A Unified Platform for Industry 4.0
Advanced Analytics
Intuitive Portals
Highly Customizable

fathom Precocity™
YOUR CHALLENGE

You face a clear mandate— you must rapidly complete a full digital transformation of your operational environment, your tool sets, and your day-to-day processes.

To do so, you must overcome multiple challenges. Your operations generate a massive amount of data— and are due to generate even more as you deploy more sensors and IoT devices. Your organization is highly complex with many inter-dependent moving pieces. And you still rely on multiple legacy processes.

To overcome these challenges, and to complete your digital transformation, you are stitching together multiple individual, siloed technology solutions that do not communicate or collaborate well with each other.

In this working environment, it can be challenging to simply know what to do next when you sit down at your desk in the morning— let alone what large-scale steps to take to complete your organization’s total transformation.

OUR SOLUTION: FATHOM PRECOCITY

fathom Precocity gives you the missing piece to your industrial digital transformation.

fathom Precocity is a single, unified industrial IoT platform that:

- Collects all of your operational data into a single hub
- Provides at-a-glance insight into your real-time performance metrics
- Applies advanced analytics to draw answers from your information
- Integrates multiple systems (including legacy platforms)
- Combines all of your day-to-day activities into a single portal
- Centralizes your team under a shared collaboration suite
- Reduces your organizational complexity into clear actions and KPIs
- Allows a faster, simpler, more complete digital transformation
WHAT FATHOM PRECOCITY PROVIDES

fathom Precocity gives you a scalable, flexible, and extendable industrial IoT platform. Our single platform will adapt to your unique context to drive better decisions, faster execution, and greater insight into your environment. It gives you:

**CONNECTION:** Provides real-time data collection, visibility, and actionable answers from all of your devices, equipment, sensors, objects, and people.

**AUTOMATION:** Provides hands-free processes, procedures, and governances for your unique Operational Technology and Information Technology stacks.

**PERSONALIZATION:** Provides highly configurable and customizable analytics, portals, and workflows through our AI, ML, and Big Data engines.

WHO FATHOM PRECOCITY IS FOR

fathom Precocity adapts itself to meet the unique needs of any industrial vertical. So far, we have leveraged Precocity to develop bespoke solutions for six verticals:
OUR PLATFORM, YOUR RESULTS

We adapt Precocity to the specific strategic and day-to-day needs of each of our clients. As such, the exact results we drive will vary depending on our clients’ different priorities. However, every client who deploys Precocity typically generates:

• Improved Asset Performance
• New Revenue Streams
• Reduced Costs
• Greater Operational Efficiency
• Increased Safety and Risk Mitigation
• A Fully Executed Digital Strategy

HOW IT WORKS: OUR CORE FRAMEWORK

We simplify, accelerate, and complete digital transformation by following a powerful three step framework.

INSIGHT
We collect all of your data into a single central hub. We give you accurate, end-to-end, real-time visibility into every scrap of information generated by your operational and supply chains. We then package everything into a highly-personalized portal that gives you the insights you need at-a-glance.

ANSWERS
We give you data-driven decisions. We apply advanced algorithms, machine learning applications, and cutting-edge A.I. to pull value from your complex operational metrics— all in real-time. We then give you simple answers that will diagnose issues, predict outcomes, and prescribe the right path forward.

EMPOWERMENT
We accelerate your execution. We automate, streamline, and govern every critical action you must take to improve your KPIs. Every morning, when you open your portal, you will have everything you need to drive your performance— every insight, every answer, and every application, all from a single screen.
**FATHOM PRECOCITY’S 6 KEY COMPONENTS**

We designed fathom Precocity as a horizontal, modular platform that can be adapted to solve every major challenge presented by Industry 4.0. We built our Precocity on top of six core components that meet the most fundamental digital transformation requirements, while still allowing a high degree of flexibility and customizability.

1. **OT LAYER (AUTOMATION AND CONTROL)**
   Collects and presents complex operational data in an action-oriented, visual portal.

2. **ASSET MANAGEMENT AND TRACKING**
   Monitors and reports on asset performance, location, and real-time operational data.

3. **WORKFLOW ENGINE**
   Gives non-technical users the tools to create their own custom workflows.

4. **EDGE TO CLOUD COMPUTING**
   Deploys distributed computing to optimize speed, performance, and resource usage.

5. **DATA SERVICES**
   Stores and processes data in a robust, scalable manner to ensure 100% uptime.

6. **ANALYTICS**
   Applies advanced analytics and brings you to operational artificial intelligence ASAP.
KEY COMPONENT 1: OT LAYER (AUTOMATION AND CONTROL)

fathom Precocity gives you intuitive tools that make it simple to manage your complex environment. That work begins with our OT Layer component.

You will gain the ability to collect huge volumes of complex, high-velocity operational data from your OT stack, your IT stack, and your IoT sensors. You will then build vibrant, personalized, and sophisticated visualizations of your data that are accessible through your customizable portal. Every time you sit down to your portal, you will gain at-a-glance insight into your assets and operational environment, and know the exact right actions to take to improve their performance.

Our OT Layer gives you:

CONNECTIVITY
Pull data from multiple sources and devices, and view it from a single central portal.

SECURITY
Keep your data safe with layers of encryption and privacy identity management.

ALARMS
Create custom alerts that detect crises before they happen, and warn you in advance.

VISUALIZATIONS
Explore & analyze your data through visualizations with granular access rights.

AN HMI BUILDER
Design, view, monitor, and customize your visualizations of assets and environments.

HISTORIAN
Store large amounts of data and rapidly retrieve them at a moment’s notice.

INTEGRATION
 Seamlessly share data with systems and protocols that include, but are not limited to:
KEY COMPONENT 2: ASSET MANAGEMENT & TRACKING

INTRODUCTORY PARAGRAPH

fathom Precocity gives you the ability to monitor the performance, location, and condition of each of your assets— in real time.

Our Asset Management & Tracking gives you total visibility into each of your assets, and provides a suite of new capabilities. You will monitor the reliability and integrity of your assets, deploy advanced predictive maintenance algorithms to repair assets before they break, and develop a data-driven asset management strategy based around a few critical actions:

• Evaluating the health of each of your assets.
• Predicting how long each of your assets will perform safely.
• Mitigating any risk associated with each of your assets.

KEY COMPONENT 3: WORKFLOW ENGINE

fathom Precocity's Workflow Engine lets you create apps and automated workflows that will execute many of your existing processes from start to finish in just one click.

We designed this component to be simple, intuitive, and easy-to-use— even by non-technical team members. With this component, you and your team members will be able to customize your fathom Precocity functionality on-the-fly, and create powerful automated processes that will reduce the time and effort to complete many of your day-to-day tasks.

NO CODING
Users can create their own unique apps and workflows (even non-technical users).

DRAG-AND-DROP
Offers a simple, intuitive, and easy-to-use interface that anyone can master.

REPORTING & ANALYTICS
No more need for third-party analytics tools— build and run your own custom reports.

CUSTOM WORKFLOWS
Create, edit, and launch your 100% personalized workflows in just one click.

POWERFUL INTEGRATIONS
Integrate with our existing tool set to streamline and automate your day-to-day tasks.

NO SHRINK DEVELOPMENT TIME
Instantly reduce your app and workflow development time from months to hours.
KEY COMPONENT 4: EDGE-TO-CLOUD COMPUTING

Industrial enterprises have expanded their footprint. They now deploy countless intelligent devices and sensors, spread across their local—and often global—operations.

fathom Precocity utilizes edge computing to collect, process, manage, and share all of this widespread data in the most efficient manner possible. Our platform dynamically deploys computational resources to produce optimal speed, performance, and efficiency for every one of your distributed devices. Our edge computing component also enforces governance to ensure data security and privacy, no matter how wide your network spans.
KEY COMPONENT 5: DATA SERVICES

fathom Precocity stores and processes data in a robust, scalable manner to give you 100% uptime.

We built our Data Services component on robust architecture, and embedded a host of advanced techniques, to ensure all of your data will remain safe, uncorrupted, and available at all times (no matter where in the world you may be when you pull it up).

fathom Precocity will automatically scale your computing resources to meet your ever-changing needs—without any human intervention. Our platform will make sure your enterprise always utilizes the exact amount of resources it requires, and never experiences either downtime or unnecessary expenses.

Techniques we built into our Data Services component include:

**In Memory Database**
- Transform the data, and filter, aggregate depending on the requirements of the consuming applications.
- A lightweight in-memory database platform, Precocity achieves throughput in the millions of operations per second with sub-millisecond latencies, enabled by its multiple data
- Processing large volumes of data with minimal latency.
- Handle data in many different formats, retaining source identity if needed and transforming or normalizing in real-time.

**Knowledge Graph**
Knowledge Graph is limit complexity and organize information into data and knowledge.

**Distributed Data Management**
Historian is data storage for time series data, alarm history and documents.
KEY COMPONENT 6: ANALYTICS

fathom Precocity can move an organization from low digital maturity to operational artificial intelligence and other advanced analytics in just seven simple steps.

**STEP 1: DATA COLLECTION**
We will collaborate to articulate your needs, and to define your data requirements. We will then collect, connect, and combine your data from every required source.

**STEP 2: DATA PREPARATION**
We will ensure all of your data is accurate and usable. We will perform cleaning, pre-processing, normalization, standardization, and scaling on all required data.

**STEP 3: CHOOSING A MODEL**
We will work with you to select your AI model(s). Precocity can perform Supervised, Unsupervised, and Reinforcement Learning, as well as Automated Machine Learning.

**STEP 4: TRAINING**
We will train your AI models with your data to deliver the best long-term results. We will utilize artificial neural networks and multi-intelligent agent systems.

**STEP 5: EVALUATION**
We will regularly evaluate your AI models’ results, to continuously improve their performance, via proprietary model libraries, run trackers, and pull requests.

**STEP 6: PARAMETERS TUNING**
We will also drive continuous improvement via constantly refining the parameters of your AI models’ algorithms, through multiple tools and techniques.

**STEP 7: PREDICTION**
We will rapidly get your models ready for on-premise deployment. The result: you gain a scalable, flexible, one-click AI-driven operational environment.
PRECOCITY’S TECHNICAL ARCHITECTURE
TAKE THE NEXT STEP

SCHEDULE A CONSULTATION

Meet with one of our experts for a no-obligation discussion, where we will:

• Review your existing systems and processes.
• Evaluate what’s working and what could improve.
• Discuss how Fathom could drive better outcomes.

BOOK A DEMO

Let us walk you through a live demonstration of our Precocity platform, where we will:

• Show you the platform’s look, feel, and usability.
• Preview our most relevant and unique functions.
• Brainstorm ways to customize Precocity to meet your needs.

PARTNER WITH FATHOM

Start a conversation to see if there’s a good mutual fit between you and Fathom, including:

• Learn more about funding our next round of growth.
• Join our ecosystem of partners, allies, and gurus.
• Apply to work on a part-time, full-time, or contract basis.

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ABOUT FATHOM

Fathom Solutions will accelerate, simplify, and enhance your digital transformation. We will unify your scattered systems, leverage advanced analytics to your organizational data, and drive high-impact action. The result: you will improve your performance, cascade value to your stakeholders, and realize the full promise of your digital strategy. To schedule your initial consultation, reach out to contact@fathoms.io
Improve Production.
Increase Uptime.
Lower Risk.