TRANSFORM A WORLD OF DATA INTO A WORLD OF INTELLIGENCE
SAS creates for one reason - so you can turn today’s most critical challenges into tomorrow’s great decisions.

Jim Goodnight
FROM THE CEO

I believe curiosity is at the heart of human progress. We possess a relentless desire for answers - to explore a different path, or improve the current state. We are driven by the need to know. So we ask questions: What if? Why? How can we do it differently?

At SAS, our curiosity never stops. We’re always uncovering and discovering, innovating and analyzing. Because what follows is always progress - whether it’s a better version of what exists, or something entirely new.

We understand that not all problems are the same size, but that all problems can make a significant - often immediate - impact on business and even lives. Our curiosity has driven us to help you solve your most critical business issues, as well as tackle humanitarian issues around natural disasters, opioid abuse, suicide prevention, child welfare and much more. At SAS, we create for one simple reason - so you can transform today’s most critical challenges into tomorrow’s great decisions. Together, we can find answers to any challenge. We can make what was impossible, possible.

Over the years, SAS has developed an incredibly deep set of capabilities and amassed a level of knowledge across industries to empower you to drive continuous intelligence and competitive differentiation from your data. We do this through an unwavering commitment to innovation, reinvesting twice the percentage of annual revenue into R&D as our competitors. This is one reason why analysts last year named SAS as a leader in more than 30 reports. It’s also what inspired us to design - and continue to enhance - the perfect analytics platform, with capabilities our customers requested, like openness, interoperability and expanded machine learning. And we are armed with our best arsenal ever.

Through our passion for delivering innovation, our mission is to empower and inspire you with the most trusted analytics. To feed your curiosity and take you to greater insights. We aim to make it easier for more people and more organizations to use powerful analytics every day - to shorten the path from data to understanding, and to inspire bold new discoveries and ideas that drive progress for yourself, and for the world.

Curiosity is the catalyst for all acts of discovery, and it leads to knowledge, insight and wisdom. At SAS, we envision a world where everyone can make better decisions, grounded in new data and discoveries, assisted by the power and scale of SAS® Analytics.

And in a world where data grows exponentially, SAS stands at the forefront to help you transform this world of data into a world of intelligence.

Sincerely,

Jim Goodnight
CEO of SAS
“SAS has the ability to bring together the data scientist community like no other solution can.”

Shawn Hushman
VP of Decision Sciences of Cox Automotive
INTELLIGENCE ANYWHERE. ANYTIME.

Data without analytics is value not yet realized. By bringing analytics to wherever there is data, everyone and everything will be able to make more intelligent decisions. Fueled by data and aided by analytics, organizations can uncover new relationships, identify never before seen patterns, automate tasks and gain new understanding of the world around us.

We embed intelligence into everything, executed where you need it - in the cloud, on-site or at the device. It’s in household appliances. Wearable fitness monitors. Car engines. It’s in robots, road sensors - in short, it’s everywhere. And we’re enlisting machines as partners to augment human decision making.

Artificial intelligence = analytics innovation

Data is all around us. The Internet of Things (IoT) and sensors have the ability to harness large volumes of data, while artificial intelligence (AI) can learn patterns in the data to automate tasks for a variety of business benefits.

SAS leads the pack for analytics innovation in a breadth of industries where we experience the human benefits of smart vehicles, smart stores and smart cities. SAS works with major vehicle manufacturers, helping them equip cars and trucks of the future to be safer and more responsive to human needs and interaction. And SAS helps analyze streams of biometric data flowing from wireless, wearable medical devices that allow patients to remain at home while under a physician’s care instead of enduring long hospital stays.

SAS has been delivering AI and machine learning technologies to customers for decades. We continue to innovate AI capabilities in contemporary areas such as deep learning, computer vision, natural language, forecasting and optimization.
Intelligence across the Internet of Things

Organizations now deal with massive amounts of data from sensors and real-time data streams across the IoT. In fact, industry analyst firm IDC estimates the size of the analytics market in IoT will grow to over $23 billion by 2020. No matter where data lives – edge devices, data centers or in the cloud - you need to get the most out of your IoT data, mining and analyzing it to detect patterns as events occur. To help customers realize this tremendous potential, SAS created a new global division devoted to IoT. Bringing together R&D, marketing, product management, enablement and channel sales, the IoT division develops, delivers and supports powerful IoT analytics software that covers the entire analytics life cycle - batch, streaming and edge - all designed to help customers create value from their IoT investments. The SAS IoT division develops new partnerships and expands existing ones to bring together best-in-class technology and expertise.

For example, in 2017, SAS and Cisco unveiled the Cisco SAS Edge-to-Enterprise IoT Analytics Platform. It brings together all the hardware and software needed to analyze IoT data so customers do not need to build an IoT platform from scratch. SAS brings similar benefits to customers through long-standing partnerships with Hewlett Packard Enterprise and Intel.

A key technology for the new IoT division is SAS Event Stream Processing, which analyzes high-velocity data while in motion so action can be taken immediately. SAS Analytics for IoT helps customers make fast, confident decisions while reducing bandwidth and storage costs. And it covers the full analytics life cycle - from data capture and integration to analytics and deployment.
Intelligence throughout the analytics life cycle

The analytics life cycle is the process of extracting intelligence and value from data - and SAS continues to be at forefront. You need to be able to access data from anywhere, prepare it for analysis, analyze it and then ensure the insights can be visualized, shared and put into operational environments. This sounds easy enough; in reality, it is incredibly difficult. Unless you have the SAS Platform.

The SAS Platform supports the complete analytics life cycle, empowering teams to more easily extract value from data and make decisions that drive growth. Our software foundation is engineered to create intelligence and value from any type of data – whether you are using a single API, one product, a suite of products or an entire industry solution. SAS offers the ability to scale processing power as needed; the option for real-time modeling with SAS Event Stream Processing; and the flexibility to call upon multiple languages or skill sets - all with the ease of discovery and deployment in one unifying platform.

Enhancements to the platform through SAS® Viya® and the transitioning of core SAS Analytics technologies deliver even more capabilities to your analytics-driven organization. The SAS Platform includes new managed software-as-a-service offerings on the SAS Cloud and continues to support public or private cloud deployments.

SAS is also making it easier for customers to build artificial intelligence solutions by incorporating AI capabilities such as machine learning, deep learning, computer vision, natural language processing, forecasting and optimization – enabling new capabilities for organizations.

The SAS® Platform enables you to gain intelligence from your data across the entire analytics life cycle. It provides you the complete ability to access data from anywhere, prepare it for analysis, analyze it and make it operational.
“SAS has been able to retain authority in the advanced and predictive analytics market and continue to grow year over year. SAS’ deep roots in advanced analytics and commitment to R&D are two things that help SAS stay at the top of the category.”

Dan Vesset
Group Vice President of Analytics and Information Management at IDC
INNOVATION FUELED BY THE WORLD’S MOST TRUSTED ANALYTICS

Analytics is the very core of SAS. We’ve been applying analytics to the toughest business problems for more than 40 years. With a commanding 30.5 percent market share in predictive and advanced analytics, we dominate the market because we infuse cutting-edge, innovative algorithms that help customers solve their most stubborn problems and unearth potentially missed opportunities.

Last year, analysts named SAS a leader in more than 30 reports, recognizing the company’s innovation and market dominance in areas including streaming analytics, machine learning, big data, data science platforms, real-time marketing, data integration, data quality, fraud detection, risk management and retail analytics.

Our software turns data into intelligence – analyzing streaming data and generating split-second decisions that happen at a speed and volume impossible for humans. With a unifying data management and analytics environment, we empower customers to solve today’s challenges and uncover tomorrow’s opportunities. We do this by offering the most trusted analytics everywhere, and to everyone. The SAS Platform continues to be the foundation that powers AI and other innovations to meet changing business needs.

Customer intelligence and decision management

Analysts continue to position SAS as a leader in marketing technology, most notably in the crucial areas of real-time interactions and digital marketing analytics. Customers expect brands to know what they want, and when and how they want it. SAS helps marketers meet these demands, often in real time, while also enabling smart marketing strategies powered by predictive analytics, artificial intelligence and machine learning.

Learn how Seacoast Bank enhances customer value and generates insights using SAS Visual Analytics. sas.com/customers

Data management

Data drives everything. You need to make sure it’s right. Data management is critical as companies are dealing with more diverse types of data than ever before, and need the ability to access, integrate, cleanse and govern data to make it valuable for analysis. It is a key component of the SAS Platform, modularized for rapid results and designed with IT and business collaboration in mind. Recent product enhancements around self-service and smart data preparation, cloud data access, event stream processing and governance and compliance make it even easier to quickly transform big data into big opportunity.

Learn how Greek insurance leader INTERAMERICAN relies on SAS for GDPR compliance. sas.com/customers
Fraud and security intelligence

Independent analyst firms like Forrester and Chartis have long distinguished SAS as a leader in fraud analytics, recognizing machine learning and artificial intelligence among our key differentiators. SAS’ Fraud and Security Intelligence division, which includes fraud management, anti-money laundering, public safety and cybersecurity, delivers the most breadth and depth of any solutions on the market. These solutions enhance the speed and accuracy of customers’ surveillance and detection capabilities with hybrid analytics that automatically suggest new rules in real time. Intelligent case management, smart automation and the ability to make decisions faster all help reduce fraud, waste and abuse while also streamlining investigation processes and boosting productivity.

Learn how SAS helps Danish payments processor Nets improve fraud detection while reducing card fraud and false positives. sas.com/customers

Risk management

Ninety-nine of the top 100 global banks use SAS Analytics to manage risk. In light of changing regulatory requirements, SAS is helping organizations establish a risk-aware culture, optimize capital and liquidity, and meet new challenges like the new IFRS 9 / CECL accounting standards. Perhaps more importantly, SAS goes beyond helping organizations with compliance, to aiding them with orchestrating and managing models and analytics that benefit their business.

Learn how TD Bank uses SAS to manage model risk across the model life cycle. sas.com/customers

Cloud

Cloud computing was designed to be transparent. All of us use it every day, whether we know it or not. However, we understand our customers and partners have a strategic view on this landscape. They have a vision that cloud infrastructures, partners and services are key to advancing their initiatives more economically, with reduced risk, and empower their people to make decisions on data without regard to where they store it. SAS is supporting this vision by reinventing how we think about analytics in the cloud. In 2018, SAS will expand even further how we exploit cloud platforms and ensure our customers’ success for generations to come.
Succeeding in an analytics economy

Using analytics to suggest actions to business leaders, analysts, data scientists and customer service teams is fueling what we call the analytics economy. The analytics economy, simply put, is the combination of data + analytics + collaboration. Each insight sparks the next, and the value of insights compound just like interest on a savings account. This is all possible now because we have accessible data, fueled by advances in computing power and connectivity, and interpreted by more powerful analytics. Analytics must be anywhere data resides.

We want anyone, regardless of skill level, who has access to data be able to solve their analytic problems. Doing so harnesses the curiosity, observations and insights and unleashes the intellectual potential of your entire organization – from executives and data scientists to everyone in the business.

Learn more about how customers like Kelley Blue Book and Oberweis are embracing, and building, an analytics economy. sas.com/customers

Midmarket emphasis

While faced with the same industry challenges as their larger counterparts, midmarket companies have different purchase behaviors. They often operate on smaller budgets, with less access to sophisticated enterprise technology solutions. Leaders in the midmarket must focus on optimizing marketing capabilities with fewer resources to create deeper customer experiences. Some of the biggest brands, like the New York Mets, are often the smallest companies with just a couple hundred employees. That small team still has to keep 40,000 fans happy at every home game. SAS helps them use their staff and messaging tools to deliver the right messages to the fans, while reporting the success of the campaigns to owners and managers.

Companies actively using customer insights more successfully meet their goals. Despite technology constraints and limited resources, midmarket companies can apply customer analytics to their marketing efforts. Running SAS on cloud architectures lets smaller organizations realize quick time to value, while controlling infrastructure cost. SAS Visual Analytics makes analytics approachable without requiring a statistical background. And integrated marketing toolsets can differentiate midmarket companies from small and large competitors alike.

All of this, combined with SAS’ strong partner ecosystem and portfolio of results-as-a-service, managed analytics service provider and software-as-a-service offerings, helps customers of all sizes implement technology in ways that best fit their needs and those of their customers.

Learn more about how SAS and the New York Mets team up to keep fans happy. sas.com/customers
“We believe that lives can be improved through analytics - it is transformative technology.”

Oliver Schabenberger
Chief Operating Officer and Chief Technology Officer
TruDecision

“SAS provides the cloud-based horsepower we need to deliver our proprietary data and modeling solutions. At present, our industry focuses on the technology required to source and route customer information, with almost no insight into the customers themselves. Backed by SAS, we can insert ourselves directly into that data flow, rapidly developing and deploying artificial intelligence, machine learning, and neural network models to maximize the effectiveness of our customers’ business process.”

Daniel Parry, Chief Executive Officer of TruDecision

Canadian financial technology firm TruDecision brings efficiencies to auto dealers and lenders through analytics. Using SAS Viya, the company is able to revolutionize the customer acquisition process by performing powerful credit analytics on consumers in real time – even before the lender or dealer encounters them. This drives costs down by as much as 40 percent for each group.

GE Transportation

“Our locomotives are equipped with edge devices that manage hundreds of data elements per second to optimize locomotive operation. We use SAS Event Stream Processing to enable our customers with analytical insights on their data in real time. The software has been easy to implement and use.”

Garret Fitzgerald, General Manager of Transport Intelligence at GE Transportation

In the rail industry, assets are mobile and constantly moving in and out of communication, making it even harder to derive value from data that lives on the edge. That’s why on more than 1,000 locomotives across North America, GE Transportation uses SAS to analyze data streaming from hundreds of sensors that generate a billion data points per second. SAS Analytics and the IoT help make trains smarter, more efficient and more reliable. Yet on more than 1,000 locomotives across North America, GE Transportation uses SAS to analyze data streaming from hundreds of sensors that generate a billion data points per second. SAS Analytics and the IoT help make trains smarter, more efficient and more reliable.
SciSports

“SAS has the potential to give us four key things we need. The ability to scale our processing power up or down as needed; the option to put models into production in real time using SAS Event Stream Processing; the ease of development and discovery in one platform; and the flexibility to call Python or other open source software.”

Wouter Roosenburg, Chief Technology Officer at SciSports

Through a development partnership with SAS, Dutch sports analytics firm SciSports helps clubs in Europe and Brazil with AI and advanced 3-D imaging. SciSports uses 14 cameras around a soccer pitch to track every player’s move and analyze performance in real time to make in-game and training adjustments.

Pennsylvania Patient Safety Authority

“It is one thing to develop one of the nation’s largest and best-known statewide patient safety databases. It’s quite another to turn that data into lifesaving information. The effect of this project has been transformational.”

Howard Newstadt
PSA Finance Director and Chief Information Officer

Medical errors are the third-leading cause of death in the US. That’s why Pennsylvania Patient Safety Authority applies SAS Visual Analytics to millions of medical error reports, unearthing new information about medical error trends and causes, revealing new strategies to help protect patients, and saving hundreds of thousands of dollars in database design and staff time.
Commonwealth of Virginia Department of Medical Assistance Services

“Today, we can instantly see which services are available, and where. This will help get addiction recovery assistance to the people who need it more quickly.”

Cindi Jones, DMAS Director

In November 2017, the Virginia State Health Commissioner declared opioid addiction a Virginia public health emergency. Opioid-related deaths in the commonwealth were up nearly 80 percent in 2016 compared to five years ago. The Virginia Department of Medical Assistance Services (DMAS) speeds medical care to citizens in need, including treating those with opioid addiction, by analyzing massive amounts of data using SAS Analytics. More and more, that care involves treating opioid addiction.

But with data flooding in from across the commonwealth, including emergency department, opioid and heroin abuse data, it is difficult to match patients with the best provider and services. This is particularly burdensome in rural counties, where providers are fewer and scattered. Using SAS Visual Analytics, DMAS can review fresh provider network data each day and view on a “heat map” any gaps in coverage. Previously, data was updated only every few weeks - too late for someone in crisis. DMAS extracts and disseminates over 1 billion records a year - a number expected to snowball as DMAS transitions to 100 percent managed care.

DMAS needed analytics software that could increase and help it quickly process requests from citizens and stakeholders, such as the governor, general assembly, chief medical officer, secretary of health and human services, and others. DMAS now turns around prior authorizations for services or prescriptions in a single day, a process that previously took 30 days or more.
WildTrack

"Having reliable data on species’ numbers and distributions is fundamental to wildlife conservation, but it’s not easy to collect, particularly for elusive and endangered species. Spotting these animals’ footprints is much easier than locating the animals themselves. SAS helped us open new doors to monitor these endangered animals in a non-invasive way that poses no risk of injury to them. That’s essential when dealing with species that are so rare."

Zoe Jewell, co-founder and Principal Researcher, WildTrack

There are only about 7,100 cheetahs left in the world. This is down from 100,000 less than a century ago. WildTrack, a nonprofit conservation group, wants to ensure these powerful cats aren’t next on the extinction list. And they’re doing that with help from artificial intelligence.

Powered by technology from SAS, WildTrack is identifying and cataloging data from the footprints of these animals in Africa, training algorithms to see what an indigenous tracker sees in each of these unique marks. To an indigenous tracker, each footprint helps tell the animal’s story - the species, location, age-class, sex. AI is taking a very tedious human process and automating it. And this data has incredible value in conservation.

WildTrack’s award-winning analytic application – the Footprint Identification Technique (FIT) – uses SAS to analyze digital footprints of animals to identify these and other endangered species with at least 90 percent accuracy.

To date, FIT algorithms have been developed for 15 different species, including the black rhino, white rhino, Bengal tiger, Amur tiger, Lowland and Baird’s tapirs and polar bear. This data has been collected to determine the numbers and distribution of species in their respective habitats so that conservation programs can be implemented. Without access to this data, it would be difficult for researchers to find a starting point to see exactly which species need to be monitored.
Telethon Kids Institute

“We use SAS every day. When you’re doing this research, you need to back up your findings with sound tools and methodologies. With SAS, we can guarantee the accuracy of our procedures and be confident in our findings.”

Scott Sims
Data Analyst at Telethon Kids Institute

Telethon Kids Institute is a global leader in children’s health research, with a mission to discover the causes, cures and treatments for illnesses, diseases and conditions that affect kids. They rely on SAS to help them prevent child maltreatment in Australia. Evidence shows children with disabilities are three times more likely to be maltreated than other children, but that risk varies by type of disability. With the help of SAS Analytics, the institute found that children with intellectual disability, mental problems and conduct disorders had increased risk of maltreatment. But those with autism, Down syndrome or birth defects did not. The analysis also exposed areas most in need of early intervention.

The University of Oklahoma

“The (products other than SAS) I tried weren’t as statistically user-friendly as I wanted. With SAS, you’re able to manipulate and set things, especially targets, the way you would want to, whereas other systems don’t allow that sort of manipulation. And the SAS world is filled with helpers. If I have questions, I can search the SAS online communities to see if somebody else has already dealt with and answered my problem. If not, I can post there and, within 24 hours, I’ll have eight different ways of solving it.”

Lisa Moore, University of Oklahoma data scientist (Institutional Research and Reporting)

The University of Oklahoma uses predictive analytics from SAS to improve its student recruitment strategies. The resulting freshman class was the largest in the university’s history, and the most academically prepared. The class included more students ranked No. 1 in their class, and more with a 4.0 GPA, than ever before. The class also contained more National Merit Scholars than any other public or private university.
Telia Denmark

“It has been really positive to see that we are achieving a level of data quality of which we might not have been sufficiently aware had we not started this process.”

Anders Stokvad, Senior Business Analyst at Telia Denmark

Europe’s fifth-largest telco, Telia Denmark, is amplifying GDPR readiness with the help of SAS Analytics. The dashboard makes it easy to report to management stakeholders about progress in a format that gives at-a-glance insights. This has proven to be a valuable tool for relevant management discussions and makes a complex task more readily understood.

New Zealand Ministry of Social Development

“We have a golden opportunity in the social sector to use advanced analytics to transform the lives of New Zealanders, and that’s what we’re doing. By taking the same approach to data analytics that the corporate sector has been doing for decades, MSD saw a huge opportunity to learn more about who receives benefits and to make better decisions about the support and investment they need.”

Paula Bennett, former Minister of Social Development

Social welfare accounts for nearly a quarter of New Zealand’s gross domestic product. Tasked with improving services while spending these funds responsibly, the Ministry of Social Development (MSD) is transforming its welfare system with the help of SAS Analytics. With analytics at the heart of welfare reform, MSD is using its huge amount of information to provide better support to those who need it. It has transformed the way MSD targets its service-based investments and has enabled the agency to concentrate efforts on those who need it most. This translates to greater savings of taxpayer money as well as better futures for people and their families. After just a few years, early results of the investment approach have been positive. Benefit figures are at a five-year low, and with projected savings of $1 billion over four years, other government agencies are looking to follow in MSD’s footsteps.
Suez can pull all of our massive amounts of data into the SAS Platform, not just a sampling, and run the most sophisticated machine learning algorithms on it to create the more accurate forecasts for our sales team. One interface that can be used across the organization that creates a single version of the truth is improving the way we do business. Not only do we have the statistics in SAS, we now have the data collection, preparation and visualization all in one platform. Plus, we can deploy the models in a scalable, aligned and auditable way, and continuously feed the model new data to make it smarter and smarter over time. The better the forecasts, the better Suez is able to serve our customers.”

Teddo van Mierle, Marketing Intelligence Expert at Suez

A Netherlands-based waste management group - Suez Recycling and Recovery - uses machine learning from SAS to improve sales performance. Now provided with a reliable view into their customer and prospect data, sales reps can access the most up-to-date customer profiles and receive customized recommendations about where to concentrate sales efforts on a daily basis. Inside sales uses the same data and forecasts tracked by outside sales to help make decisions in real time while speaking with customers and prospects by phone. This creates a unified approach to sales across the organization and improves customer relationships.
“SAS continually demonstrates a standing commitment to supporting education.”

Venessa Harrison
President, AT&T North Carolina
CLOSING THE ANALYTICS SKILLS GAP

Teaching and learning

Whether you’re a teacher, professor, student, academic researcher or independent learner, we offer anyone in a teaching and learning environment free and low-cost options for accessing our world-class analytics software, training resources and online communities.

Free software and training are available through:

• **SAS University Edition** - designed to help learn and teach SAS skills, as well as how to analyze data using SAS foundational technologies, at no charge.
• **SAS OnDemand for Academics** - provides online access to powerful SAS software via the cloud, typically as part of an academic course. It is free to professors, students, academic researchers and independent learners.
• **SAS Academy for Data Science** - colleges and universities get free access to academy content to help students earn valuable credentials.
• **Free e-learning resources** and online tutorials to help users get started in SAS.

For institutions wanting in-house software and data for teaching and academic research, the Education Analytical Suite provides comprehensive SAS foundational technologies via reduced-cost enterprise licenses.

Degrees and certifications

We have partnered with colleges and universities to develop more than 70 master’s and undergraduate degrees and more than 170 joint certificate programs in analytics and related disciplines. And we also make it easy for educators to teach SAS by providing free workshops to help them get started.

In addition, the SAS Academy for Data Science offers online, flexible training to help people earn valuable credentials like SAS Certified Big Data Professional, SAS Certified Advanced Analytics Professional and SAS Certified Data Scientist. Global customer demand for certification from SAS continues to grow with more than 125,000 SAS credentials awarded. In 2017, 56 percent of SAS certifications earned were outside the US.

Communities

Our customers are not only critical to SAS innovation but also in helping those who want to expand their analytics knowledge. Our users share a vibrant online community where they exchange extensive SAS expertise or look for help. Thousands of practitioners participate in SAS users group activities, where they enjoy presentations, hands-on workshops and access to SAS experts. In SAS’ hosted online communities, practitioners receive not just technical advice for how to use our software, but also “best practice” guidance for how to approach analytical problems. The advice from seasoned professionals includes the discipline of proper data preparation, which algorithms are best for which type of data and analysis, and how to interpret results that might differ from what was expected.

The SAS Analytics U and SAS Certification communities connect students and independent learners with resources to develop and certify their SAS skills. These connections - made among professional and student users around the globe - help to advance the experience and expertise of SAS practitioners.
“Beyond innovation, SAS has always been committed to three things: treating employees well, environmentally friendly practices and giving back to education.”

Jenn Mann
Chief Human Resources Officer
year programs focused on energy conservation and solar projects, emission management, pollution mitigation, water conservation, waste reduction and recycling, procurement and green building.

Analytics helping humanity
Some people look at data and see numbers. Others look at numbers and see the potential to improve lives. SAS is proud to be part of the Data for Good movement, which encourages using data in meaningful ways to solve humanitarian issues around poverty, health, human rights, education and the environment. From helping tackle opioid addiction and safeguarding vulnerable children to protecting fragile species through conservation efforts, SAS’ analytics solutions change the world by analyzing data to solve critical humanitarian issues. Expanding on our social innovation efforts, SAS introduced GatherIQ™—a crowdsourcing initiative bringing together volunteers to solve social challenges. The GatherIQ app has been downloaded by people in more than 70 countries who want to use data for good.

Commitment to education
Education drives economic growth, and we are committed to developing the next generation of innovators. By supporting efforts that prepare more graduates for college, work and success, SAS plays a vital role in the global community. To bridge a persisting analytics skills gap, SAS makes it easy to build highly coveted analytics skills by targeting worldwide education initiatives in STEM to ensure the next generation of innovators has the knowledge and skills to succeed. Curriculum Pathways® offers free digital tools, resources and apps for grades P-12. It is used in all 50 states, and globally, by more than 3.5 million teachers and students. Curriculum Pathways also offers the free CodeSnaps app to interactively teach students coding fundamentals with Spheros and iPads.

Sustainability for a brighter future
Since 1976, SAS has been a sustainability innovator through environmental, social and economic efforts. We work closely with employees, suppliers and customers to foster an award-winning, sustainable workplace that has a positive impact on our future. SAS reduces its environmental footprint with multi-
In 2017, efforts around corporate social responsibility landed SAS among People magazine “Companies That Care” and Fortune’s list of companies that “Change the World.”

- **3.8 million kWh**: Renewable energy generated annually from solar installations.
- **More than 90 FREE**: On-site charging stations for plug-in electric vehicles.
- **2 million**: Users of free Curriculum Pathways® (P-12).
- **78%**: Of all office and data center space at SAS world headquarters is LEED® certified. SAS remains dedicated to green building standards, aspiring to LEED certification in both new construction and renovations.

**Data do-gooders**: Data scientists across more than 70 countries.

**Over 3,000**: Education institutions using, teaching and learning with SAS.
SAS has been ranked on Fortune’s 100 Best Companies to Work For in the US since the list was introduced in 1997. SAS is also recognized globally as a company dedicated to employee well-being.

### 2017 Workplace Culture Awards

- Argentina
- Australia
- Austria
- Belgium
- Brazil
- Canada
- China
- Europe
- France
- Germany
- Greece
- India
- Ireland
- Hong Kong
- Italy
- Luxembourg
- Malaysia
- Mexico
- Portugal
- Russia
- Spain
- Switzerland
- UK
- US

### 2017 Great Places to Work Multinational Award

SAS ranks No. 3 among the world’s best multinational workplaces.

SAS is continually recognized for providing an enriching work environment that ignites employees’ creativity and gives them the opportunity to change the world. SAS is considered a best place to work for:

- Women
- Gender Equity
- IT Professionals
- Millennials
- Working Parents
- Recent Grads
- Diversity & Inclusion
“Successfully innovating new technology and ways to help our customers is why we continue to be the company people turn to for unrivaled analytics expertise and business solutions.”

Jim Goodnight
SAS CEO
Increased customer demand for artificial intelligence, machine learning, fraud and risk management and cloud solutions strongly influenced continued revenue growth and profitability for SAS in 2017. The analytics leader posted US$3.24 billion in total operating revenue.

Last year, Asia Pacific and Latin America saw the highest growth as customers in those regions adopted more strategic uses of analytics. Government, manufacturing, retail and sectors of financial services saw strong momentum.

As SAS customers sought to better engage with their own customers, the move to real-time customer engagement became more prominent last year. Targeted solutions like SAS Customer Intelligence 360, SAS Marketing Automation and SAS Marketing Optimization continued helping brands take the next best action with analytics.

Revenue associated with the cloud rose 15 percent as customers sought cost-effective and rapid access to SAS software in a convenient cloud environment. Customers also recognized the value of adding SAS’ expertise without the cost of building their own internal teams. Using the SAS Platform, customers can capitalize on all of their analytics resources, across all of their technologies – taking advantage of SAS expertise, as well as resources in the open source community.

**2017 growth drivers**

SAS’ investment in risk management is paying off, as new sales in this area grew by 35 percent – an indicator that more companies see value in creating a risk-aware culture to meet regulatory demands and anticipate the impact of their investments. SAS expected credit loss and stress testing solutions go beyond compliance to help companies orchestrate and manage models and analytics for business benefit.

An uptick in SAS capital management risk solutions was driven by continued banking regulatory stress testing requirements and new financial reporting standards like IFRS 9 and CECL. An increased need to make real-time credit decisions boosted revenue for SAS credit scoring solutions.

The advanced data governance and data quality capabilities offered by SAS Data Management, which grew at 11 percent, became increasingly important for customers to contend
with data protection regulations like GDPR. Hybrid data landscapes, which combine on-premises and cloud data, also required more sophisticated data integration technologies last year.

Shifts in fraud patterns that require more sophisticated detection methods, like machine learning, led to an 11 percent increase in SAS fraud and security solutions. Modernization of anti-money laundering programs and a need for proactive policing also contributed to this growth.

SAS enhanced the artificial intelligence portfolio with new product releases in machine learning, deep learning and natural language processing, enabling faster insights and simplifying the end-to-end solution for businesses. This focus to make machine learning easy to use and provide quick time to value was well received by SAS customers, and contributed to double-digit growth in machine learning last year.

2018 focus areas

In 2018 SAS is focused on investment areas supporting continued growth in critical and emerging areas. This includes targeted investments to accelerate growth in core strengths, including artificial intelligence and machine learning, analytics, fraud, risk management, data management and customer intelligence. In addition, there is incredible growth opportunity for SAS in IoT, cloud and expansions into the midmarket.

Last year alone, SAS revenue associated with IoT grew by 60 percent. Industry analyst firm IDC estimates the size of the analytics market in IoT will grow to over $23 billion by 2020. An estimated 55 billion connected things are projected to be generating massive data volumes by 2025. Capitalizing on this opportunity will require innovation, like SAS Event Stream Processing, which gained tremendous traction in 2017. And SAS has created an IoT division combining R&D and marketing expertise that continues SAS’ focus on providing edge analytics that add great value to customers’ IoT investments. SAS will continue expanding its Fraud and Security Intelligence business unit that includes fraud management, anti-money laundering, public safety and cybersecurity.

SAS will continue heavy investment in embedding artificial intelligence across the SAS portfolio. Plans are also underway for a center of excellence to help SAS customers understand and apply artificial intelligence in ways that can transform their businesses and the world around us. For example, in financial services, artificial-intelligence-enabled natural language processing can help unlock new services for customers and revenue streams for businesses. In the energy sector, deep learning tools enabled by artificial intelligence can help maximize investments in renewable energy by optimizing placement of wind farms.

New offerings to enhance the cloud experience with SAS applications will include managed container services for customer infrastructure in public or private clouds.
Continuous innovation sustains market leadership

Analysts continue to laud the company’s innovation and market dominance, naming SAS a leader in predictive and advanced analytics. According to analysts, SAS holds a 30.5 percent share of the advanced and predictive analytics market, well over twice the market share of the next-closest competitor. SAS has led – and grown – in this category since IDC started tracking the market in 1997. In 2017, analysts also named SAS a leader in streaming analytics, machine learning, big data, data science platforms, real-time marketing, data integration, data quality, fraud detection, risk management and retail analytics.

Maintaining market leadership is heavily dependent upon innovation. Year after year, SAS reinvests about twice the amount of revenue of major technology firms into R&D – 26 percent in 2017. This investment supported the addition of artificial intelligence capabilities to the SAS Platform. And enhancements to SAS Viya extend the SAS Platform to deliver additional capabilities for analytics-driven organizations including Cisco, the American Red Cross, Munich Re and Lockheed Martin. This modernization appeals to a growing number of SAS Viya adopters seeking to bring together all their analytics assets, and unite SAS with open source interfaces and languages.

Powerful partner ecosystem

SAS global partnering efforts influenced more than one-third of new sales and nearly half of SAS’ largest deals. This includes a growing demand for cloud solutions by midmarket customers with a desire to purchase through trusted local partners.

With an increasing focus on channel sales, SAS grew channel revenue by 79 percent in 2017. The partner impact result is a channel program of systems integrators, resellers, OEMs and managed analytic services providers all focused on helping customers implement SAS technology in ways that best fit their needs and those of their own customers. Digital transformation in core markets is driving significant growth in delivering SAS through cloud partners and managed service providers. SAS is doing more repeatable business with top global partners like Accenture, Capgemini and Deloitte. And as IoT becomes increasingly prevalent, SAS is enhancing collaboration with partners like Cisco and Intel to drive analytics adoption with IoT.
SAS partnering efforts influenced 36% of new sales in 2017.

SAS partnering had high-value impact on nearly 50% of SAS’ largest deals in 2017.

In 2017, analysts ranked SAS a leader or leader equivalent in more than 30 reports.
SAS commits time and resources in areas we believe will make a lasting positive impact in the world.

**Innovation**
When people are empowered with knowledge, no challenge is impossible. So we invest nearly twice the percentage of annual revenue in R&D as most major tech companies.

**Data for Good**
From helping resolve critical humanitarian issues and our dedication to green building and conservation initiatives, to changing conversations around behavioral health and protecting at-risk children, we believe data and analytics make lives better.

**Education**
Our commitment to education is a natural extension of where we came from and what we do. SAS supports global education initiatives that promote learning for all and build a global community of innovators.

**Diversity and inclusion**
At SAS, diversity is more than just gender or race. Our culture blends different backgrounds and experiences from 58 countries globally. We want everyone to feel confident in expressing their ideas, and know that they will be respected for their unique contributions and abilities.