

Problem in Focus

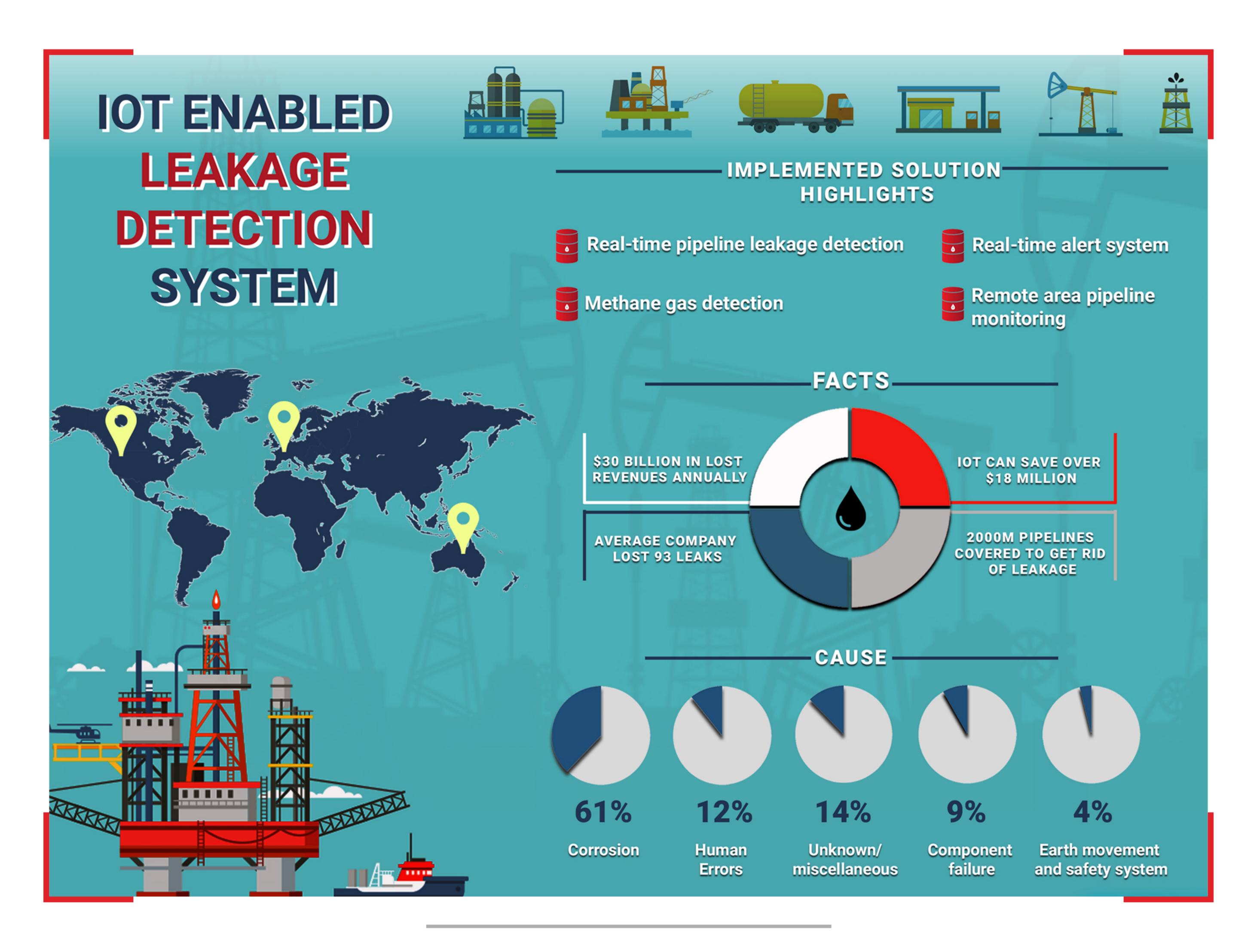
The United States bears fuel losses of \$10 billion annually due to leaks and thefts. The companies, operating in the midstream segment of the oil and gas industry, foresee significant upside in improving pipeline safety and reliability. The statistics measured that around 2.5 million miles of pipelines in the USA have an average of 93 leaks per mile.

How will IOT Solve?

Oil and Gas industry believed in updating the traditional method of pipeline leakage detection to create a safer and greener industry for the next 100 years. As the detection of the leaks was getting exceptionally hard, especially in remotely located wells, the need for an alternate solution became a necessity.

IOT sensor helps monitoring the leakage at remote areas helps in monitoring the pumps, motors, and compressors in oil and gas supply.

Facts & Cause



Market Trend

The pipeline monitoring system market is projected to grow from USD 4.6 billion in 2019 to USD 6.5 billion by 2024, at a CAGR of 7.1% from 2019 to 2024 the demand for pipeline monitoring system can be attributed to high growth as a result of the increasing number of oil & gas leakages in production, pipelines, and storage tanks due to natural disasters and high pressure along with stringent government regulations for pipeline safety and security and expansion and upgradation of pipelines. The growing trend of the development of new devices and solutions to monitor pipeline performance, optimize resources, automate the functions, and safeguard the operations are resulting in the growth of pipeline monitoring systems. The next-generation technologies, which are the future of the pipeline monitoring market, comprise integrated, multi-layered systems using disruptive technologies, Internet of Things (IoT), digital acoustic sensing, and connected pipelines "the leak detection segment is projected to lead the pipeline monitoring system market from 2019 to 2024.

By solution, the leak detection application segment is projected to grow at the highest CAGR from 2019 to 2024. This growth can be attributed to the increasing investments from oil & gas companies in pipeline monitoring infrastructures for safe transportation of liquids. Pipeline leakage detection systems help in detecting damages across pipeline infrastructures. These systems detect leaks on the basis of flow, pressure, temperature, and density.

North America accounted for the largest share of the total market of pipeline monitoring systems, in terms of value, followed by Asia Pacific. However, the Asia Pacific region is projected to grow at the highest rate than Europe in the pipeline monitoring system market from 2019 to 2024.

Top players by Market Players

Siemens AG (Germany), Honeywell International Inc. (U.S.), BAE Systems (U.K), Perma Pipes (U.S), Transcanada (Canada), PSI AG (Germany), Pure Technology (Canada), Orbcomm Inc. (U.S.), Huawei and (China) are the major manufacturers of pipelines and monitoring systems in the pipeline monitoring system market. Other players in the pipeline monitoring system market include Atmos International (U.K.), Clampon AS (Norway), ABB Group (Switzerland), Future Fibre Technologies (Australia), Senstar Inc. (Canada), Syrinix (UK), Radiobarrier (Russia), TTK (France), Krohne Group (Germany.), and Thales Group (France)

Top Technological Solutions available in Market

- "PIG's
- Smart ball
- Acoustic/ Ultrasonic
- Magnetic flux leakage technology
- Fiber optic technology
- Mass volume / balance
- LIDAR
- Vapor sensing
- Others (Beta foil technology and Leo technology)

Application Area

- Crude and refined oil
- Natural gas
- Biofuels
- Water
- Waste water
- Beverages

Recent Advancements/developments

In October 2020, ABB introduced the first comprehensive gas leak detection solution for utilities to help safeguard city populations. The new ABB MicroGuard solution will work alongside ABB's MobileGuard to pinpoint dangerous gas leaks. Faster and easier detection with this patented laser-based technology will help reduce fatalities, environmental damage, and material loss.

In June 2020, Atmos created a unique regulation program compliance service for its customers. The service will provide dedicated support for customers wishing to achieve full API 1130 compliance in leak detection systems.

In January 2020, Emerson introduced the Plantweb Insight Inline Corrosion Application suite to provide the oil and gas industry real-time interpretation and analysis of critical data that helps prioritize maintenance and make informed integrity decisions.

In November 2019, ABB Ability mobile gas leak detection was launched in Australia for improving pipeline integrity and public safety. This expansion makes it ideally suited for Australia with more than 100,000 kilometers of transmission and distribution pipelines that deliver natural gas to homes across the country which use gas for heating their houses and hot water and for cooking. The compact system can be placed into the trunk of almost any vehicle and can be fully installed in about 4 hours.

In June 2019, Emerson introduced 2 Rosemount 628 Universal Gas Sensors to measure carbon monoxide and oxygen depletion in addition to the existing capability to monitor hydrogen sulfide. These additions to the series broaden the range of hazardous situations that can be monitored using the Rosemount 928 Wireless Gas Monitor platform.

In February 2019, Honeywell enhanced its industry-leading product line of handheld photoionization (PID) monitors by adding Bluetooth connectivity and launching a mobile application to simplify the data collection process and reports creation. Enhancements to the Honeywell RAE PID monitors allow remediation engineers and hygienists to use their smartphones to pull more information from environmental and site factors in the field.

Pipe leaking Techniques links

Link 1 Link 2 Link 3 Link 4 Link 5 Link 6 Link 7

New Start-ups

Aquarius Spectrum

"Aquarius Spectrum Ltd (Aquarius) is an industry-leading supplier of innovative leak detection solutions designed for water loss reduction and prevention, pipe condition assessment, and optimized maintenance and operational costs. Aquarius' end customers are water utilities.

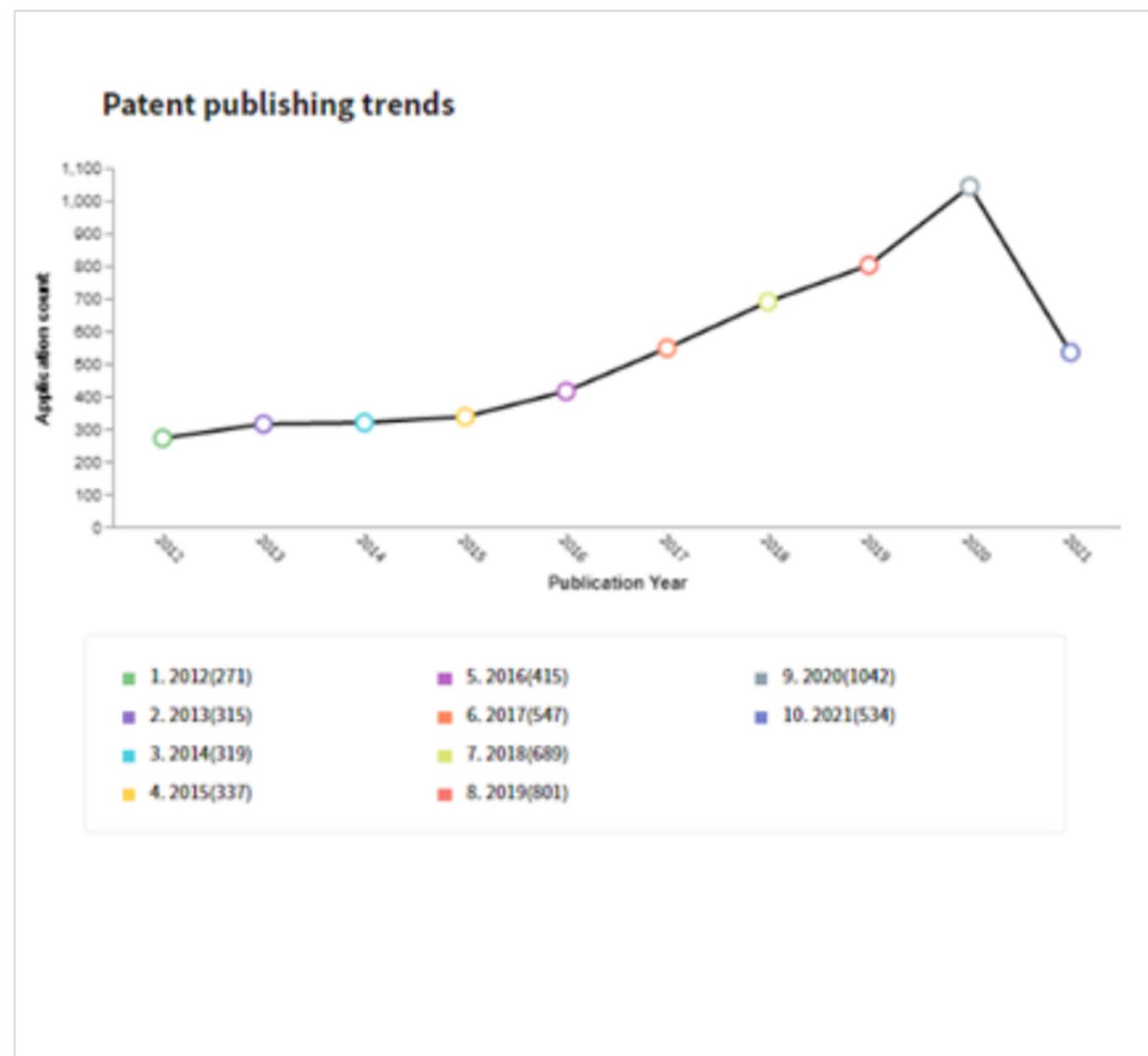
Aquarius products are currently monitoring more than 2,500 miles of water pipes around the world, helping major water utilities to reduce their non-revenue water and significantly lower maintenance costs through the installation of fixed and mobile acoustic sensors and comprehensive data analysis provided automatically by the cloud-based monitoring system."

Advanced Pressure Technology

AP Tech, also known as Advanced Pressure Technology, is a manufacturer of gas handling components – primarily pressure regulators and valves. AP Tech's forte is products to deliver specialty gases for high purity through ultra high purity applications. Starting from the source vessel to point of use and into the process tool or equipment itself, AP Tech products are known to deliver gases with uncompromising quality, performance and reliability. The company sets the ultimate standard for service and support, traits that are now synonymous with the brand – AP Tech.

IP Insights

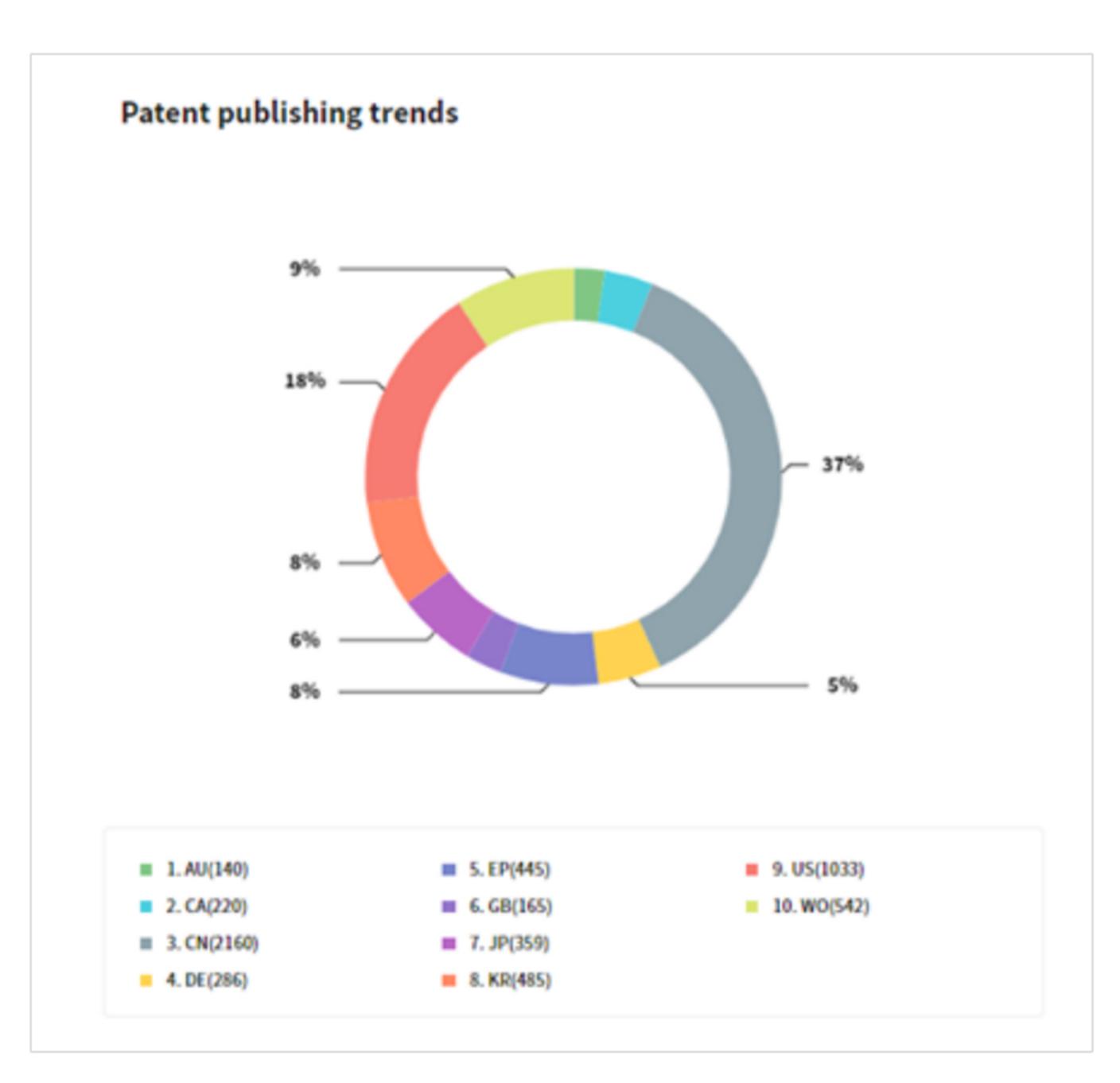




Priority Countries

Application Year(s)

Patent publishing trends

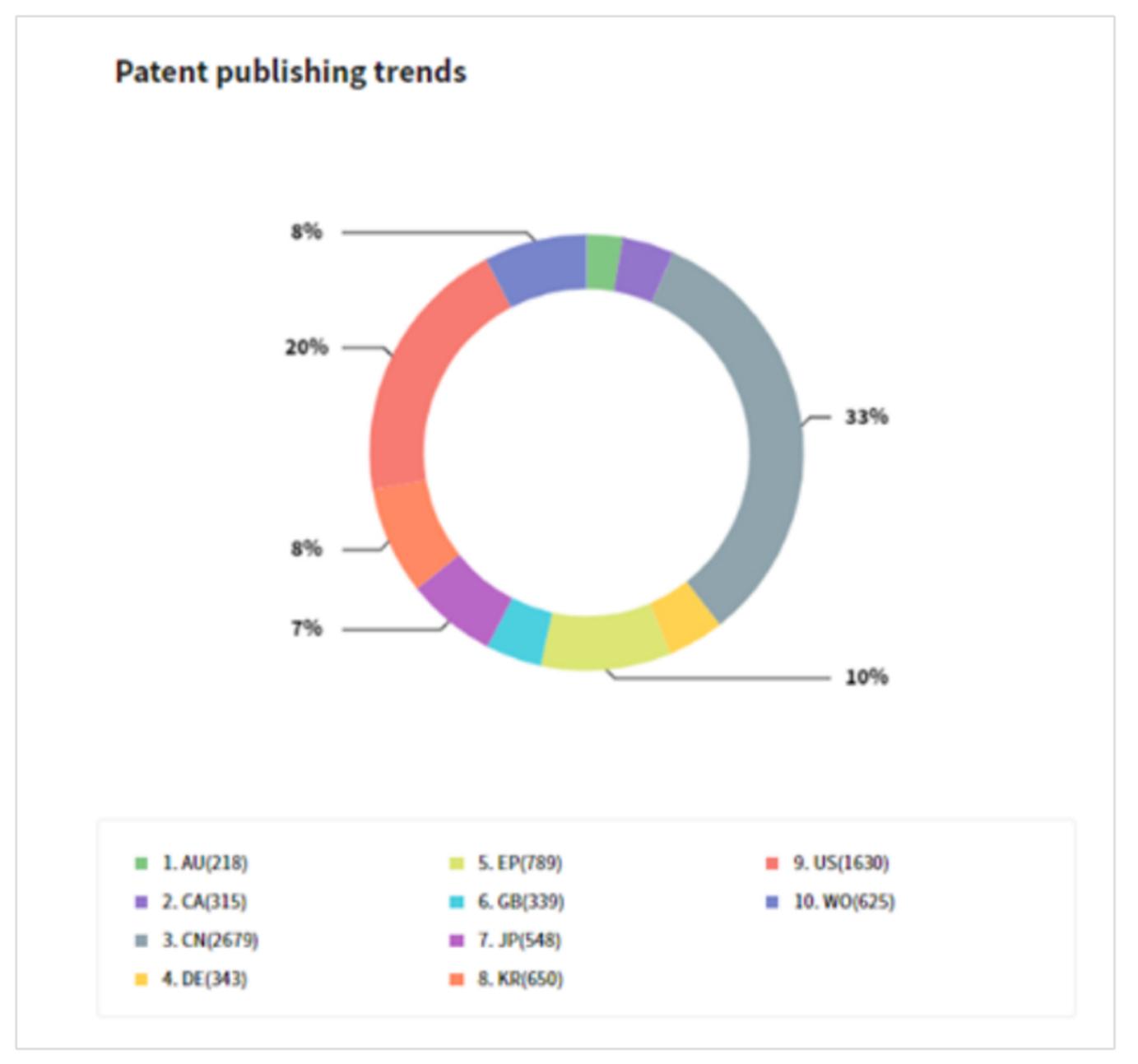


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Application Countries

Publication Year(s)

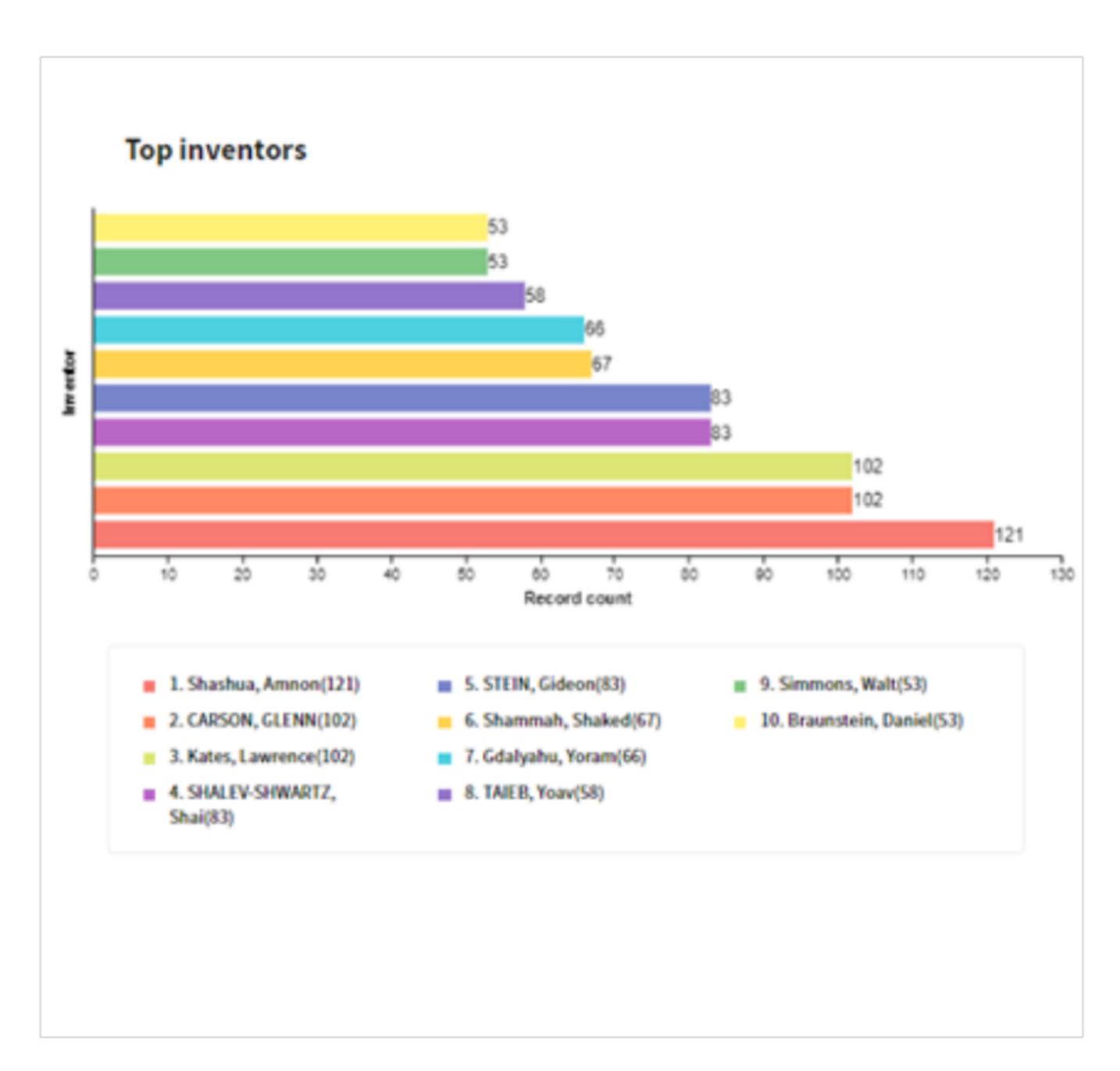
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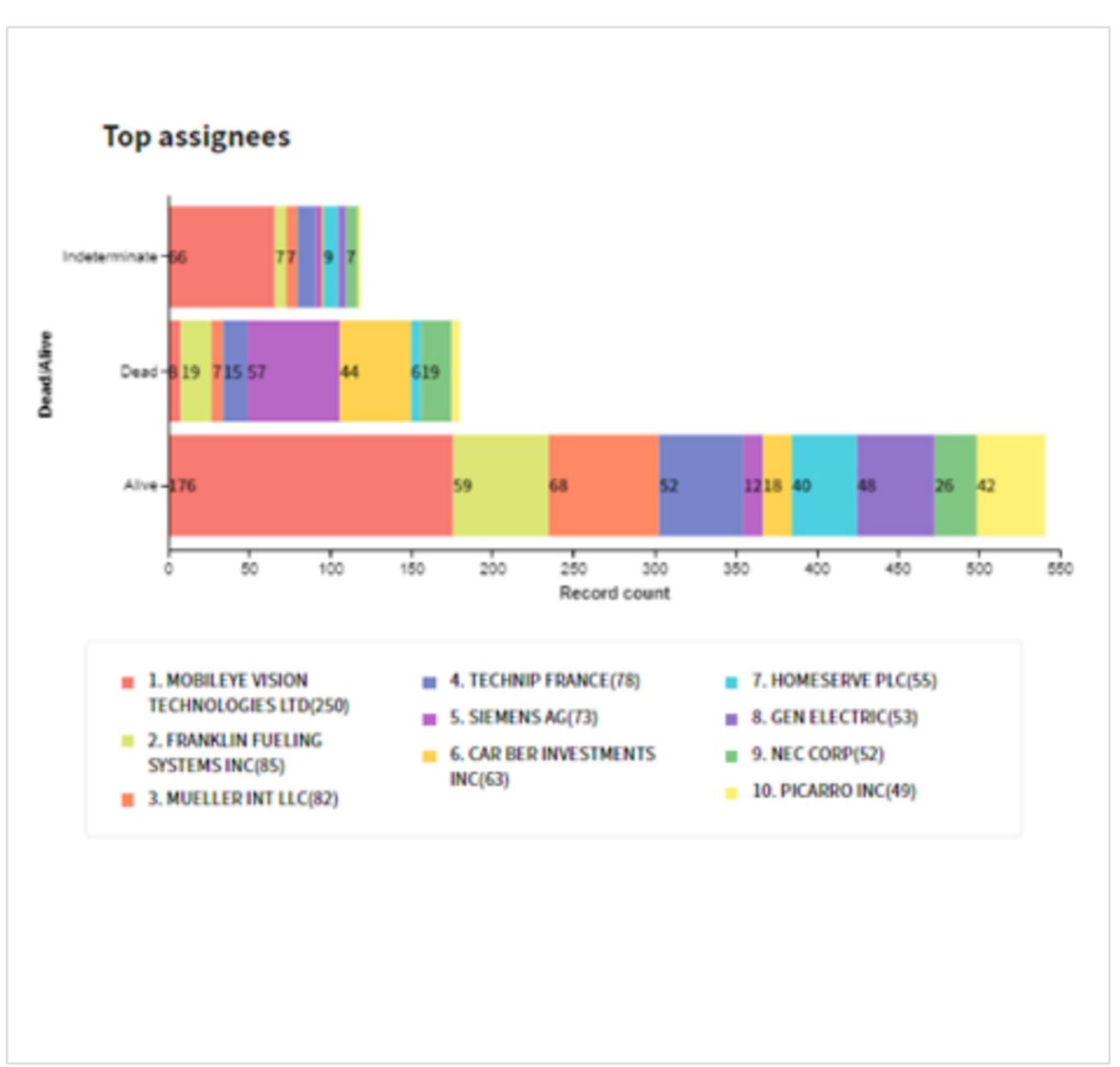
Top assignees g 120ž 100-Assignee/Applicant 7. HOMESERVE PLC(SS) 1. MOBILEYE VISION 4. TECHNIP FRANCE(78) TECHNOLOGIES LTD(250) 5. SIEMENS AG(73) 8. GEN ELECTRIC(53) 2. FRANKLIN FUELING 6. CAR BER INVESTMENTS 9. NEC CORP(52) SYSTEMS INC(85) INC(63) 10. PICARRO INC(49) 3. MUELLER INT LLC(82)

Publication Countries

Top Assignee according to total publications

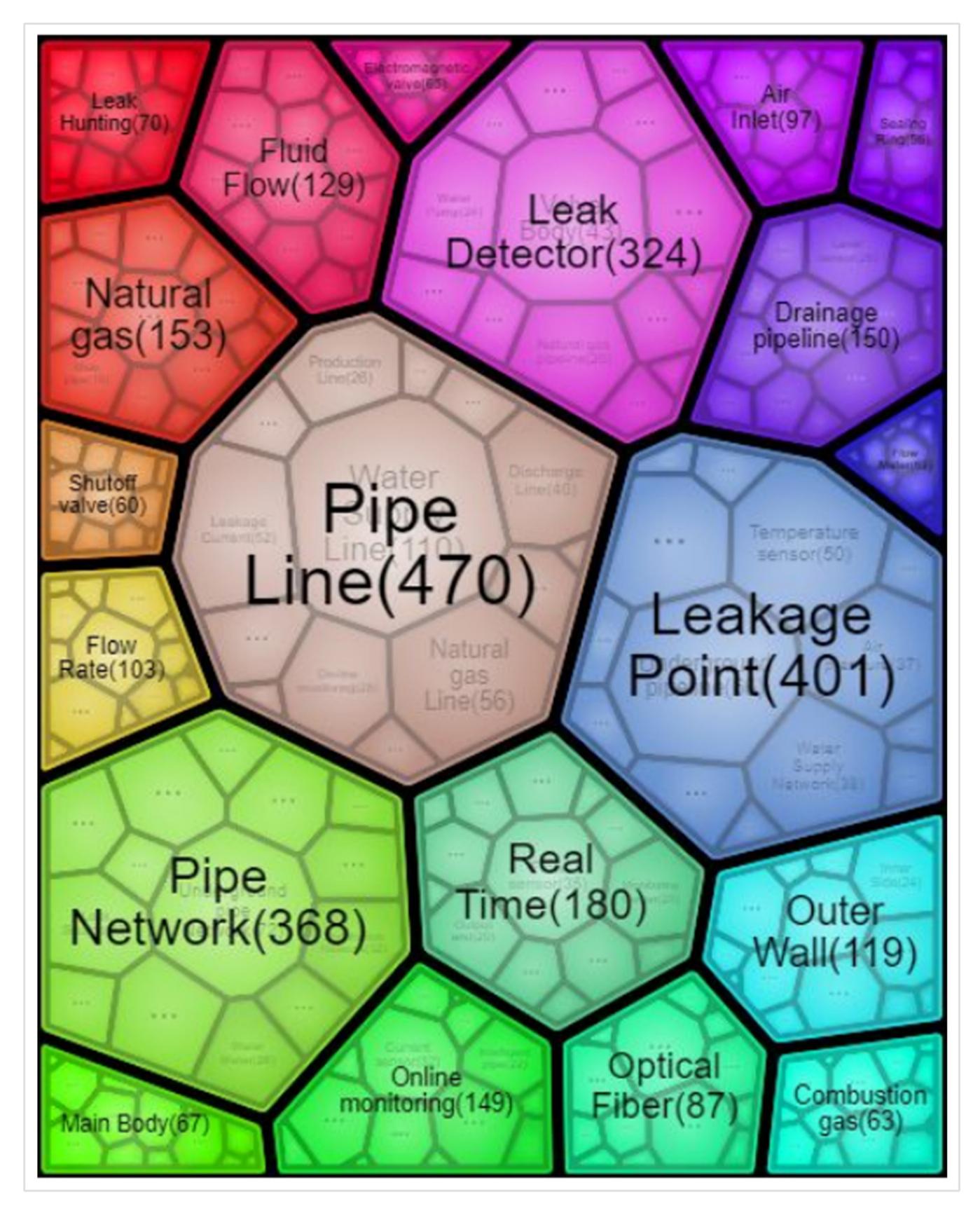


Top Inventors according to total publications

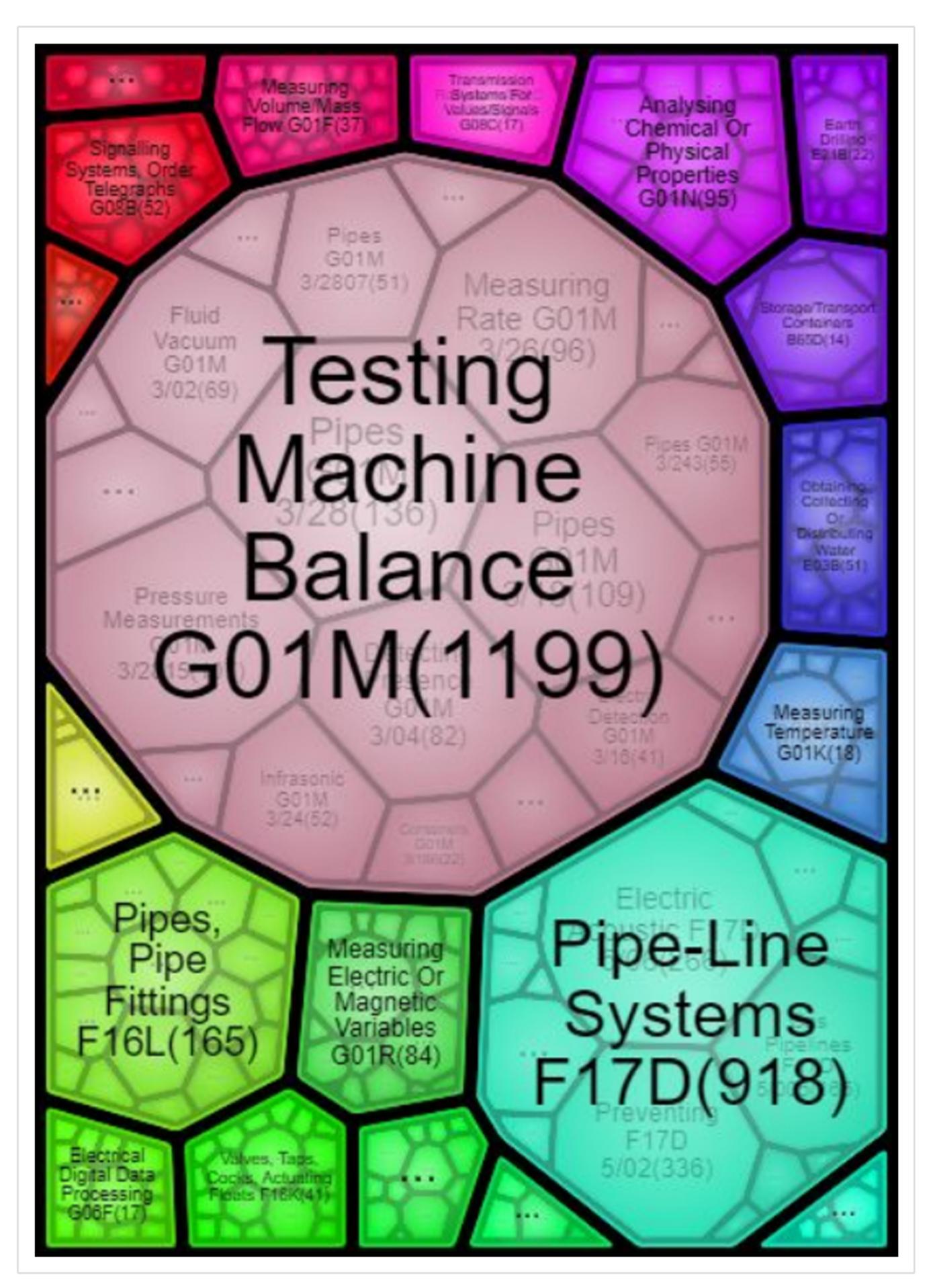


Top assignee by dead/alive according to total publications

IP Insights



Top Technological Concepts



Top CPC Classes



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Let's get connected!

