Finding your True North

Achieving Business Excellence with your People, Processes & Solutions

IpX - Institute for Process Excellence

True North for Enterprise Excellence

WHO WE ARE

Institute for Process Excellence

IpX provides the True North for your journey toward enterprise excellence.

We are best known for our founding CMII & IPE model. We have adapted and grown as technology has advanced into the industry standard CM2 certification, industry leading workforce development, and business transformation services

IpX
Institute for Process Excellence

WHO AM I

I am a Product of my Mentors
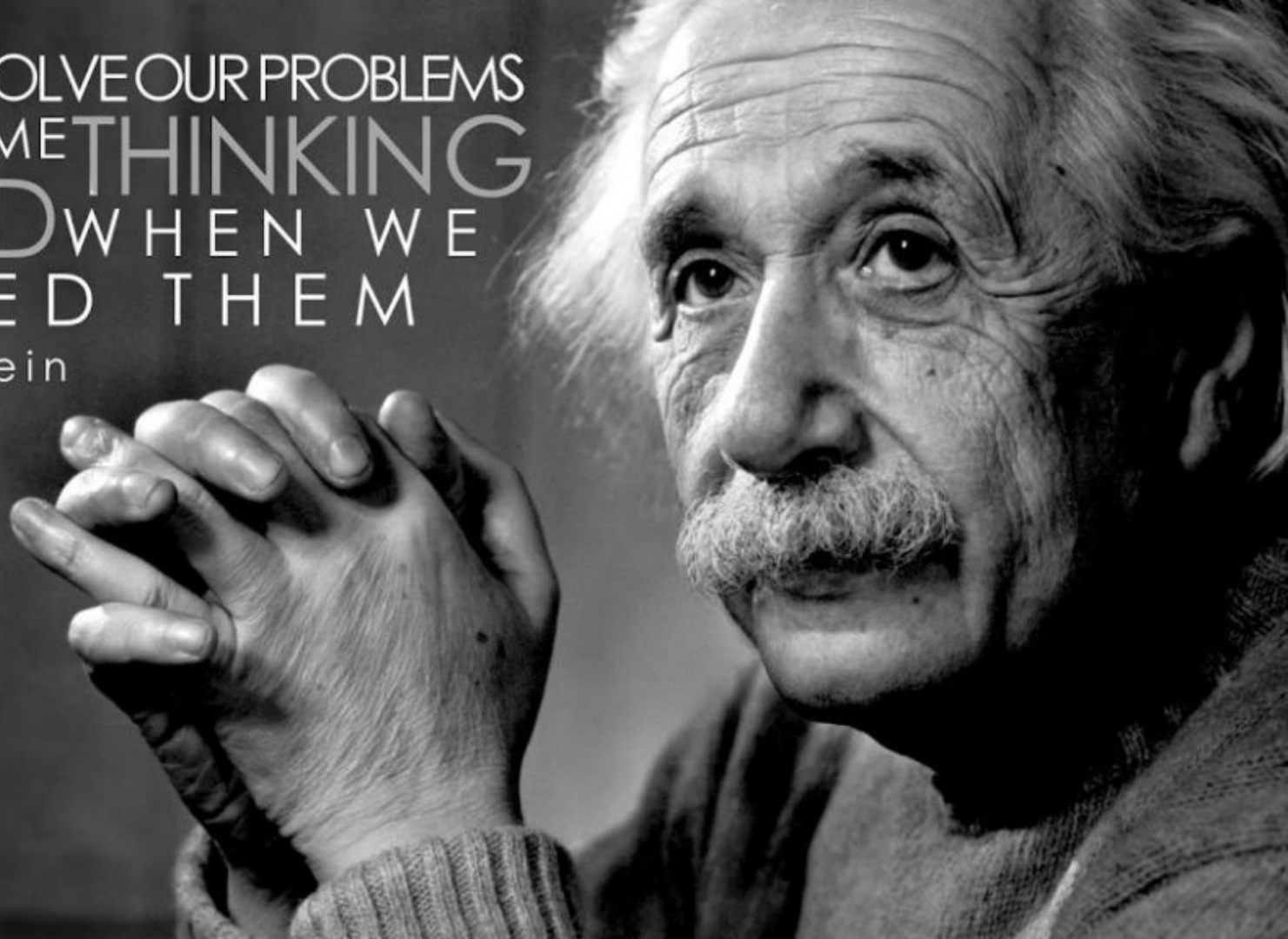
A little update to an old Henry Ford quote.

"… A **leader** sees so much more to be done than has been done, that they are always pressing forward…"

"Thinking always ahead, thinking always of trying to do more, brings a state of mind in which nothing is impossible. The moment one gets into the 'expert' state of mind a great number of things become impossible."

Carolyn Conaway, a powerhouse female, graduated high-school in 1958, self-taught financial analyst, and extraordinary human. She was by far my greatest mentor. I owe any success to her.

Great mentors are hard to find and even harder to become. I'm still striving to be better at everything.

WE CANNOT SOLVE OUR PROBLEMS
WITH THE SAME THINKING
WE USED WHEN WE
CREATED THEM
-Albert Einstein

Excellence

People.   Processes.   Tools.   Data.

True North Business Model   *Robust Digital Platform*

True North
Empowering your People

There's growing significance placed on creating enterprise ecosystems where a variety of different voices are encouraged and heard.

These voices come from people who may or may not be of the same gender, race, or ethnicity.

True North - Empowering your People

Creating and sustaining a diverse, inclusive, and productive workforce rests with all employees at all levels within the organization.

The enterprise of tomorrow must introduce methods for:

o globalization of diversity and inclusion initiatives

o employee resource networks

o community outreach strategies

The inclusive culture must be embedded throughout the enterprise ecosystem.

True North - Empowering your People

Diversity and inclusion should not be treated as a 'one-off' initiative.

Promoting diversity and inclusion in the workplace is a continual process that should be maintained and nurtured to be effective.

Today, it is not only about having diversity within a company but leveraging that diversity to produce better products and services.

Managing diversity and inclusion in the global workplace has been, in many ways, an unmapped territory.

True North - Empowering your People

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Modern tools, approaches, and a phased roadmap are required for measuring employee engagement, satisfaction, and program success.

We must realize the importance of a workforce powered with the voices of people from different backgrounds, personalities and thinking styles across the enterprise.

We must create an environment where all people are encouraged to draw upon their unique experiences, perspectives and backgrounds to ensure sustainable long-term success of the organization.

Effective Training and Development Platforms	**Value Added Mentorship Programs**
Recognition and Rewards Systems	**Fair and Equal Compensation Structures**
Work-life Harmonization Techniques	**Communication and Feedback Analytics**
Onboarding and Retention Processes	**Multicultural Talent Management**

RISE
Retention through Inclusion, Service and Equality®

True North - Empowering your Processes

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Core business processes and their enabling systems represent the major organizational activities and functions used to perform work and conduct business.

These instances of conflict or redundancy will have a negative impact on the operational efficiency of an enterprise.

Marketing & Sales

Logistics & Maintenance

Program & Project

Human Resources

Operations

Environmental

Safety & Security

Quality

Is this you?
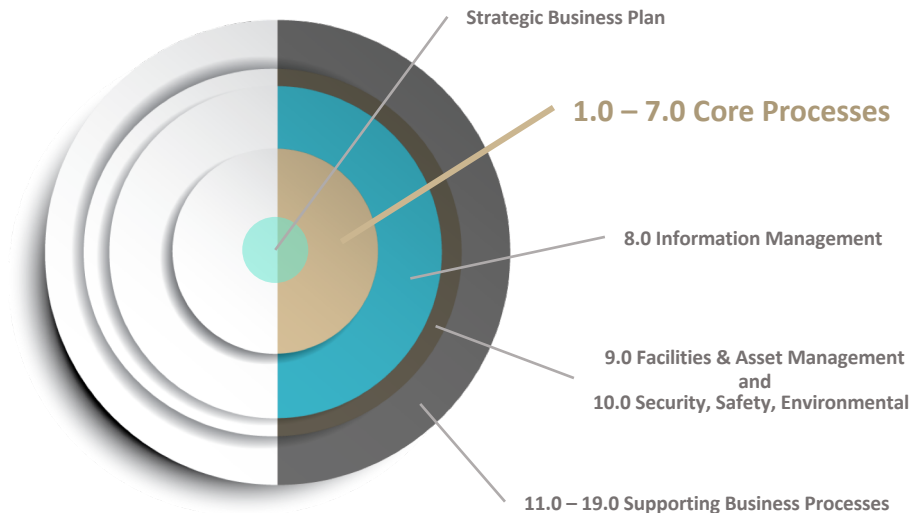
True North - Empowering your Processes

CM2
Enterprise Infrastructure

When companies realize the value of elevating configuration management out from the shadow of engineering, they begin to see the real benefit of connected systems that are promised by technology but never achieved by technology alone.

Scott Wertel, CM2-P
Configuration Manager for Nammo Talley

Strategic Business Plan

1.0 – 7.0 Core Processes

8.0 Information Management

9.0 Facilities & Asset Management
and
10.0 Security, Safety, Environmental

11.0 – 19.0 Supporting Business Processes

True North - Empowering your Processes

o Students attending the CM2/IPE courses estimate that they spend 40 to 60% of their resources on intervention.

o There is a huge difference in intervention resource costs of 40 to 60% versus cost of quality at 15 to 25%.

o Factors involving intervention are much broader than those involving only product quality and product defects.

Intervention resources are spent to rescue schedule and quality
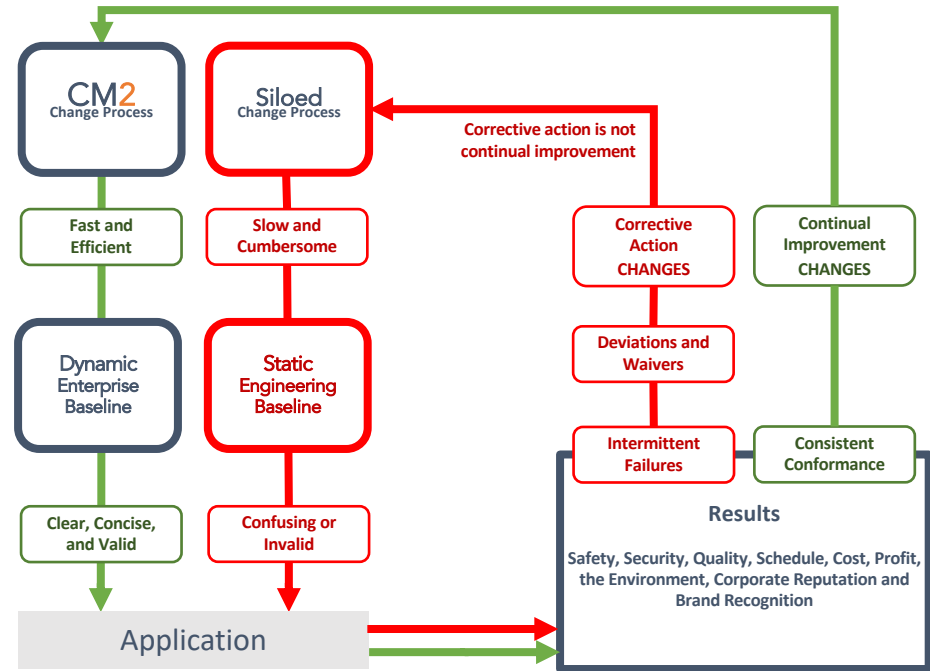
True North - Empowering your Processes

IpX
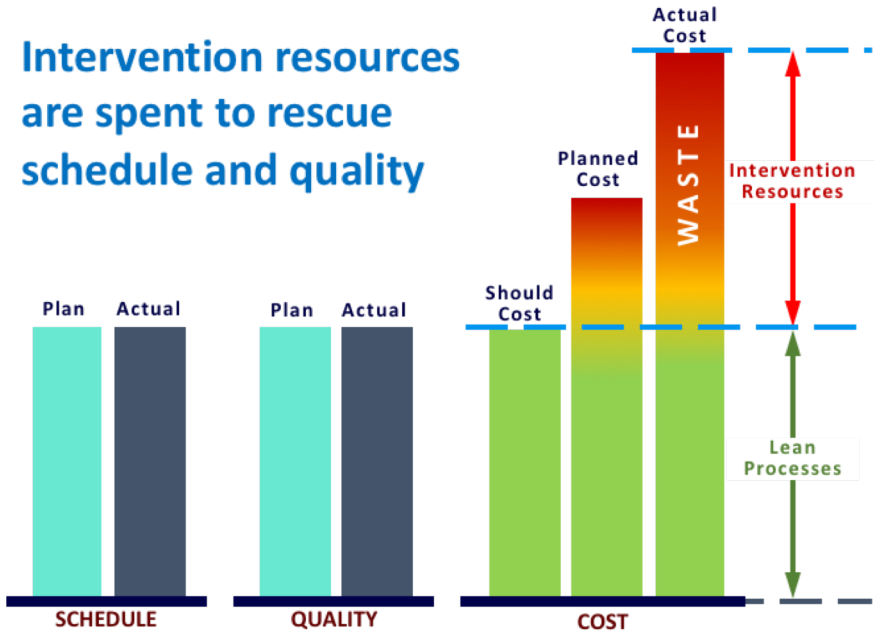
With CM2, intervention costs include the resources spent to rescue not only quality but also schedule and other requirements shown below.

Rescuing schedule involves expensive expediting and overtime costs.

To draw a parallel between CM2 and the Cost of Quality model, the cost of good quality is represented by the green path.

The cost of poor quality is represented by the red path.

The CM2 Model is the enabler for escaping the corrective action mode.
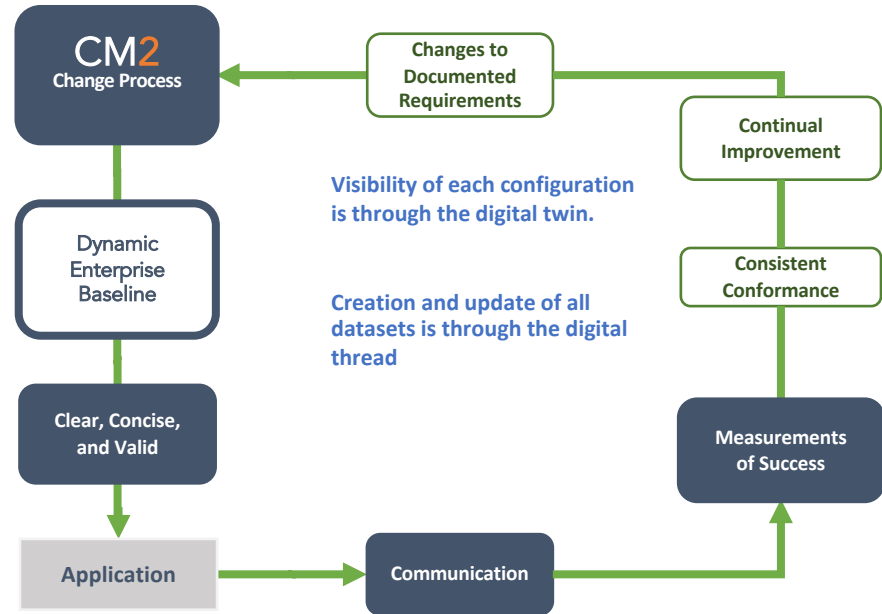

CM2 Change Process

Siloed Change Process

Corrective action is not continual improvement

Fast and Efficient

Slow and Cumbersome

Corrective Action CHANGES

Continual Improvement CHANGES

Dynamic Enterprise Baseline

Static Engineering Baseline

Deviations and Waivers

Clear, Concise, and Valid

Confusing or Invalid

Intermittent Failures

Consistent Conformance

Application

Results

Safety, Security, Quality, Schedule, Cost, Profit, the Environment, Corporate Reputation and Brand Recognition

True North - Empowering your Processes

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There are four critical elements required to achieve **consistent conformance** and continual improvement.

1) Ability to accommodate change

2) Keeping requirements clear, concise and valid

3) Communicating requirements to users promptly and precisely

4) Ability to measure conformance to requirements

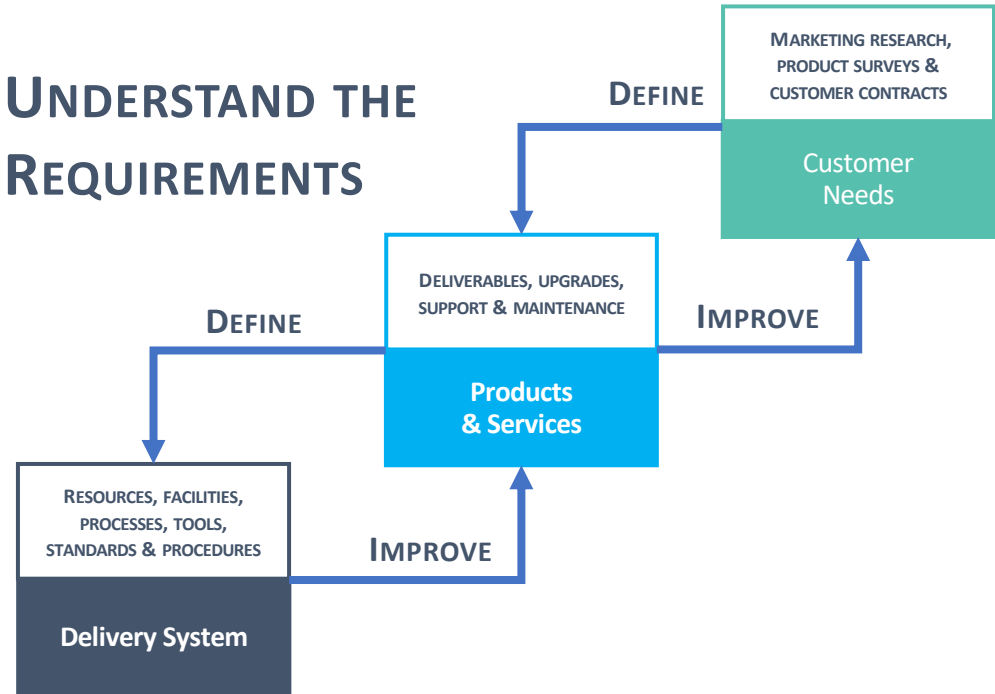These elements are imperative for maintaining the validity of the digital thread and digital twin.

CM2
Change Process

Changes to Documented Requirements

Continual Improvement

Visibility of each configuration is through the digital twin.

Dynamic Enterprise Baseline

Consistent Conformance

Creation and update of all datasets is through the digital thread

Clear, Concise, and Valid

Measurements of Success

Application

Communication

True North - Empowering your Processes

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Everything an enterprise does originates from a customer demand or a market driven need.

UNDERSTAND THE REQUIREMENTS

DEFINE

MARKETING RESEARCH, PRODUCT SURVEYS & CUSTOMER CONTRACTS
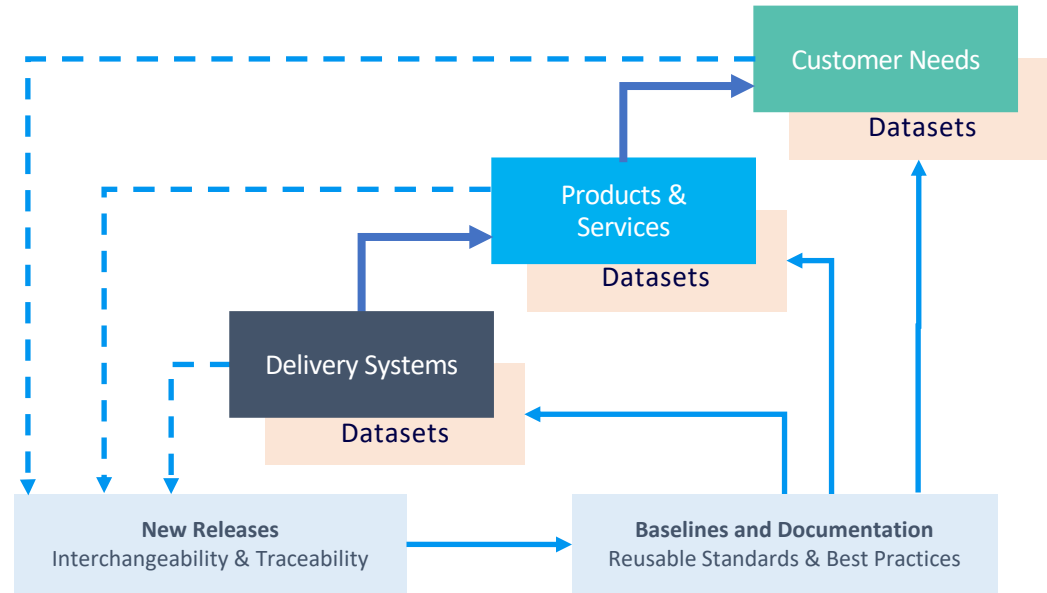
Customer Needs

DEFINE

DELIVERABLES, UPGRADES, SUPPORT & MAINTENANCE

IMPROVE

Products & Services

RESOURCES, FACILITIES, PROCESSES, TOOLS, STANDARDS & PROCEDURES

IMPROVE

Delivery System

True North - Empowering your Processes

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"Zero Defects", "6 Sigma", "Lean Enterprise", "Do it Right the First Time" and similar initiatives, all have something in common.

The desire to achieve consistent conformance while eliminating waste and reducing intervention resource expenditure.

Organizations struggle to achieve these objectives when they are continually challenged by the quality of their released information.

Consistent conformance becomes a byproduct, and corrective action is avoided, when released requirements are clear, concise and valid.

Customer Needs

Datasets

Products & Services

Datasets

Delivery Systems

Datasets

New Releases
Interchangeability & Traceability

Baselines and Documentation
Reusable Standards & Best Practices

Dash = feedback | Solid = enables | Mini blue = information flow

True North - Empowering your Digital Platform

The foundational element is an autonomous and adaptive enterprise of people, processes, and systems that operate cohesively within an integrated business model.
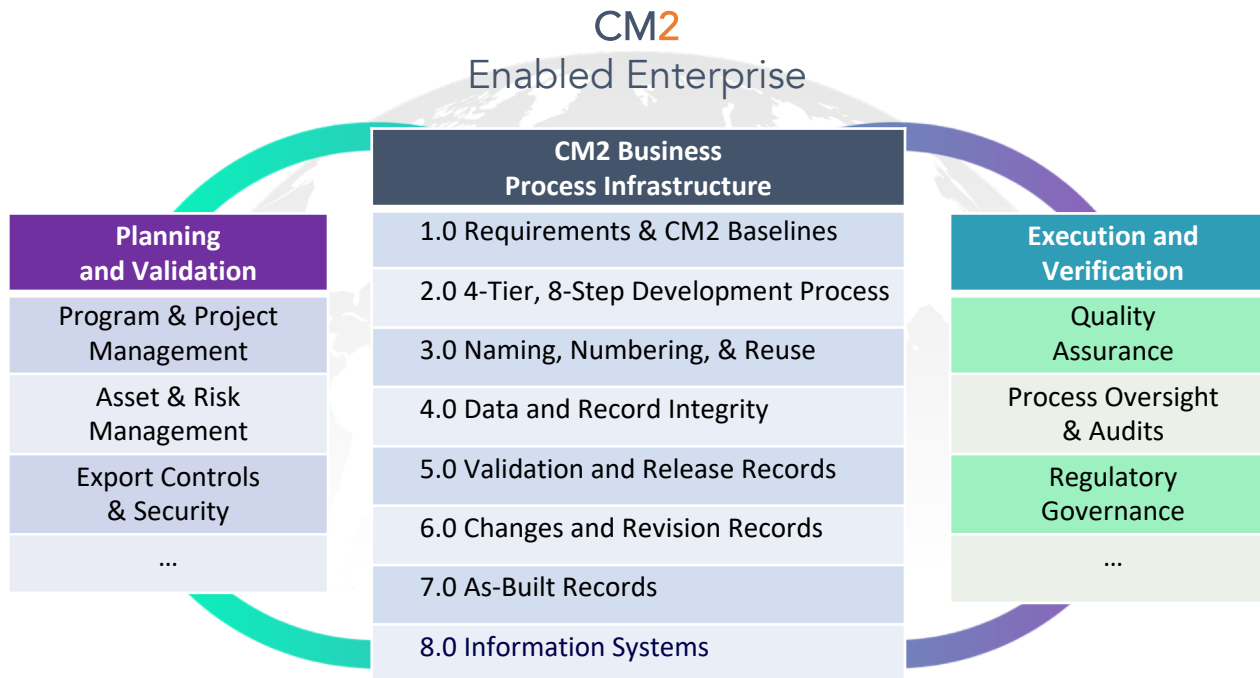
Your enterprise will have the ability to reach a nearly limitless customer base, produce amazing levels of service, and benefit from integrated supply lines.

A future where your organization offers the largest portfolio, fastest delivery time, and greatest customer experience.

True North - Empowering your Digital Platform

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The key to a CM2 enabled enterprise is the IpX True North CM2 business process infrastructure empowered by robust digital platforms.

CM2
Enabled Enterprise

Planning and Validation

- Program & Project Management
- Asset & Risk Management
- Export Controls & Security
- …

CM2 Business Process Infrastructure

- 1.0 Requirements & CM2 Baselines
- 2.0 4-Tier, 8-Step Development Process
- 3.0 Naming, Numbering, & Reuse
- 4.0 Data and Record Integrity
- 5.0 Validation and Release Records
- 6.0 Changes and Revision Records
- 7.0 As-Built Records
- 8.0 Information Systems

Execution and Verification

- Quality Assurance
- Process Oversight & Audits
- Regulatory Governance
- …

True North - Empowering your Digital Platform

Efficient and effective business processes supported by modern digital platforms that allow organizations to move across industry will eliminate the legacy silo centric business models.

Process and device will be inseparable; physical things become part of the enterprise process.

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True North - Empowering your Digital Platform

Based on the CM2 enterprise operating model and modern digital platforms, there will no longer be a difference between information and material because products will be dynamically linked to their application and supporting information.

"Implementation of the CM2 Baseline and Closed-Loop process is the foundation for the control and delivery of product information in a consistent manner that will allow for the incorporation of Industry 4.0 principles across all business groups."

– Greg Russ, Executive Director for Cummins

Business 4.0
Enabled Enterprise

PLAN   DO

Requirements   **CM2** Agile Core   Application

ACT   CHECK

True North - Empowering your Digital Platform

 IpX
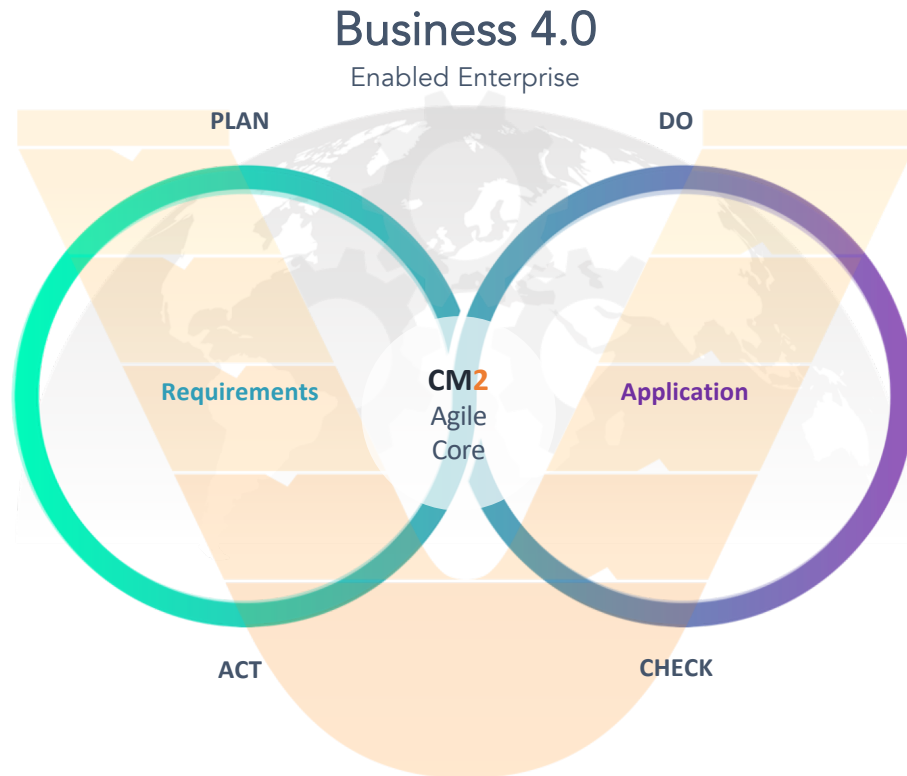
Functional competencies must come together in order to recognize the full potential and opportunity of Business 4.0.

- ✓ **Big Data –** Rise in data volumes, computational power, and connectivity.

- ✓ **Tangible Analytics –** Integrated and functional analytics, knowledge management, and business-intelligence capabilities.

- ✓ **AI & AR –** Rapid advancement in human to machine connectivity such as augmented-reality systems.

- ✓ **Digital Capability –** Integration of digital thread and twin and the influence on advanced robotics.

IPE/CM2 Global Congress

INSPIRE. CONNECT. MENTOR. SUPPORT.

At the 2015 IpX annual symposium, leaders from Aviation, Automotive, Healthcare, Energy, Consumer Products and Technology came together to create a cross functional industry forum to benchmark industry best practices and provide a resource to the community.

"Successful implementation of the IpX CM2 Baseline and Closed-Loop change process is prerequisite to achieve the end-to-end configuration traceability driven by the needs of the model based design and the digitalization of the enterprise"

– Max Gravel, CM2-P

Community

People. Processes. Tools. Data.

True North Business Model   *Robust Digital Platform*

Leading the Transformation Journey

APPLICATION

TRANSITION

PREPARATION

CM2-Certifications & Services

Aptiv/Delphi – 1225

Boeing – 1000

Hewlett Packard – 391

Bombardier – 380

Baxter – 380

Apple – 151

Cummins – 150

True North – It Starts with You

A significant transformation towards enterprise excellence allows for an increase in employee engagement resulting in greater collaboration, accountability and ownership.

An appropriate realignment of organizational systems, structures, processes and technology to support the transforming culture philosophy is paramount.

Increasing workforce capability and opportunities will allow the organization to attract and retain top talent.

True North
It Depends on You

Your enterprise will have the ability to reach a nearly limitless customer base, produce amazing levels of service, and benefit from integrated supply lines.

A future where your organization offers the largest portfolio, fastest delivery time, and greatest customer experience.

AGCO | Airbus | Amazon |Apple | Aptiv | ASML | Baxter

Boeing | Bombardier | Bose | Boston Scientific

Caterpillar | Cummins | Delphi | Delta Faucet | Embraer

FNSS |Freightliner | General Electric | General Motors

Go-Go | Gulfstream | IBM | Lear | Lockheed Martin | Motorola

| NASA

NATO | Navy | Nike | Nokia |Northrop Grumman | Oracle

Pratt & Whitney| Purdue | Raytheon

Rolls-Royce | SpaceX | St. Jude Medical | Sub-Zero/Wolf

Zimmer |

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