




KPMG Trusted Analytics

Companies increasingly make use of **Advanced Analytics (including AI) technologies to improve their business processes and decision making. But in order to get the maximum value out of these technologies there is a need for reliable outcomes, without prejudice and with sufficient transparency. We call this *Trusted Analytics*.**

Despite Advanced Analytics (AA) (and AI) being a hot topic in the public debate, a clear definition is still lacking. This is due to the myriad of techniques that fall under the AA umbrella. We emphasize three key characteristics when we discuss AA:

DEFINITIONS ADVANCED ANALYTICS

-  Making predictions based on (large amounts of) **data**
-  Self-learning and opaqueness of input-output relationships (**black box**)
-  Used for some sort of (partly) automated **decision-making**

UNIQUE CHALLENGES

AA development and maintenance can build on an existing tradition of software and systems engineering. Many concepts from current quality and risk management methods still apply. However, on a number of aspects AA is fundamentally different.

- The **design process** is fundamentally different
- Ongoing **monitoring** is required
- Compliance** and **ethics** come into play
- Explainability** is needed to open up the **black box**
- Accountability** must be redefined

THE RIGHT BALANCE BETWEEN INNOVATION AND CONTROL

In practice, AA solutions are often the result of cycles of trial and error, driven by data scientists and other experts in search of valuable applications of new technology. Such an explorative and iterative way of working is essential to unlock the potential value of AA. Consequently, the system of controls and risk management around AA initiatives should accommodate flexibility and agility.

- In the **exploration phase** problem definitions are formulated and the feasibility and value potential of use-cases is tested.
- In the **solution development** phase analytics solutions are developed and deployed that are ready to be consumed by target applications.
- In the **consumption** phase value is harvested from the analytics solutions by integrating it in business processes and business applications.



SOLUTION CONTROL FRAMEWORK MANAGEMENT FRAMEWORK

At the governance level organizations need a **management framework** is to set **policies, guidelines** and **standards** for the entire advanced analytics capability (in terms of people, processes and technology). Topics include of example:

People	Processes	Technology
Skills and awareness	Legal constraints	Reference Architecture
Roles and responsibilities	3rd party management	Standard platform

At the level of individual analytics solutions a **solution control framework** is required to determine what the **specific risks** are, and what the **measures** should be to **control** these risks. We have developed a **solution risk scorecard** and a **library of standard controls** that can be used as a starting point.

A part of the measures should be executed during solution development, others during solution consumption (e.g. monitoring and improvement).

The policies, guidelines and standards from the management framework provide the foundation for the detailed solution control frameworks.

GOVERNANCE

PROCESSES

PROCESSES

ALGORITHMS



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