Brochure

Digital Twin Platform

Monitoring / Control / Management

GENIUS

PIPELINE 4.0

Pipeline Management

Leak Detection/ Location
PIG / Batch tracking
Monitoring & Data Analysis

Executive summary:

GENIUS platform is a powerful tool for businesses looking to optimize their operations, reduce costs, and increase efficiency. By providing real-time insights, predictive maintenance capabilities, and support for better team collaboration and financial decision-making, GENIUS is the future of streamlined business operations. Whether you're a small startup or a large corporation, GENIUS can help you stay ahead of the competition and achieve your goals.

GENIUS Platform: The Future of Streamlined Business Operations

In today's fast-paced business landscape, efficiency and agility are more important than ever. Companies need to be able to adapt quickly to changing market conditions and stay ahead of the competition. That's where the GENIUS platform comes in.

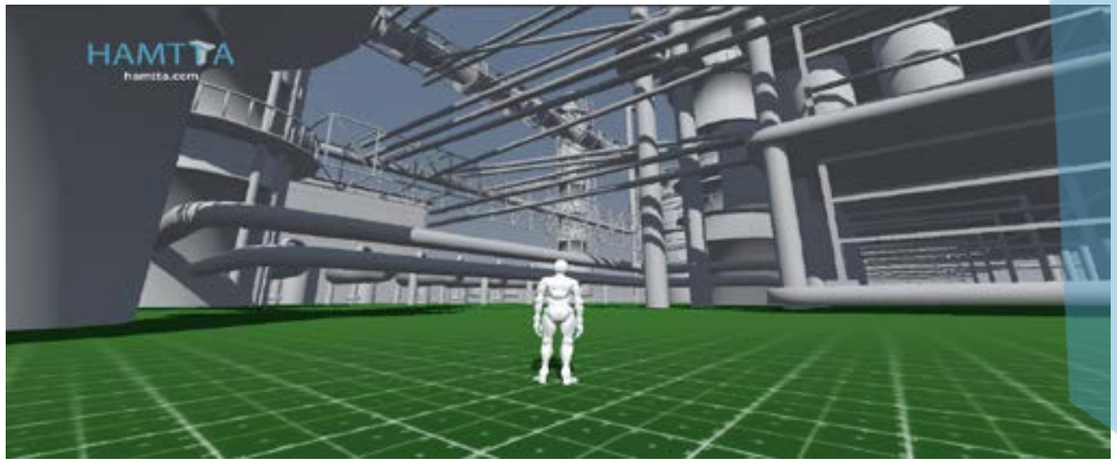
GENIUS is a powerful platform that provides a contextual model of a process or organization's operations, allowing for integration, accelerated risk assessment, and production time. By leveraging digital twins, GENIUS supports five pillars of human knowledge and reasoning: conceptualization, comparison, control, monitoring, and management.

At its core, GENIUS is all about improving efficiency and reducing costs. By providing real-time insights and predictive maintenance capabilities, the platform can help businesses optimize their production processes and ensure that operations run smoothly and efficiently. This, in turn, can help reduce costs and increase profitability.

But the benefits of GENIUS go far beyond just optimizing production processes. The platform also allows for real-time remote monitoring, enabling businesses to keep a close eye on their operations even when they're not on site. This can help identify issues early on and prevent costly downtime.

Another key benefit of GENIUS is its ability to support better team collaboration. By providing a centralized platform for communication and collaboration, GENIUS can help teams work together more effectively and efficiently. This, in turn, can help to streamline workflows and reduce inefficiencies.

Finally, GENIUS also supports better financial decisions. By providing real-time data and insights, the platform can help businesses make informed decisions about their operations and investments. This can help them allocate resources more effectively and make better decisions overall.



Digital Twins and Related Technologies: Unlocking the Potential of Data Analytics

Digital twin technology is rapidly gaining popularity in today's tech-driven world, with numerous applications in a wide range of industries. However, implementing digital twins and related technologies like product lifecycle management (PLM), 3D CAD, manufacturing operations management (MOM), manufacturing process management (MPM), computer-aided design (CAD), enterprise resource planning (ERP), model-based system engineering (MBSE), and augmented reality (AR)/virtual reality (VR)/extended reality can require a significant capital investment.

Despite this, the potential benefits of digital twin technology are vast. By modeling and monitoring real-world objects, digital twins can help organizations optimize processes, reduce costs, and improve the customer experience. The key to unlocking the potential of digital twin technology lies in data analytics.

The ability to model and monitor real-world objects is an important feature of digital twin technology. This feature reflects real-time data analysis, which boosts the functionality of digital twin technology in a firm or an organization. Once established, digital twins and analytics provide more accurate diagnostic, optimal, and predictive operations.

Here are some of the potential applications of digital twin technology based on industry:

- **Infrastructure**: Digital twins can help in the planning, design, and maintenance of infrastructure projects, such as bridges, tunnels, and highways.
- **Retail**: Digital twins can help retailers optimize their supply chains, improve store layouts, and better understand customer behavior.
- **Agriculture**: Digital twins can help farmers optimize crop yields, reduce waste, and better manage resources like water and fertilizer.
- **Oil and Gas**: Digital twins can help oil and gas companies optimize production processes, reduce downtime, and improve safety.
- **Aerospace**: Digital twins can help aerospace companies optimize aircraft design, improve maintenance procedures, and reduce costs.
- **Telecommunication**: Digital twins can help telecommunication companies optimize network performance, improve customer service, and reduce downtime.
- **Automotive and Transportation**: Digital twins can help automotive and transportation companies optimize manufacturing processes, improve vehicle design, and reduce costs.
- **Energy and Utilities**: Digital twins can help energy and utilities companies optimize energy production and distribution, reduce waste, and improve safety.
- **Healthcare**: Digital twins can help healthcare providers optimize treatment plans, reduce costs, and improve patient outcomes.
- **Other Industries**: Digital twins can be applied to almost any industry, providing opportunities for optimization and innovation.

How has the Digital Twin Platform contributed to enhancing safety measures within construction/ operations, and what specific improvements have been made to reduce risks?

The construction and operations industries have traditionally been associated with a high level of risk. From falls and heavy machinery accidents to hazardous materials and equipment malfunctions, safety hazards are present at every step of the process. Fortunately, advances in technology have led to the development of innovative solutions that can help to mitigate these risks and enhance safety measures.

One such solution is the use of an intelligent Digital Twin Platform (DTP) for Process Safety Management (PSM). PSM is a systematic approach that is used to identify, evaluate, and control risks associated with various processes. The integration of PSM with a DTP can provide numerous benefits that can improve safety and reduce risks.

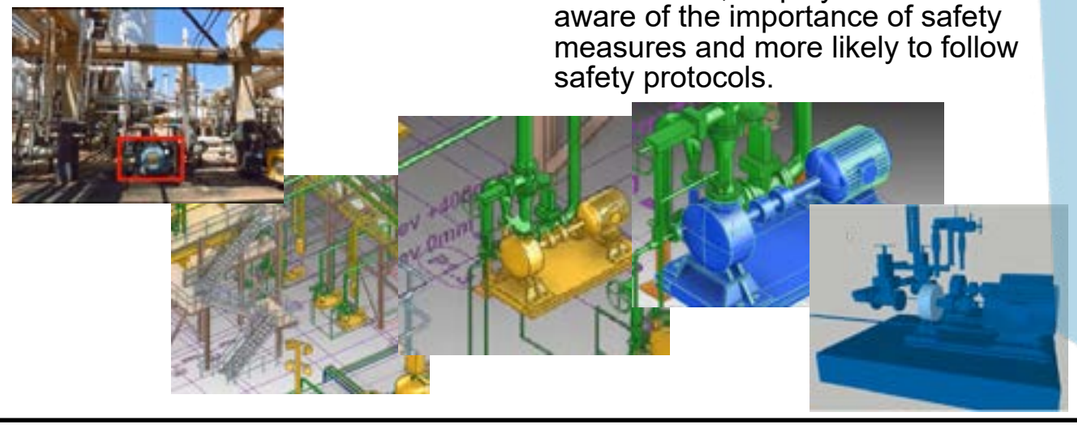
Real-time monitoring and analysis of process safety data is one of the most significant benefits of using a DTP for PSM. A DTP can provide a virtual environment that can simulate and optimize safety procedures, equipment, and processes. This feature enables the identification and mitigation of risks in a timely manner, preventing safety incidents from occurring.

Furthermore, the ability to simulate potential safety incidents and evaluate the impact of different safety measures is another advantage of using a DTP. This allows for better decision-making, as safety personnel can test and implement various safety measures and assess their effectiveness in the virtual environment.

Improved collaboration between different teams involved in PSM is another benefit of using a DTP. Engineers, operators, and safety personnel can work together seamlessly in the virtual environment, improving communication and ensuring that safety measures are effectively implemented.

The use of a DTP can also reduce downtime and production losses by identifying and addressing safety issues before they become critical. By simulating potential safety incidents, safety personnel can develop preventive measures that can mitigate risks and prevent costly shutdowns.

Finally, the use of a DTP can improve the safety culture and awareness among employees. As they see the impact of their actions on the virtual environment, employees become more aware of the importance of safety measures and more likely to follow safety protocols.



What role has the Digital Twin Platform played in improving the sustainability of the operations, both in terms of environmental impact and long-term viability?

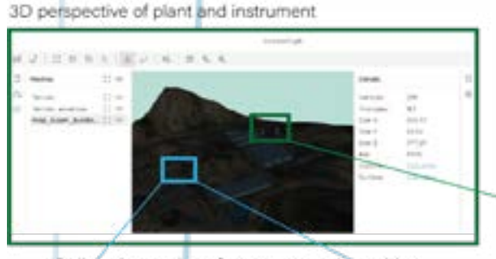
However, the benefits of using a DTP are not limited to safety improvements. The technology can also play a significant role in improving the sustainability of operations, both in terms of environmental impact and long-term viability.

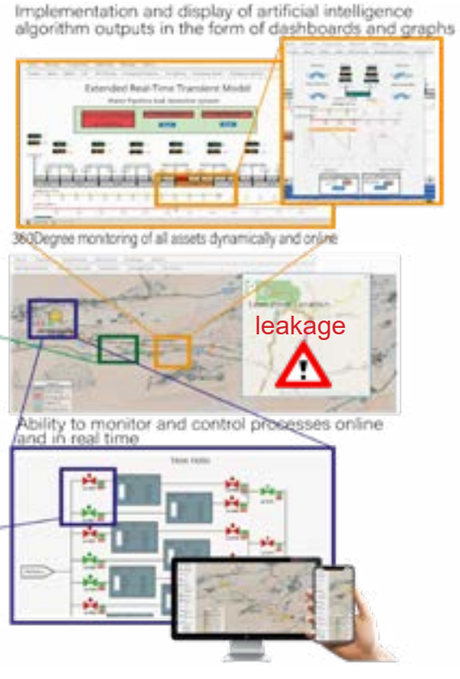
The environmental impact of construction and operations industries can be significant, with waste generation, energy consumption, and greenhouse gas emissions being major concerns. A DTP can help to reduce these impacts by providing a virtual environment to optimize resource usage, identify potential sources of waste, and develop sustainable practices.

For instance, a DTP can be used to simulate and optimize energy usage in buildings, helping to identify areas where energy consumption can be reduced without compromising safety or functionality. By identifying potential sources of waste and optimizing the use of resources, a DTP can help to reduce the environmental impact of construction and operations industries.

In addition, the long-term viability of operations can also be improved by using a DTP. By simulating and optimizing equipment performance, a DTP can help to identify potential issues before they become critical, extending the lifespan of equipment and reducing the need for costly replacements. This can lead to significant cost savings, as well as reducing the environmental impact of equipment manufacturing and disposal.

Furthermore, the ability to simulate and optimize operations in a virtual environment can also help to identify potential inefficiencies and bottlenecks. By optimizing processes and improving the use of resources, operations can become more streamlined and cost-effective, leading to long-term viability.





Pipeline Management solutions provided by Hamtta

Let’s imagine you are the owner of a company that operates an extensive oil pipeline network. You are concerned about potential leaks, theft, and line breaks that could lead to environmental damage, financial losses, and regulatory issues. In order to effectively manage your pipelines, you decide to implement pipeline management solutions provided by Hamtta.

Hamtta offers a comprehensive suite of modules specifically designed for liquid, gas, and multiproduct pipelines, both onshore and offshore. These modules include advanced technologies for detecting leaks, identifying instances of theft, and promptly responding to line breaks. Additionally, Hamtta’s solutions enable continuous monitoring of tightness and lifetime stress, ensuring the integrity of your pipelines.

With Hamtta’s products, solutions, and services, you can address various operational, security, environmental, and legislative requirements. Whether your pipelines span long distances or are shorter in scope, and regardless of the industry you operate in (oil, gas, water, chemicals, etc.), Hamtta can provide you with customized detection systems or complete solutions tailored to your specific needs and application.

What sets Hamtta apart is its unique technology, which can be further enhanced by incorporating a wide range of instruments and field data acquisition systems from trusted partners. This integration allows you to gather accurate and reliable data from your pipelines, enabling better decision-making and proactive management.

By implementing Hamtta’s pipeline management solutions, you can gain peace of mind, knowing that you have a robust system in place to mitigate risks, comply with regulations, and safeguard the environment. You can confidently operate your pipeline network, knowing that you have advanced tools and support to ensure the safety, efficiency, and longevity of your operations.

Pipeline Management:

Pipeline management involves a range of activities aimed at ensuring the efficient, safe, and reliable operation of pipelines. It encompasses various aspects, including design, analysis, simulation, and optimization. Let’s explore some of the key elements of pipeline management:

Pipeline design: This involves the initial planning and engineering of the pipeline system, considering factors such as route selection, material selection, and construction specifications. Proper design is crucial for the pipeline to meet operational requirements and regulatory standards.

Leak detection: Leak detection systems play a vital role in identifying and locating leaks in pipelines promptly. These systems utilize various technologies, such as acoustic sensors, flow balance, pressure monitoring, and modeling, to detect leaks and minimize potential environmental damage, product loss, and safety risks.

Theft detection: In certain cases, pipelines may be susceptible to theft or illegal tapping. Implementing theft detection systems helps identify unauthorized access points or abnormal flow patterns, enabling prompt intervention and prevention of theft incidents.

Predictive and proactive modeling: Predictive modeling involves using mathematical and computational techniques to forecast pipeline behavior and potential issues. By simulating various operating scenarios, pipeline operators can proactively identify potential bottlenecks, pressure variations, and other operational challenges, enabling timely preventive measures.

Pipeline trainer/simulator: Pipeline operators can benefit from training programs and simulators that replicate real-world pipeline operations. These tools allow operators to practice handling different scenarios, improving their skills, decision-making, and emergency response capabilities.

Pipeline and distribution network optimization: Optimizing the pipeline system and distribution network involves maximizing operational efficiency, reducing energy consumption, minimizing costs, and ensuring optimal flow rates. This optimization can be achieved through advanced modeling, analysis, and control techniques.

Flow assurance and survival time studies: Flow assurance studies focus on ensuring the uninterrupted flow of fluids within the pipeline by addressing issues like hydrate formation, wax deposition, and corrosion. Survival time studies assess the time it takes for a pipeline to reach a critical state in the event of a leak, helping operators determine response times and mitigate risks.

Capacity studies: Capacity studies analyze the maximum volume of fluid that a pipeline can transport under different conditions while meeting safety and operational requirements. These studies aid in determining the pipeline’s capacity limitations and optimizing throughput.

Operations analysis: Analyzing pipeline operations involves evaluating performance, identifying operational inefficiencies, and implementing improve ments. This analysis includes factors like pressure management, pump optimization, maintenance planning, and overall system reliability.

Implementing comprehensive pipeline management solutions

Effective pipeline management is crucial for industries such as oil and gas, water supply, chemicals, and others that rely on the transportation of fluids through extensive pipeline networks. By implementing comprehensive pipeline management solutions, operators can achieve various benefits:

Enhanced safety: Robust leak detection systems and proactive modeling help prevent and quickly respond to leaks, minimizing environmental impact, and ensuring public safety.

Cost savings: Optimized pipeline design, efficient operations, and proactive maintenance strategies can lead to cost savings through reduced energy consumption, decreased product loss, and improved asset utilization.

Regulatory compliance: By adhering to industry standards and incorporating advanced technologies, pipeline operators can ensure compliance with regulatory requirements, preventing penalties and reputational damage.

Operational efficiency: Pipeline management solutions enable operators to maximize throughput, minimize downtime, and optimize system performance, resulting in improved operational efficiency and customer satisfaction.

Risk mitigation: By identifying potential risks, implementing preventive measures, and having robust emergency response plans, pipeline operators can mitigate operational risks and minimize the impact of incidents.

Long-term sustainability: Through flow assurance studies, capacity planning, and optimization, pipeline management contributes to long-term sustainability by ensuring reliable and efficient transportation of resources.

In the bigger picture, effective pipeline management is essential for ensuring the smooth and safe operation of critical infrastructure, supporting industries, economies, and society as a whole. It enables

Implementing comprehensive pipeline management solutions

Oil pipelines: Our products offer effective leak detection and location for oil pipelines, providing information about leak size, location, and product loss using various field-tested methods.

Gas pipelines: Accurate monitoring of the entire gas pipeline network is crucial for rapid detection of leaks and preventing potential disasters.

Chemical pipelines: Despite being the safest mode of transportation for chemicals, it is important to protect people, property, and the environment. Reliable leak detection solutions help mitigate risks.

Water pipelines: Water leaks are costly, and accurate leak detection systems are essential to reduce water loss and prevent financial losses before water reaches consumers.

Aviation pipelines: Hydrant leaks at airports can lead to fuel contamination, flight delays, safety concerns, and financial costs. Our tightness monitoring systems quickly test for leaks.

Mining & slurry pipelines: Mining and slurry pipelines face challenges like erosion and ruptures due to abrasive products. Implementing accurate leak detection systems is necessary to meet environmental commitments.

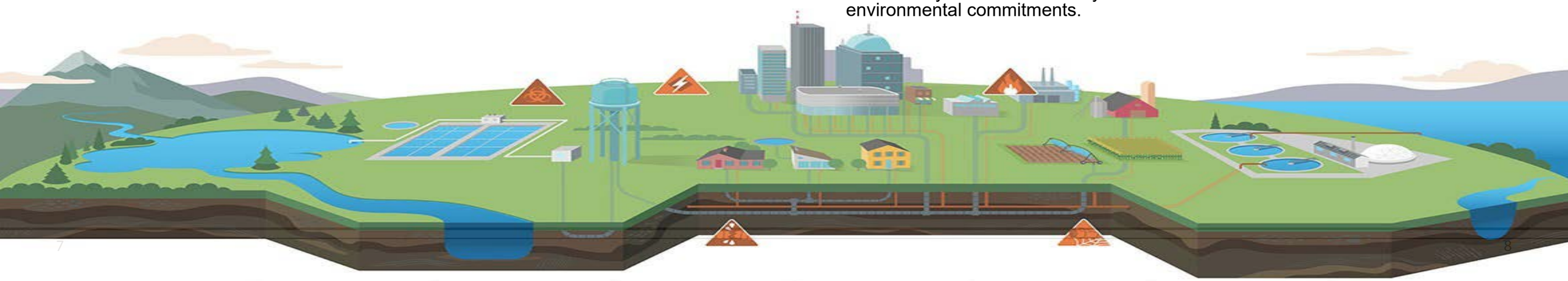
The Pipeline Digital Twin: A real-time simulation system that allows seamless monitoring of pipeline sections, even without sensors. It helps identify causes and effects of deviating operating conditions.

Leak detection and leak location: Utilizes a hybrid system combining multiple methods to effectively detect and locate leaks, minimizing damage and financial losses.

Compliance and standards: The software is compliant with national and international standards such as TRFL and API 1130.

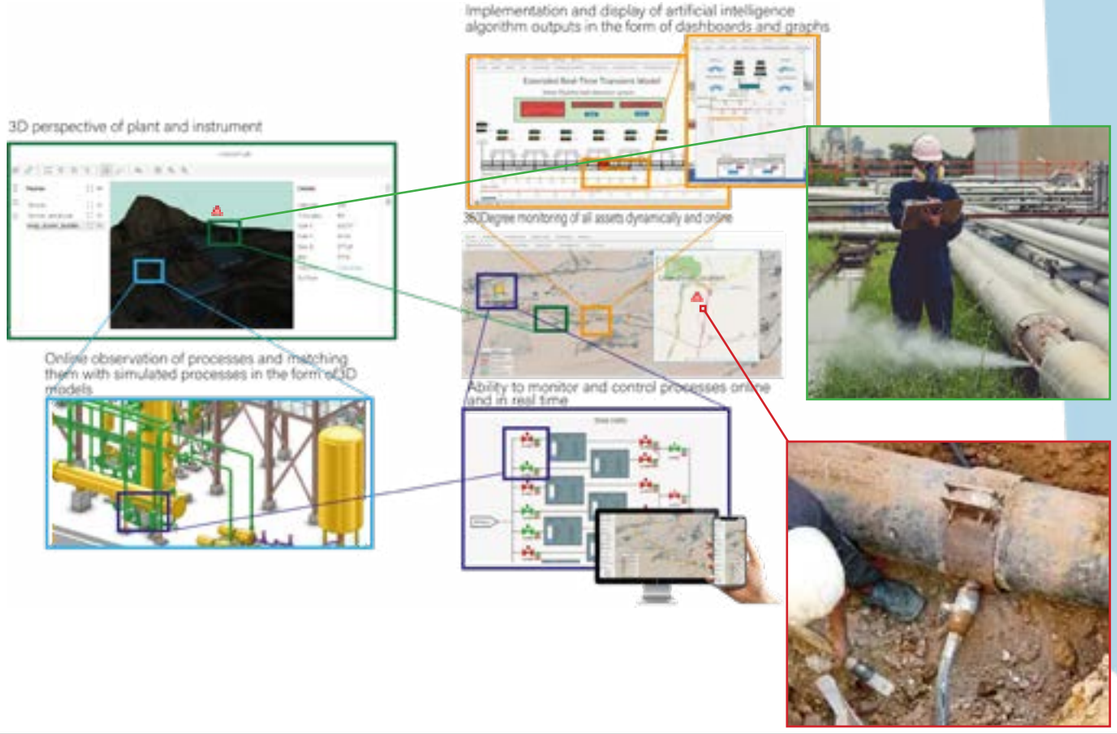
Pig and batch tracking: Provides real-time tracking of pigs and batches, including their exact location and arrival times. All relevant data for products and pigs is managed.

Monitoring and data analysis: Monitors pipeline stress, detects signs of material fatigue, identifies faulty measurements, and detects anomalies. It helps determine optimum operating pressure and prevent critical situations.



Leak detection System (LDS)

- Leak detection - location and amount of leakage
- Based on leak detection using RTTM (Real Time Transient Model) method.
- Very accurate and reliable leak information
- In accordance with API 1130, API 1175, AB 864, TRFL and CSA Z662 standards, combining and consolidating multiple methods in one
- The system performs operations independently, but if needed, it has the ability to integrate with other systems.
- Outstanding reliability due to “leak pattern bank” and ERTTM proposed solution
- Providing a solution to detect small and gradual leaks (the ability to detect gradual leaks using pressure, flow and temperature instruments)
- Continuous and real-time monitoring capability in all pipeline operating conditions with the benefit of a digital counterpart
- The ability to report the location on the map for quick and timely response of the field team
- Ability to support various protocols including OPC, Modbus TCP/IP, Modbus Serial, HART and Profibus
- Standard interface capability to SCADA
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images for quick and timely response of the field team.
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access



Theft detection

- Fast and reliable identification and localization of unauthorized or illegal withdrawals
- Special theft pattern detection capability “leak pattern bank” to detect theft
- The ability to set up an alarm within a few minutes to prevent theft
- Provides alarm and theft reporting via email - SMS - emergency call
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images for quick and timely response of the field team.
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access
- Complete leak detection audit
- Complete audit of all accident-prone areas to detect leaks
- The health check system for basic aspects, physical condition, performance and compliance with standards and regulations of API, CSA, TRFL, etc.
- Ability to report the location on the map, 3D model and 360 degree images for quick and timely response of the field team.
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access

Side features and solutions

Automatic emergency stop system
- Providing a solution for efficient and immediate pipeline rupture detection, especially for leak prone areas.
- Rupture pattern detection system capability for emergency automatic shutdown system.
- Providing reliable and quick response solutions to minimize environmental impacts and risks.
- The automatic emergency shutdown system can be standalone or integrated with a complete leak detection system.
- Configuration is possible through local display or by remote access.
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images for quick and timely response of the field team.
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access

Predictive modeling
- Provide solutions to predict pipeline conditions
- Modeling and simulation capabilities to predict pipeline conditions from current data and data in the database
- The ability to predict future events and the state of pipelines
- Continuous monitoring of pipelines for unauthorized operational conditions
- Simulation of pipeline status and forecasting based on applied changes in the project or in the process
- Includes web-based user interface
- Compatible with any device that supports Android, IOS, Windows.

Batch tracking of products
- A solution for tracking multiple products in the transmission line
- Determining the location of a batch product and identifying the mixing area
- Forecasting the arrival time and amount of net product available
- Using the optimal capacity of the pipeline
- Calculation of estimated time of entry and exit/calculation of Slops/net volume
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access

Side features and solutions

Transmission line stress monitoring
- Providing a solution for stress monitoring during the life of the pipeline
- Assessment and documentation of stress throughout the life of the pipeline
- Assessment of the remaining life of the pipeline
- Monitoring and measuring the pressure at different points of the transmission line
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access

Monitor motor/pump
- Supervision of mechanical, electrical and hydrodynamic measurement standards
- Reducing operational energy consumption through demand-based system management
- Minimizing repair work, thanks to predictive maintenance
- Includes web-based user interface
- Ability to report the location on the map, 3D model and 360 degree images
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access

Cyber security
- Cyber security solution for pipeline management
- Complementary solutions for pipeline monitoring and protection
- Protection against cyber threats
- Secure communication, complying with the latest standards and maximum safety level
- Compatible with any device that supports Android, IOS, Windows.
- Configuration through local display or with remote access
- Collect and transfer data
- Implementation of reliable systems for data collection and transmission and data encryption components
- Secure communication, meeting the latest safety standards
- Provide comprehensive transmission and communication options for project infrastructure, e.g. Internet connections through VPN tunnel and SHDSL connections, mobile phone, radio line and WLAN are secured and adapted to local conditions and the possibility of optimal data transfer.

Transparent Pricing. Flexible Options.
Software Pricing

Basics :

Modules & Drivers
- Alarm Notification Module$2,090
- Perspective Module Unlimited$10,450
- Platform (Required)$1,000
- **OPC UA Server Module**
- **Core Drivers**
- Subtotal$13,540 USD

TOTAL
$13,540 USD

Full :

Modules & Drivers
- SECS/GEM Module Single-Tool$985
- Platform (Required)$1,000
- **OPC UA Server Module**
- **Core Drivers**
- Perspective Module Unlimited$10,450
- Web Development Module$1,760
- Twilio Notification Module$550
- Vision Module Unlimited$7,150
- Vision and Perspective Discount-$3,000
- Serial Module$385
- Enterprise Administration Module Single Controller or Agent$1,485
- OPC COM DA Module$440
- Voice Notification Module$880
- Web Browser Module$605
- Alarm Notification Module$2,090
- SQL Bridge Module$2,090
- Tag Historian Module$2,200
- Reporting Module$3,630
- SMS Notification Module$880
- Sequential Function Charts (SFC)
- Module$3,500
- E**dge Solution**
- Edge Core $200
- Edge Compute$400
- Edge IIoT$600
- Edge Panel$1,300
- Edge Sync Services$200
- Number of Licensesx1
- Cirrus Link Modules & Drivers
- Cirrus Link MQTT Transmission Module $1,450
- Cirrus Link MQTT Distributor Module $3,125
- Cirrus Link MQTT Engine Module $2,000
- Cirrus Link AWS Injector Module$3,900
- Cirrus Link Azure Injector Module$3,900
- Cirrus Link EFM Emerson ROC Driver$1,325
- Cirrus Link MQTT Recorder Module$10,500
- Cirrus Link Google Cloud Platform Injector Module$3,900
- Cirrus Link Op to 22 groove Epic SNAP PAC Driver$250
- Cirrus Link EFM ABB Total flow Module$1,325
- Cirrus Link AWS Engine for Site Wise Module$2,900
- Subtotal$74,355 USD
- Redundancy$37,177 USD
- Total Care Support$23,206 USD

TOTAL
$134,738 USD

Our service:

According to the studies conducted on the fundamental needs of Industry 4, in line with the digital transformation, the Genius platform has been developed as a web app using digital twin which includes 4 phases:

•**The first phase:** creating a monitoring and control environment in the format (super-fast SCADA/HMI) where all processes can be dynamically accessed as P&ID / PFD.

•**The second phase:** monitoring dashboard (Smart Monitoring) in which real-time data can be accessed using the IOT structure in the form of AR / VR / 360 / CCTV. Also, in the simulation layer, the data are accessible as 3D models in the format of the Real-time Digital Twin framework.

•**The third phase:** creating web-based software to manage and document data in the form of digital engineering. This phase of the project is very important (flow of data, how to store it on the database, integration, System thinking, system engineering and complexity management).

•**The fourth phase:** management and decision making. Using artificial intelligence, the data stored in phase 3 is processed and is a suitable feed for BI, ERP.

Process Safety and Risk Studies Deliverables
- Hazard Identification (HAZID)
- Hazard and Operability (HAZOP)
- Safety Integrity Level (SIL)
- Simultaneous Operations (SIMOPS)
- Constructability Review
- BOW -Tie
- ALARP Demonstration
- Inherent Safe Design (ISD) Review

Risk Assessment Deliverables
- Quantitative Risk Assessment (ORA)
- Fire and Explosion Risk Assessment (FERA)
- Building Risk Assessrnent (BRA)
- Fire and Gas Mapping Study
- Emergency System Survivability Analysis (ESSA)
- Evacuation Escape and Rescue Analysis (EERA)
- Dropped Object Study
- Hazardous Area Classification
- Pollution Prevention and Control (PFC) Compliance Study
- Emergency Response Plan (ERP)
- Air Dispersion Modeling Study
- Project HSE Plan
- Noise Assessment Study
- Waste Management Plan
- H2S Dispersion & Zoning Study
- Human Factor Eng Assessment Study
- Ergonomics Study
- PHSER Workshops study
- Construction HSE Plan

Moving forward, what plans does Hamtta company have for scaling or expanding the digital twin project to other aspects of operations or to other facilities?

Hello Industrial Metaverse!

As a small company, we are excited about the potential of this emerging technology and its potential to revolutionize the industrial landscape. The concept of the industrial metaverse involves the convergence of the physical and virtual worlds, enabling real-time collaboration, immersive experiences, and advanced data analytics in industrial settings.

The industrial metaverse is essentially a digital twin on a larger scale. It allows for the integration of various data sources, such as IoT sensors, robots, and autonomous systems, to create a virtual representation of a physical system. This digital twin can then be used to simulate scenarios and optimize operations, reducing costs and increasing efficiency.

One of the most significant advantages of the industrial metaverse is its potential to enable real-time collaboration across different teams and departments. With this technology, engineers, operators, and other stakeholders can work together in a virtual environment, accessing real-time data and insights to make informed decisions. This collaborative approach can lead to better designs, faster problem-solving, and improved communication, ultimately resulting in better outcomes for industrial processes.

Moreover, the industrial metaverse can provide immersive experiences, allowing users to interact with digital twins and gain a better understanding of complex systems. This can help in the training of employees and in the communication of ideas and concepts.

As a small company, we are excited to see how the industrial metaverse will transform various industries in the future. We believe that this technology has the potential to level the playing field for smaller companies, allowing them to compete with larger enterprises on a more even footing. With the integration of real-time data analytics and machine learning, the industrial metaverse can provide a powerful tool for decision-making and optimization, leading to increased productivity and reduced costs.

The industrial metaverse is an exciting and promising development that could revolutionize the way we design, build, and operate industrial systems. As a small company, we look forward to seeing how this concept evolves and transforms various industries in the future. We believe that this technology will play a critical role in driving innovation and improving competitiveness in the industrial landscape.

PROBLEM

Visibility and Control
Traditional monitoring and control systems relied on manual data collection and analysis, which was time-consuming and prone to errors.

Operations
The lack of visibility and control often led to inefficient operations, unexpected downtime, and costly maintenance and repairs.

Quality control
Traditional quality control methods were often reactive, with issues only being detected after they had already occurred. This led to costly rework, waste, and damage to reputation.

Simulation and Optimization
In many industries, simulation and optimization were difficult and expensive to achieve. Physical prototypes and testing were often required, which slowed down innovation and increased costs.

Subjective incentives and performance metrics
Traditional methods of incentivizing employees and teams were often subjective and based on incomplete data. This led to inaccurate performance metrics and inefficient allocation of resources.

SOLUTION

Super Fast HMI (Visibility and Control)
providing real-time insights and enables predictive maintenance, allowing users to proactively address issues before they become problems.

Dynamic PID / PFD (Operations)
providing a complete and accurate view of the system, allowing for real-time control, optimization, and efficient operations.

Smart Monitoring (Quality control)
Real-time monitoring and control of processes, allowing for early detection of quality issues and enabling corrective actions.

Modeling Studio (Simulation and Optimization)
providing a virtual replica of a physical system or process that can be used for simulation, testing, and optimization.

Digital Engineering (Subjective incentives and performance metrics)
providing real-time data and insights into performance, enabling more accurate and objective incentives.

Decision-Making:
Used to make more informed decisions about operations, processes, and resource allocation. This helps users to optimize their operations and make strategic decisions based on real-time data.

Collaboration:
collaboration between teams, departments, and even companies. By sharing data and insights, teams can work together to solve problems and identify opportunities for innovation.

HAMTTA ALL IN ONE

GENIUS DIGITAL TWIN PLATFORM

MONITORING / CONTROL / MANAGEMENT

شرکت همتای هوشمند آینده

SCADA
DYNAMIC P&ID / PFD

PIPELINE MANAGEMENT

SUPER FAST HMI

Engineering
Process
Equipment
PSM
HSE
Civil
Layout
Instrumentation
Piping
Electrical

Health Check
Leak Detection
Flow Assurance
Predictive Modeling
Simulation
Batch Tracking
Pig Tracking
Monitoring

ARM4 BI / ERP

SMART MONITORING

DIGITAL ENGINEERING

HAMTTA

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Design
Procurement
Manufacturing
Shipping
Installation
Construction
Inspection & tests
Hand-over

Schedule
Maintenance
Field Engineering
Quality
Project Engineering
Engineering Document
Engineering Resources

HAMTTA

Industrial Data Integration

Objects

HAMTTA

DATA FUSION

Industrial Knowledge graph

HAMTTA

HAMTTA Pipeline Management Architecture

HAMTTA

HAMTTA

Water Pipeline leak detection system

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GENIUS platform is a powerful tool for businesses looking to optimize operations, reduce costs, and increase efficiency. By providing real-time insights, predictive maintenance capabilities, and support for better team collaboration and financial decision-making, GENIUS is the future of streamlined business operations. Whether you're a small startup or a large corporation, GENIUS can help you stay ahead of the competition and achieve your goals.

Dear valued visitors of Hamtta.com,

As the CEO and Founder of Hamtta Company, I am pleased to welcome you to our website.
Hamtta is a company that focuses on technological and knowledge-based activities in the field of digital transformation in the context of Industry 4.0 and METAVERSE. Our organization has been at the forefront of innovation and growth in our industry, and we are proud to offer cutting-edge solutions to various industries.

Our main focus is on implementing digital transformation in industries such as asset and process management, civil and mechanical engineering, power and facilities management, oil and gas, steel industries, healthcare, agriculture and livestock, smart factory, smart city, consulting, and technology. We believe that our solutions offer significant advantages to organizations, including increased efficiency, enhanced productivity, and improved decision-making capabilities.

At Hamtta, we are committed to maintaining the highest standardst. We believe that transparency and accountability are essential to building trust and maintaining strong relationships with our stakeholders.

We invite you to explore our website and learn more about our organization and the services we offer. If you have any questions or comments, please do not hesitate to contact us. Thank you for your interest in Hamtta, and we look forward to working with you.

We are making your Digital Twin.

Sincerely,

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