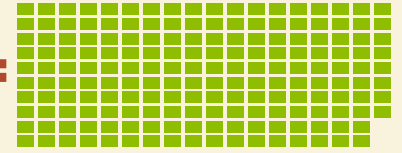


USING ANALYTICS TO REDUCE THE COMPLEXITY OF MEDICAL RESEARCH & DEVELOPMENT

Public sector R&D is a leading driver of technological innovation and economic growth.

- The National Institutes of Health (NIH) invests **\$30.1B/yr.** on biomedical research, stimulating **\$60B** in economic activity
- The Defense Health Program invests **\$1.2B/yr.** to research medical conditions from traumatic brain injury (TBI) to cancer

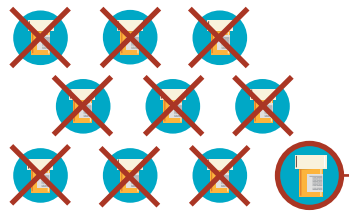


Each federal dollar invested in the Human Genome Project has generated **\$178** in economic activity totaling **\$965,000,000,000**

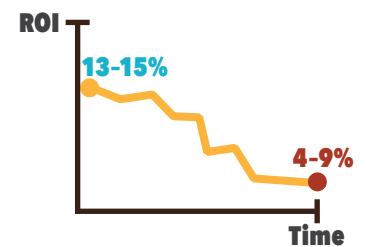
However, **HIGH COSTS & LENGTHY TIME TO MARKET** has slowed that growth.



On average, it takes **15 years and up to \$1,600,000,000** to bring a single drug to market



Studies show only **1 out of 10** drugs that begin clinical trials will achieve FDA approval



The average ROI for medical R&D fell from **13-15%** in the 1990s to **4-9%** since 2000

What can **ANALYTICS** do to **LOWER COSTS, IMPROVE ACCURACY, and SAVE TIME** in delivering life-saving treatments to patients and wounded veterans?



Integrate data vertically to generate insights at all stages of the research process



Enhance collaboration with internal and external partners



Discover molecules with medical potential through the predictive modeling of biological processes



Improve clinical efficiency by identifying rapidly emerging insights data to enable smaller and shorter trials



Identify clinical trial patients faster through data gathered from disparate sources



Reduce safety risks and unnecessary delays via real-time monitoring of wearable devices

Many agencies are **ALREADY REALIZING** the benefits that analytics offers medical R&D:



The Defense and Veterans Brain Injury Center (DVBIC) studied the long-term effects of TBI to develop clinical guidelines that have reduced the rates of re-injury in both soldiers and citizens.



Analytics are helping the U.S. Navy Bureau of Medicine and Surgery's **Navy Medical Research Center (NMRC)** accelerate the path of a promising malaria vaccine toward FDA approval.



The Centers for Medicare and Medicaid Services offers health researchers secure, virtual access to the **Chronic Conditions Warehouse (CCW)** to study diseases like diabetes.

Government Business Council

ABOUT GBC
Government Business Council (GBC), the research arm of Government Executive Media Group, is dedicated to advancing the business of government through analysis and insight. GBC partners with industry to share best practices with top government decision-makers, understanding the deep value inherent in industry's experience engaging and supporting federal agencies.

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General Dynamics Information Technology helps our clients improve care quality for their stakeholders by enabling better ways to connect. Applying extensive health and health IT expertise for today's healthcare challenges, we provide innovative solutions that help you analyze big health data, enable payment reform, manage population health, modernize IT infrastructure and systems, exchange health information (HIE), fight healthcare fraud, waste, and abuse. Learn more about our work at www.gdit.com/health.

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