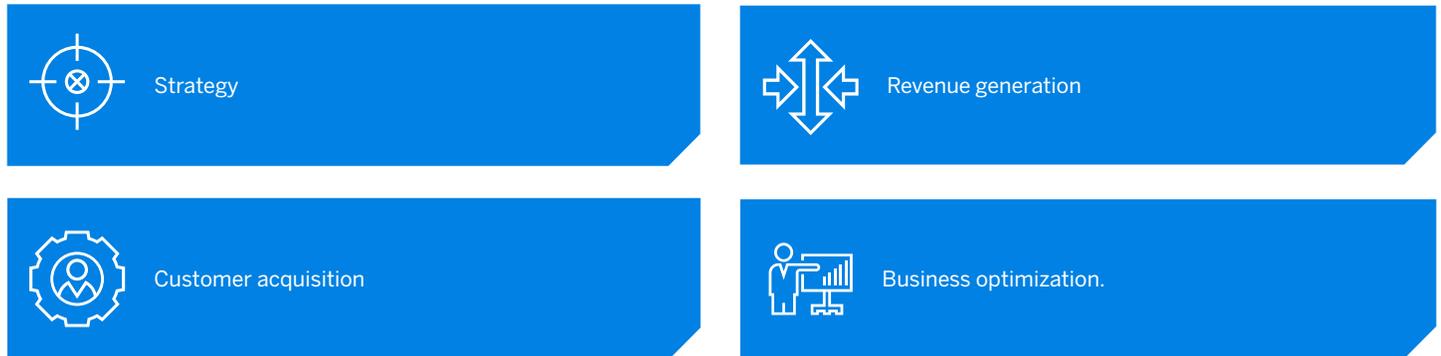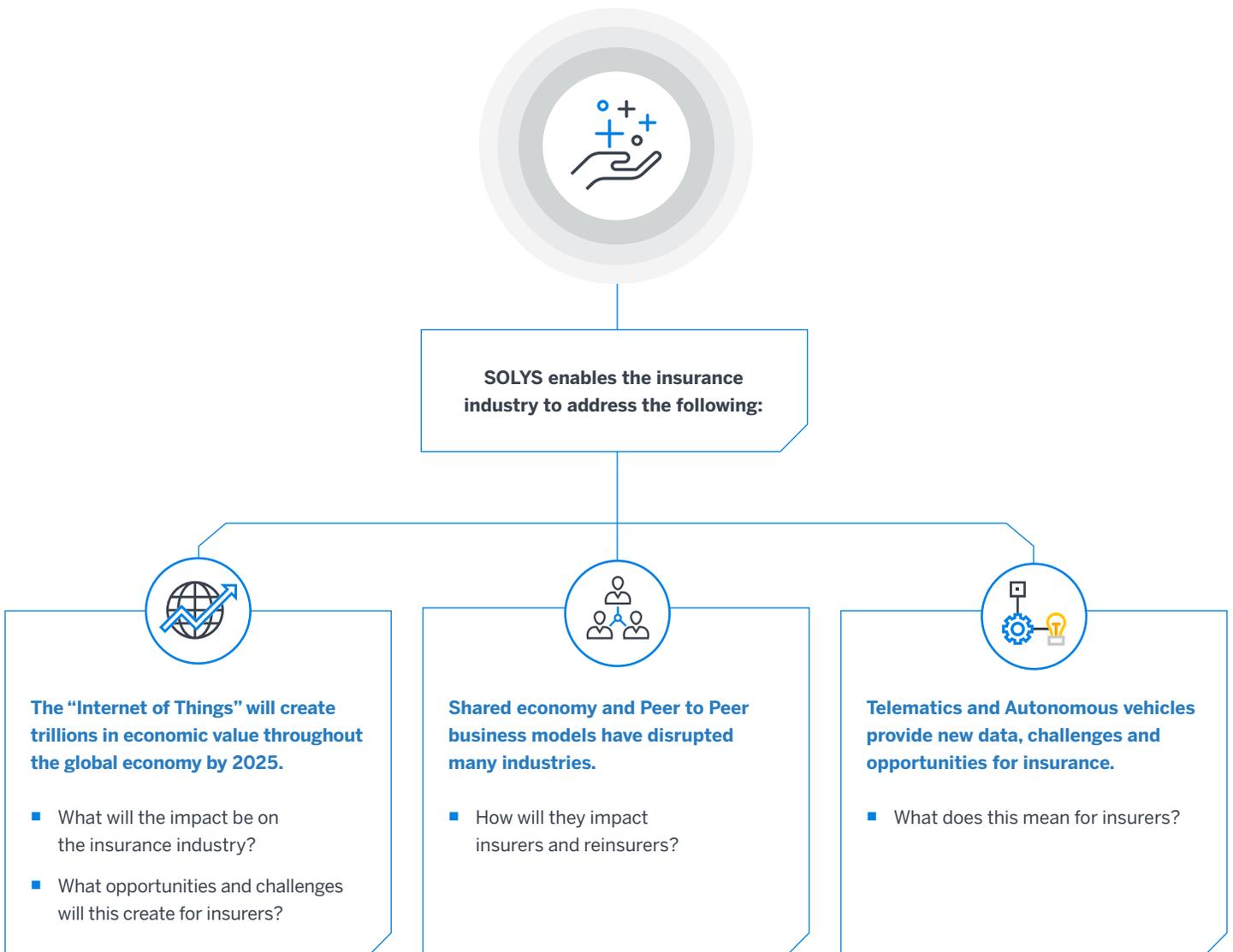# SOLYS

# Product

SOLYS is a proprietary predictive modeling platform, designed to help our consultants answer clients' most complex questions on topics including:
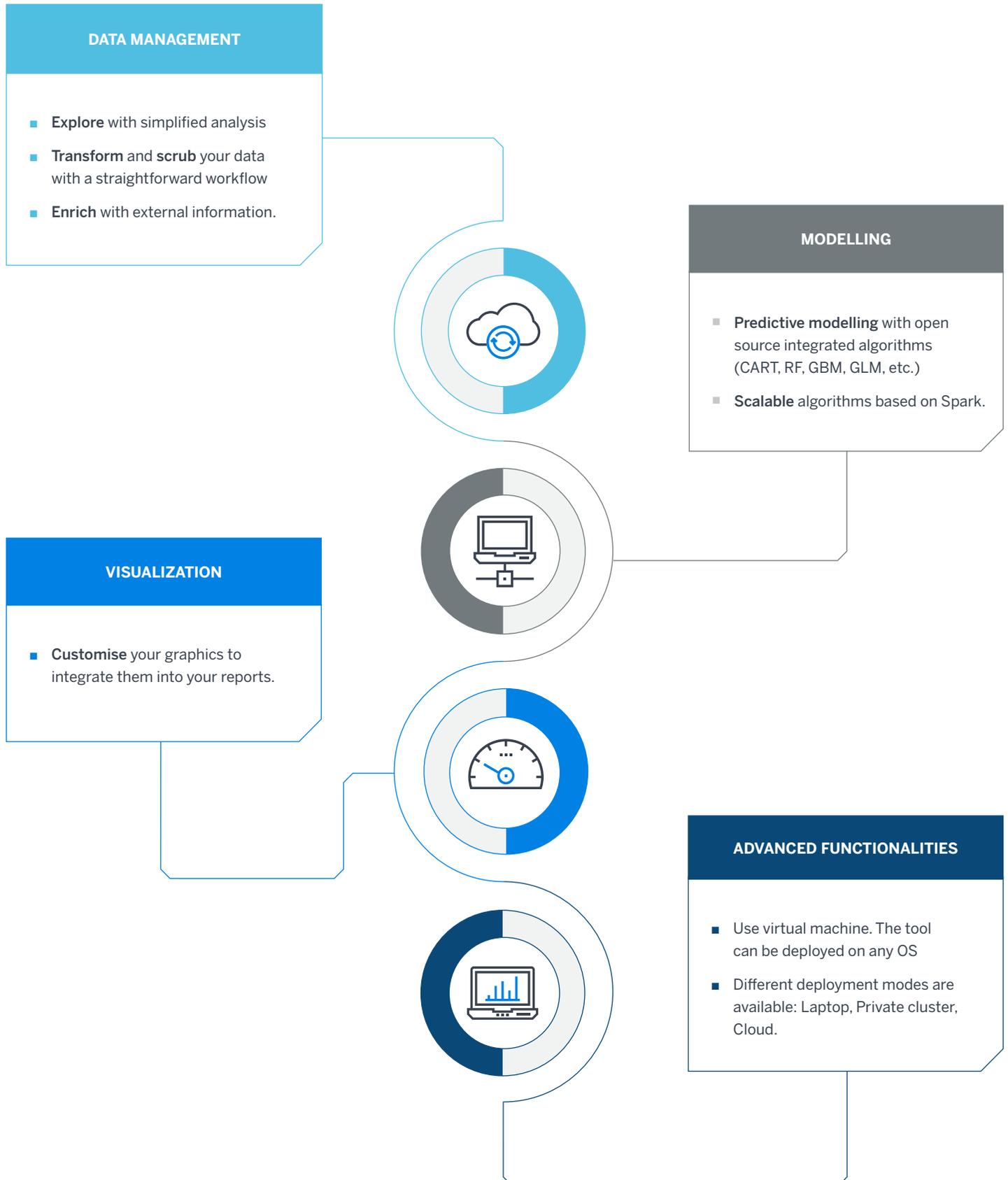
| | |
|---|---|
| **Strategy** | **Revenue generation** |
| **Customer acquisition** | **Business optimization.** |

# Opportunities and Challenges

**SOLYS enables the insurance industry to address the following:**

**The "Internet of Things" will create trillions in economic value throughout the global economy by 2025.**

- What will the impact be on the insurance industry?
- What opportunities and challenges will this create for insurers?

**Shared economy and Peer to Peer business models have disrupted many industries.**

- How will they impact insurers and reinsurers?

**Telematics and Autonomous vehicles provide new data, challenges and opportunities for insurance.**
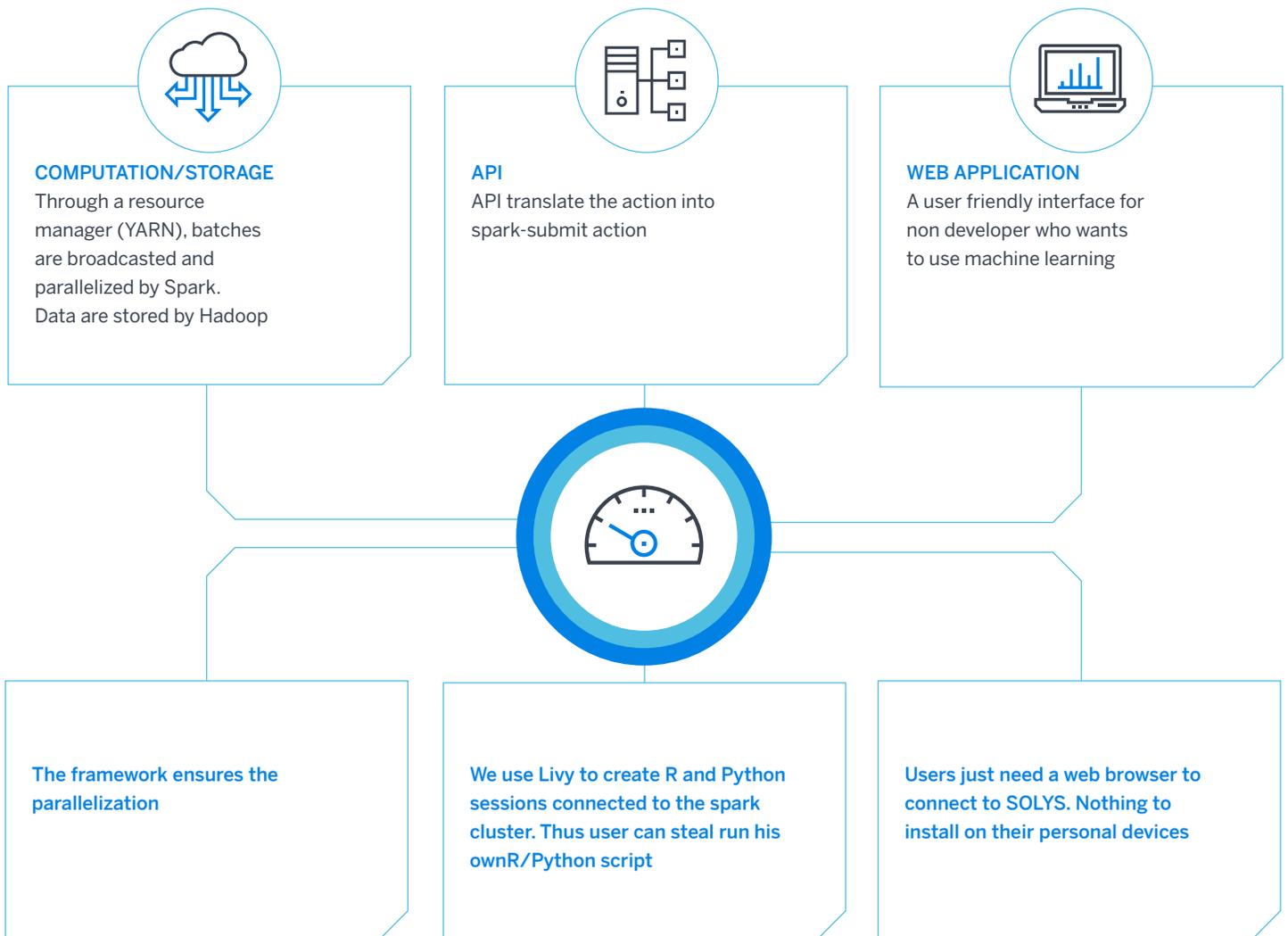
- What does this mean for insurers?

# Benefits and Key features

SOLYS makes machine learning projects more efficient by allowing consultants to focus on added-value, such as modelling or reporting.

## DATA MANAGEMENT

- **Explore** with simplified analysis
- **Transform** and **scrub** your data with a straightforward workflow
- **Enrich** with external information.

## MODELLING

- **Predictive modelling** with open source integrated algorithms (CART, RF, GBM, GLM, etc.)
- **Scalable** algorithms based on Spark.

## VISUALIZATION

- **Customise** your graphics to integrate them into your reports.

## ADVANCED FUNCTIONALITIES

- Use virtual machine. The tool can be deployed on any OS
- Different deployment modes are available: Laptop, Private cluster, Cloud.

**Milliman**

# Functionality

### COMPUTATION/STORAGE
Through a resource manager (YARN), batches are broadcasted and parallelized by Spark. Data are stored by Hadoop

### API
API translate the action into spark-submit action

### WEB APPLICATION
A user friendly interface for non developer who wants to use machine learning

**The framework ensures the parallelization**

**We use Livy to create R and Python sessions connected to the spark cluster. Thus user can steal run his ownR/Python script**

**Users just need a web browser to connect to SOLYS. Nothing to install on their personal devices**

# Why Milliman?

- One of the largest actuarial consulting firms in the world and the global market leader in actuarial consulting to the insurance industry

- Advise over 80% of the world's leading insurers, working with 44 of the top 50 insurers globally

- Deep expertise in providing advanced predictive analytics and machine learning solutions for the insurance industry

- Combine global expertise and market-leading technical skills with local market presence, leveraging our in-depth knowledge of the regulations and markets in which we operate

- A recognized leader in developing solutions for the insurance industry

- An active research program to supplement and support our consulting activities.

# Key Contact

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