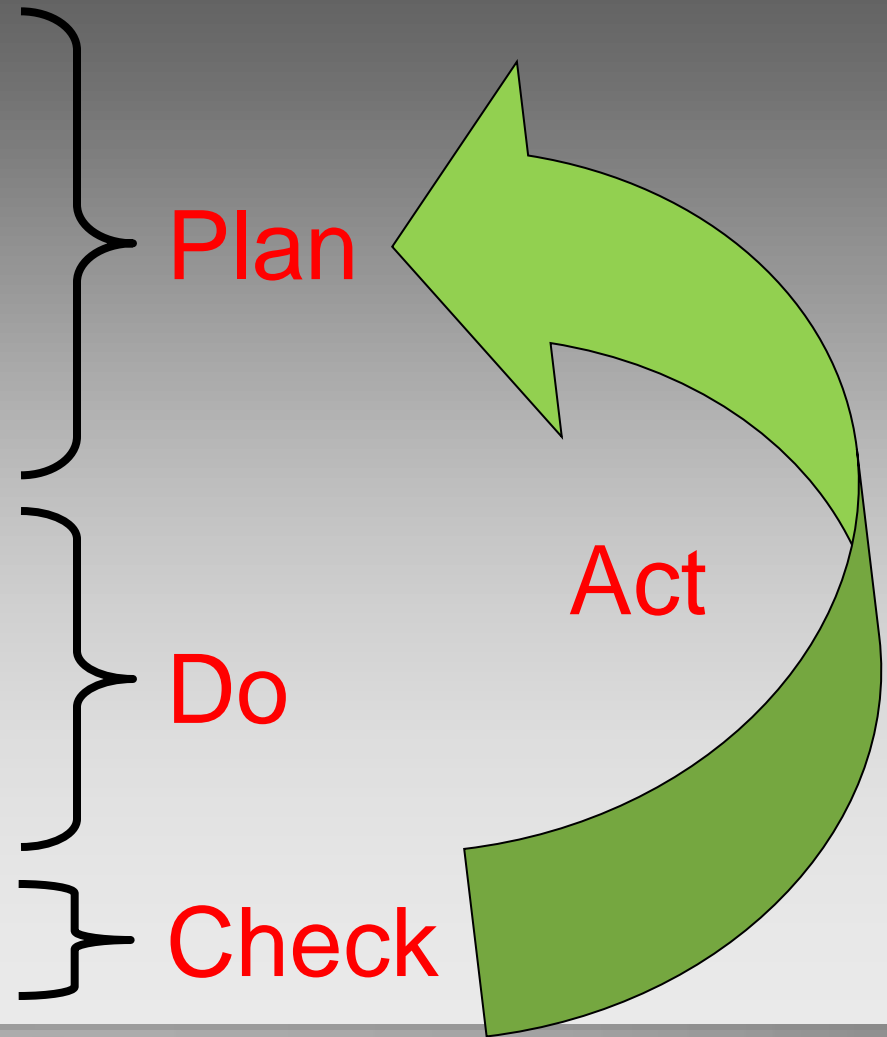
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Act

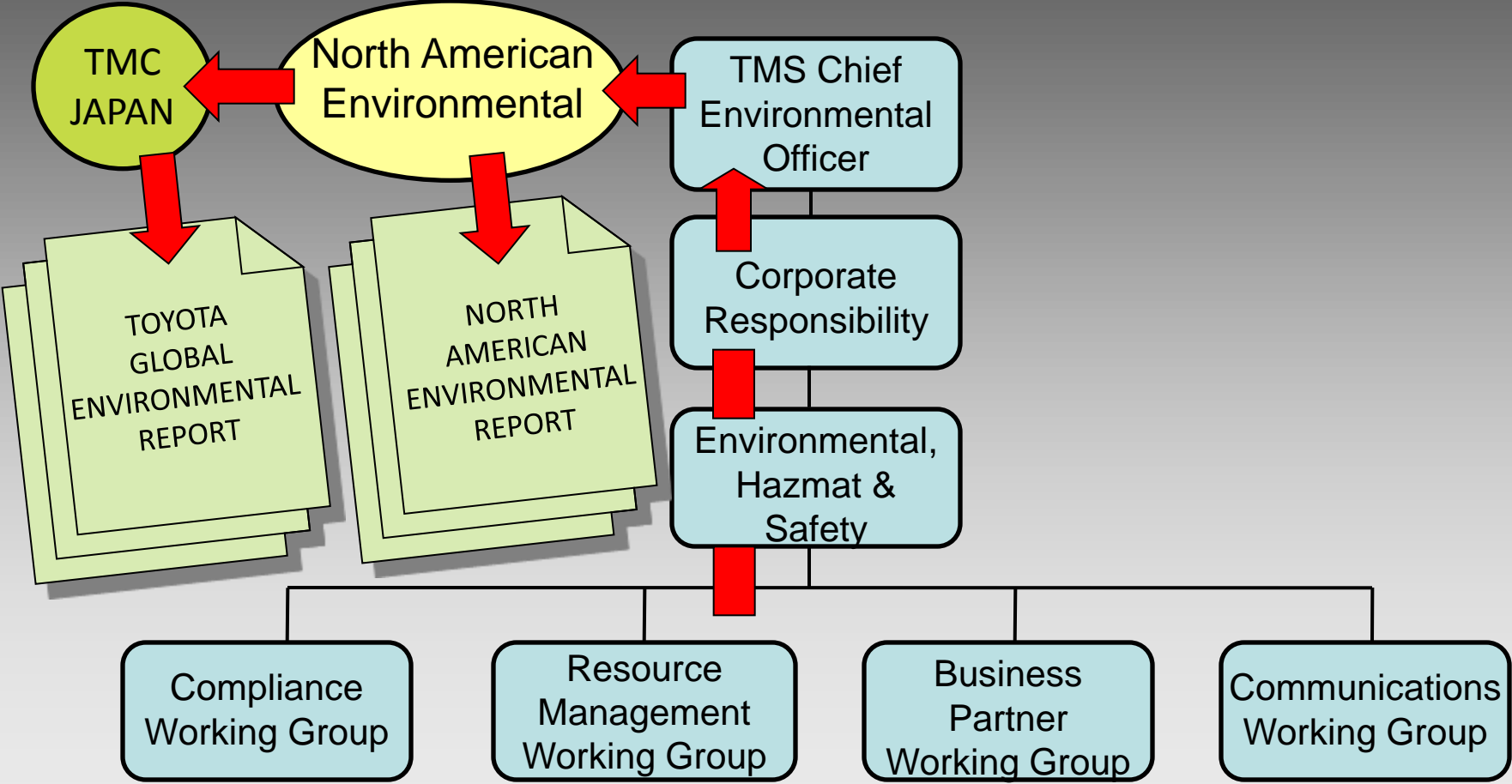


THE PROCESS APPLIED

Policy – Harmonious Growth
Produce with zero waste
Minimize waste - recycle
TLS – 90% rate (5-yr.)
Maintain 90% (1-yr.)
94% site target
Recycle plastic film
13K lbs. recycled
Site rate of 93.8%
TLS rate – 90.2%
TMS rate – 90.9%
TMS at zero waste?
Repeat cycle & kaizen



NORTH AMERICA & TMS: RESULTS REPORTING



CORE ELEMENT OF TOYOTA'S EAP: BEYOND COMPLIANCE

- EH&S compliance is the baseline – “zero violations”
- How do you go beyond “zero violations” compliance to pursue “zero impact” on the environment . . . especially in the current economic environment?

“Environmental Pragmatism”

“Short-term small” + “long-term large” strategy

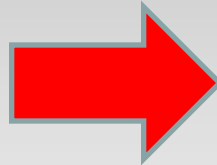


“SHORT-TERM SMALL”

- Identify small investments and process changes that have short-term ROI and achieve environmental goals
- String them together to maximize return

TMS Parts & Vehicle Logistics

- ➔ Driver incentive
- ➔ Idling reduction
- ➔ Speed governors
- ➔ Aerodynamic equipment
- ➔ Route kaizens



FY11 Annual Savings

Fuel & Emissions

- ➔ 158,700 gal
- ➔ 3.64M lbs. CO₂
+ \$600K



“LONG-TERM LARGE”

- Patient investment – facilities, equipment and process changes
- Longer-term plans and expectations
- No instant ROI – but greater long-term return



“LONG-TERM LARGE” – NAPCC SOLAR PROJECT



NAPCC SOLAR PROJECT BENEFITS

- 2.3 megawatt solar roof array – second largest in North America
- Generates 58% of NAPCC electricity requirements

Financial Cost/Benefit

- ➔ No upfront capital costs
- ➔ Prevents 2.4M lbs. CO2 annually
- ➔ \$360K/yr. - utility cost savings



“LONG-TERM LARGE” – TMS STATIONARY FUEL CELL

- Ballard 1 MW Proton Exchange Membrane (PEM) hydrogen fuel cell
- Use during peak demand period

Financial Cost/Benefit

- \$5.5M project
- Majority funding CA Self-Generation Incentive
- 1.9-year ROI
- \$130K/yr. – utility cost savings



HOW DO WE ADDRESS TODAY'S ENVIRONMENTAL CHALLENGES & "GO BEYOND"?

THE SOLUTION IS "MISSION POSSIBLE"

A program that is "holistic" and "sustainable" with a . . .

- ➔ 1. **Foundation** – environmental management system; and
- ➔ 2. **Plan** – environmental action plan . . .

That are imbedded in the business!



