SPEAKERS

- Tony Cockshutt: Enbridge

- Ann-Marie Kayser: Marathon Petroleum Company

Pipeline SMS Group Webinar

- Greeting and API Antitrust statement

- Review Maturity Model

- Brief review of Maturity Model + tools

- Upcoming Pipeline SMS items

- Group discussion

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API ANTITRUST GUIDELINES

- No discussion or forecasting of prices for goods or services by or received by a company.
- No sharing or discussing any company's confidential or proprietary information.
- No discussion of any company's specific purchasing plans; merger/divestment plans, production information, inventories or costs.
- No sharing or discussion of specific company compliance costs, unless publicly available.
- No agreement or discussion regarding the purchase or sale of goods or services (such decisions are independent company decisions).
- No discussion on how individual companies intend to respond to potential market/economic scenarios or government action: discussion limited to generalities.
- No disparaging remarks regarding specific vendors, products or services.

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WHAT IS A MATURITY MODEL

- Measures: degree to which the Pipeline SMS is comprehensive, systematic, and integrated throughout an organization

- Allows the operator to objectively determine the
  - strengths and weaknesses of its personnel and processes that support PSMS
  - areas of its PSMS needing improvement.

Maturity: A point at which the safety management system has become embedded into the processes of an organization and planned activities are completed and planned results achieved regularly, without gaps. – API RP 1173
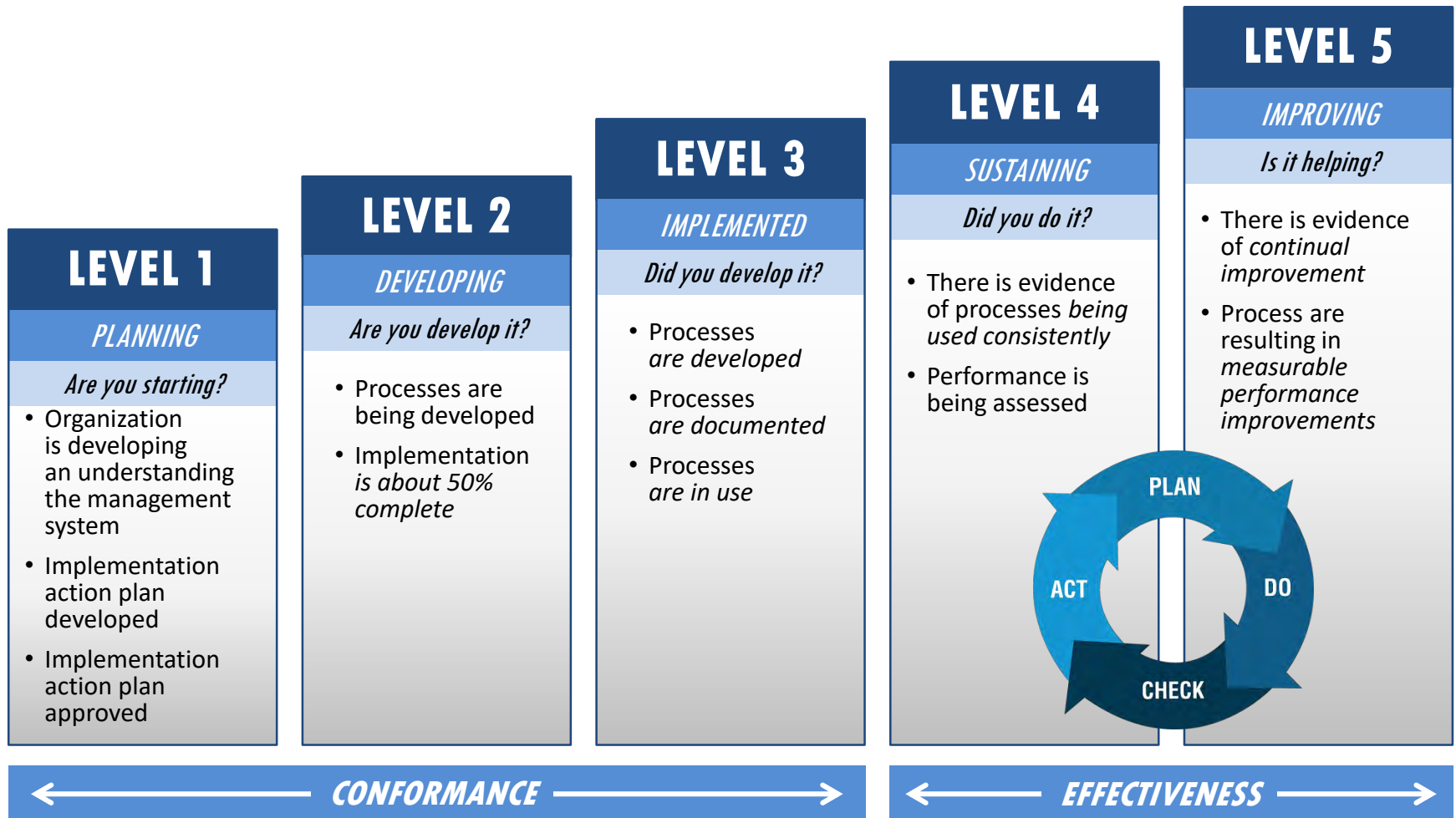
Maturity Model: A description of the levels of a maturity continuum and the characteristics, attributes, indicators or patterns associated with each stage. – API RP 1173

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WHY DO WE NEED ONE?

- API RP 1173 Requires operators to "establish a method to evaluate the growth and development, otherwise known as maturity, of its PSMS"

- Pipeline SMS Industry Team developed a model to help operators meet these requirements

- If your company already has one, that is OK

- Industry needs to show improvement

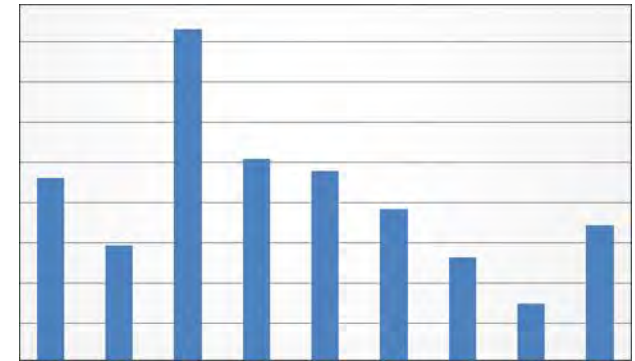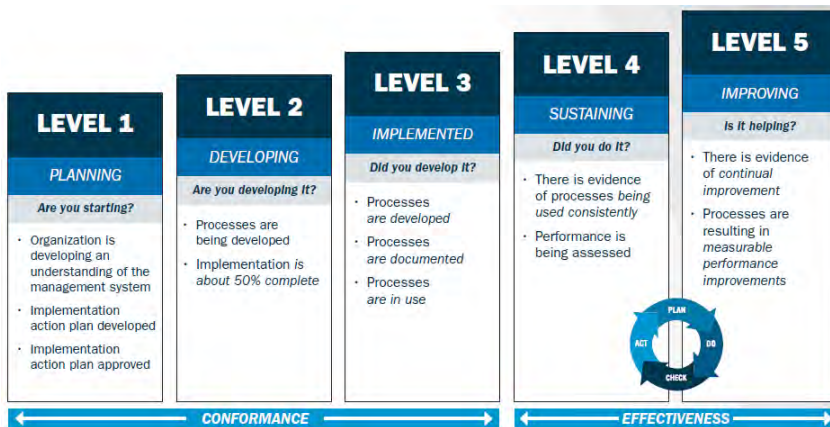- Maturity model points the way to further improvements

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PIPELINE SMS MATURITY MODEL

LEVEL 1
PLANNING
Are you starting?

- Organization is developing an understanding the management system
- Implementation action plan developed
- Implementation action plan approved

LEVEL 2
DEVELOPING
Are you develop it?

- Processes are being developed
- Implementation *is about 50% complete*

LEVEL 3
IMPLEMENTED
Did you develop it?

- Processes *are developed*
- Processes *are documented*
- Processes *are in use*

LEVEL 4
SUSTAINING
Did you do it?

- There is evidence of processes *being used consistently*
- Performance is being assessed

LEVEL 5
IMPROVING
Is it helping?

- There is evidence of *continual improvement*
- Process are resulting in *measurable performance improvements*

PLAN · DO · CHECK · ACT

← *CONFORMANCE* →

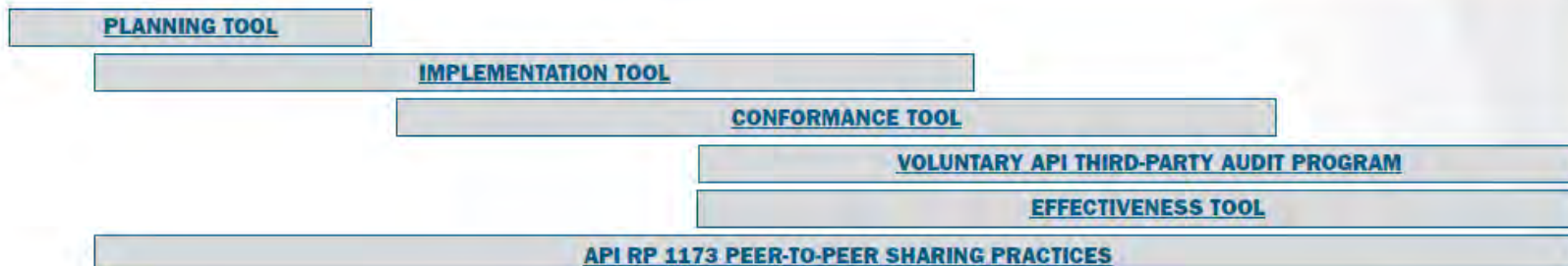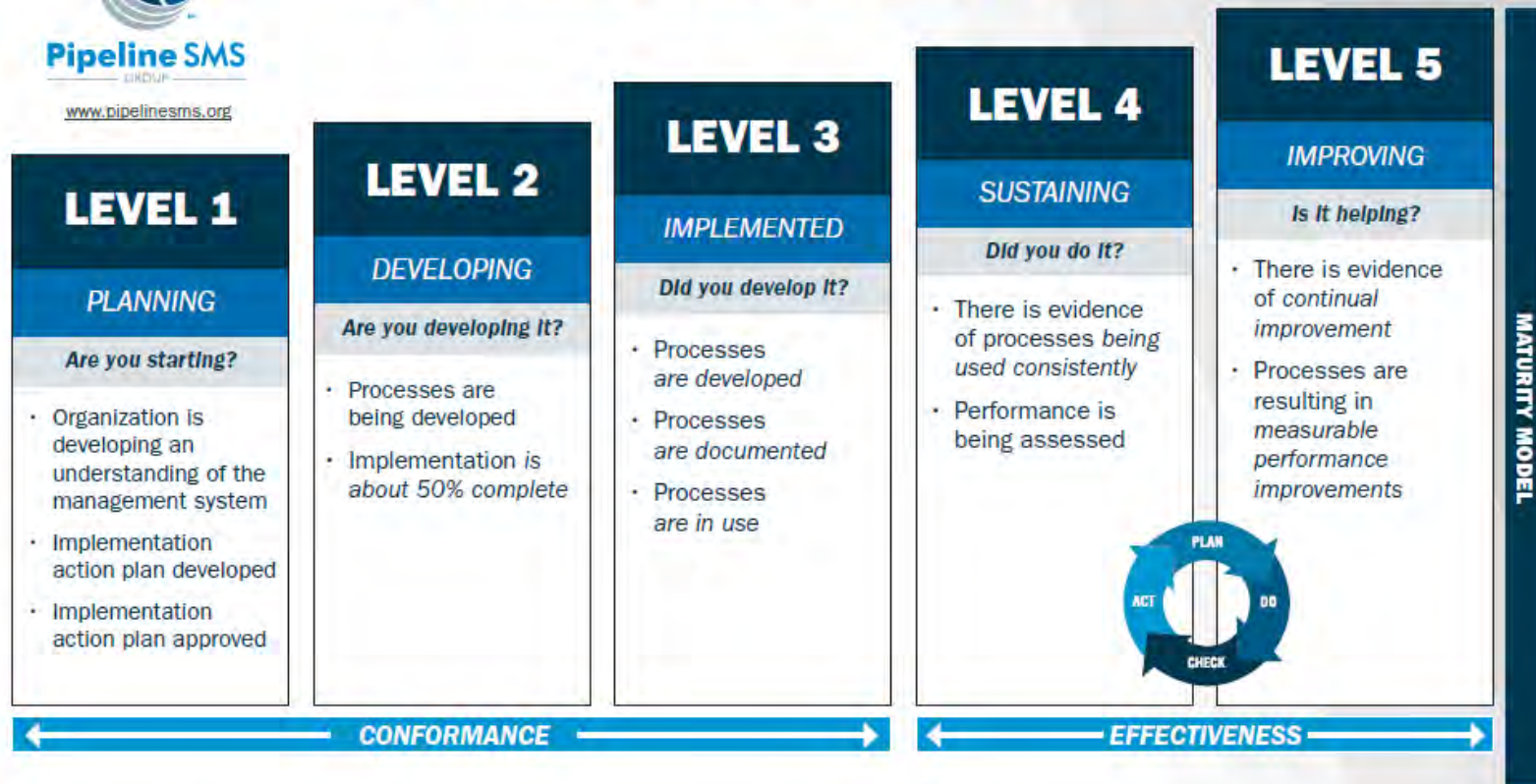← *EFFECTIVENESS* →

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EFFECTIVENESS

Performance metrics complete the picture

- Develop a suite of 6-10 performance metrics
- Typically lagging metrics
- Choose from readily available metrics where possible
- Choose metrics meaningful to industry, regulators and the public

Pipeline SMS Maturity Model and Tools

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www.pipelinesms.org

MATURITY MODEL

LEVEL 1
PLANNING

Are you starting?

- Organization is developing an understanding of the management system
- Implementation action plan developed
- Implementation action plan approved

LEVEL 2
DEVELOPING

Are you developing it?

- Processes are being developed
- Implementation *is about 50% complete*

LEVEL 3
IMPLEMENTED

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PLAN · DO · CHECK · ACT

← **CONFORMANCE** →   ← **EFFECTIVENESS** →

TOOLS

- **PLANNING TOOL**
- **IMPLEMENTATION TOOL**
- **CONFORMANCE TOOL**
- **VOLUNTARY API THIRD-PARTY AUDIT PROGRAM**
- **EFFECTIVENESS TOOL**
- **API RP 1173 PEER-TO-PEER SHARING PRACTICES**

See back page for a simple explanation of tools

Pipeline SMS Tool Roadmap

START

GETTING STARTED

- Understand RP 1173
- Obtain management buy in
- Commit to RP 1173 implementation
  - Liquid operators
    see www.pipelinesms.org
  - Gas operators see
    - AGA members:
      Commitment to Enhancing Safety
    - INGAA members:
      Commitment to Pipeline Safety

PLANNING TOOL

- Summary of API RP 1173 requirements (71 questions)
- A gap analysis tool to compare an operator's existing system to the requirements of API RP 1173
- Documents action plans and responsibilities to close gaps
- Helps operators achieve Level 1 maturity (develop a plan, and begin work)

IMPLEMENTATION TOOL

- Summary of API RP 1173 requirements (71 questions)
- Evaluates and summarizes the operator's implementation status by question, element and overall
- Helps operators track development of programs to implement the RP

CONFORMANCE TOOL

- Comprehensive API RP 1173 requirements (all 234 *shall* statements from the RP)
- Evaluates and summarizes the Operator's conformance to API RP 1173 by *shall* statement, element and overall
- Helps operators ensure conformance with all *shall* statements in the RP
- Tool spans Levels 2-4 as conformance requires processes are in place and effective

VOLUNTARY API THIRD-PARTY AUDIT PROGRAM

- API-administered audit program for conformance to API RP 1173
- Yields an objective evaluation and score
- Appropriate at Level 3 maturity or beyond as effectiveness will be considered

EFFECTIVENESS TOOL

- Helps operators evaluate the effectiveness of their programs in achieving the objectives of the RP (Is it helping?)
- Appropriate at Level 3 maturity or beyond as Effectiveness can be measured once the Pipeline SMS is in place

PLAN — **DO** — **CHECK** — **ACT**

PEER-TO-PEER SHARING CAN BE CONDUCTED AT ANYTIME

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For more information on Pipeline SMS tools or questions regarding Pipeline SMS, please see www.pipelinesms.org or contact API at PipelineSMS@api.org

PLANNING TOOL

- Summary of API RP 1173 requirements (71 questions)

- A gap analysis tool to compare an operator's existing system to the requirements of API RP 1173

- Documents action plans and responsibilities to close gaps

- Helps operators achieve Level 1 maturity (develop a plan, and begin work)

API RP 1173 Sub-element	Example Evidence	Actual Evidence (list the relevant documents / procedures)	Gap (Y/N)	Description of Gap or Gaps Use additional rows for each Potential	Description of Potential Action(s) to Close Gaps. Use additional rows for each Potential	Require d (R),	Priority (H,M,L)	Owner	Due Date
5.2	List or statement of the PSMS goals. List of measureable objectives for the PSMS. Corporate communications. Corporate HSE Manual.	*EXAMPLE* *Annual letter to employees from the organization's president restating the HSE goals of no accidents, injuries or releases to the environment. Sustainability Report contained specific safety initiatives.*	N						

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IMPLEMENTATION TOOL

- Summary of API RP 1173 requirements (71 questions)

- Evaluates and summarizes the operator's implementation status by question, element and overall

- Helps operators track development of programs to implement the RP

API RP 1173 Sub-	API RP 1173 Requirement	Level 0 (Not Started)	Level 1 (Planning)	Level 2 (Developing)	Level 3 (Implemented)	Level 4 (Sustaining)	Level Assignment (0 - 4)
5.2	Has top management established and documented the goals and objectives for the PSMS?				• Top management has identified and documented its goals and objectives for the PSMS.	• The PSMS objectives are measureable and consistent with overall safety policies and objectives. • There is evidence that top management is measuring the performance of the organization against the PSMS goals and objectives. • Interviews with employees demonstrate that the PSMS goals and objectives are known/understood or the employees know how to find them.	0

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CONFORMANCE TOOL

- Comprehensive API RP 1173 requirements (all 234 *shall* statements from the RP)

- Evaluates and summarizes the Operator's conformance to API RP 1173 by *shall* statement, element and overall

- Tool spans Levels 2-4 as conformance requires processes are in place and effective

RP 1173 Section	RP 1173 Citation	API RP 1173 Requirement	Level 3 (Implemented)	Level 4 (Sustaining)	Level Assignment (0 – 4)
5	5.1	Has the pipeline operator established and maintained a PSMS and built a shared understanding of safety culture?	• The operator is able to produce evidence that a PSMS has been established and maintained. • Employees within the organization understand the importance of safety and the implementation of safe practices in their tasks.	• There is documentation to demonstrate the PSMS procedures and processes are being followed. • Personnel affected by the PSMS can demonstrate that they understand the PSMS safety requirements and that safe practices are incorporated into their day-to-day activities.	3

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THIRD PARTY AUDIT AND EFFECTIVENESS TOOL

- One tool to use for Audit and Effectiveness

- Tool can be self administered or assessed by a third party

- Tool has been developed and is in testing

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MATURITY MODEL THOUGHTS

- It's a journey, not a destination
  - It's OK to move back and forth
  - Helps ensure you know where you are
- Improving overall performance
- Where can I get a copy?
  - www.pipelinesms.org
    - Hover over "TOOLS"
    - Click on "Maturity Model"

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Upcoming Pipeline SMS Items

- Support both liquids and gas industries
- Webinar series
  - Tools (February 27, 2018)
  - API voluntary third-party audit (April 19, 2018)
- 2017 Annual Report
  - Available by April 24, 2018
- Workshop
  - Tools how-to session (June 2018 • Houston, TX)

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WE WANT TO HEAR FROM YOU