BATTELLE APPLIED GENOMICS

APPLIED GENOMICS & BIOINFORMATICS

In the increasingly interconnected and complex world of today, the ability to uniquely identify individuals, generate investigative leads, and attribute trace-level evidence are becoming essential for the intelligence, national security, public safety and environmental communities. As this reality emerges, new technologies continue to evolve that enable the more precise identification and characterization of individual humans, microbes, plants and animals.

To this end, Battelle's experts advanced the use of massively parallel sequencing for defining the genetic identity of individuals and we see tremendous potential for cutting-edge genomic sequencing that will allow clients to achieve the results required by their respective industries. Our experts work across Battelle to deliver comprehensive solutions that touch bioinformatics, biological threat detection, biosurveillance, advanced analytics, biometrics, and environmental sciences to meet the unique needs of our clients.

Battelle experts are leading the way in methods for quickly and efficiently genotyping individuals directly from shortread sequencer data and were among the first to publish methods for short tandem repeat (STR) genotyping in humans. Along with collaborators, Battelle develops methods to rapidly and accurately identify microorganisms using modest computing resources. We have developed advanced methods for:

- Determination of human identity, kinship, phenotype and ancestral origin in national security scenarios
- Accurate microbe identification and metagenomics analysis for environmental bioremediation resolution
- Bioinformatics analysis and database design
- Characterization of human genome sequences for personalized medicine applications
- Pathogen strain attribution for hospital acquired infections and environmental outbreaks

Our extensive experience in environmental and clinical sample collection and processing, including our expertise in processing pathogenic samples in our extensive Biosafety Level 3 (BSL-3) suite allows us to offer a complete capability in sample sequencing and analysis – from sample preparation to data assurance and large volume data management. Battelle's highly skilled scientists perform in-house sequencing on multiple platforms, and conduct bioinformatic processing using in-house custom-built pipelines.

We can customize bioinformatics pipelines featuring extreme computational efficiency on virtually any smaller-scale computing platform. We are also capable of conducting standard sample analysis. Our current offerings include:

PRODUCTS:

- Bioinformatics software for sequence analyses
- Advanced biodetection and biosurveillance device development
- Biometric identity hardware and software

SERVICES:

- Genomics laboratory analysis and method development
- Bioinformatics software development
- Data management and analyst support
- Biometric identity hardware and software services
- Training and support

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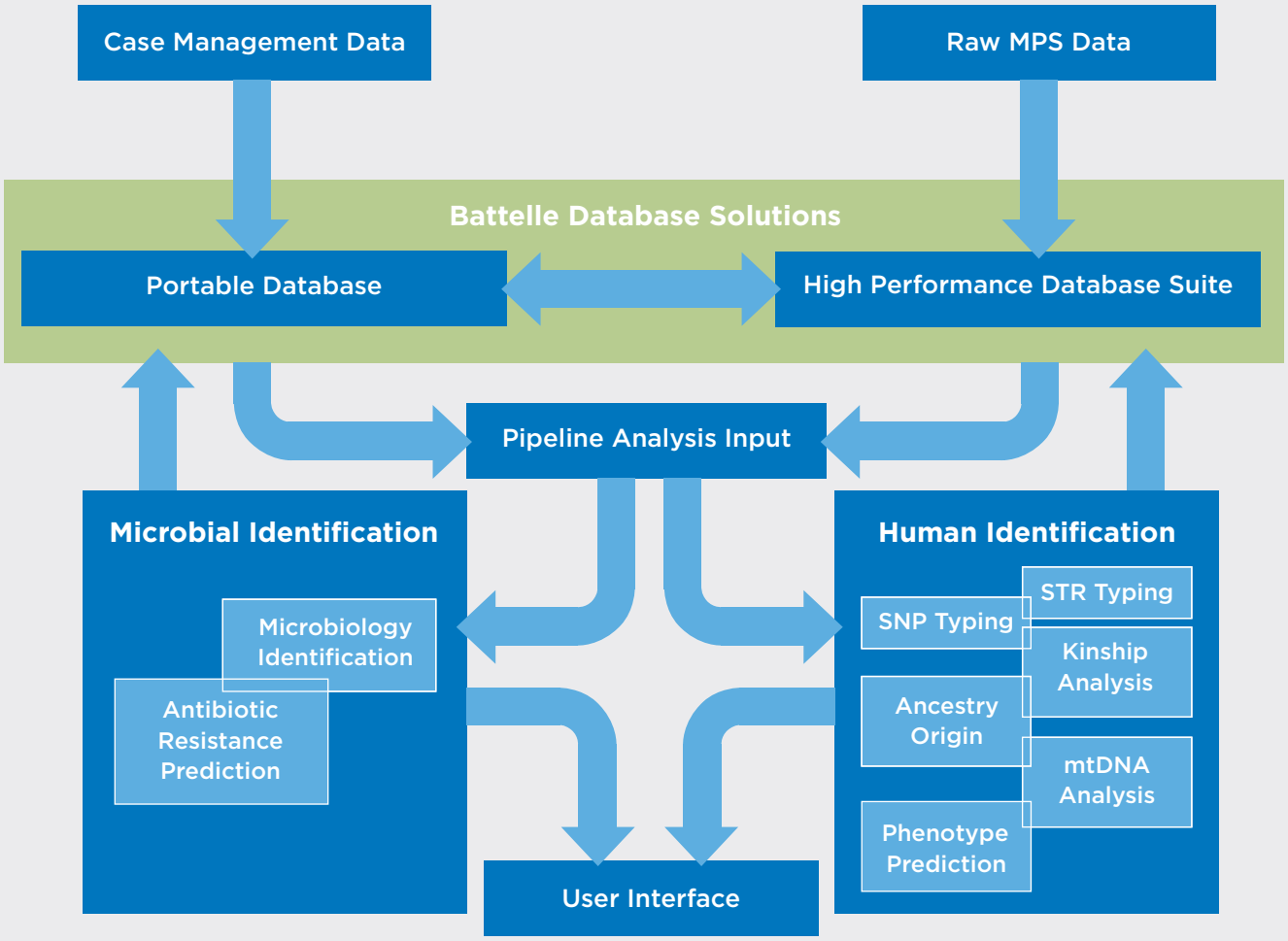
GENOMIC IDENTIFICATION

Battelle delivers sequencing results when and where they're needed: in the field, and in minutes, not days or weeks. Whether predicting the physical appearance of a suspect from DNA evidence or assigning attribution by tracing a pathogen to its origin, we deliver fast, accurate answers to the questions that matter most.



Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries. For more information, visit www.battelle.org.

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