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SAP Systems Management with PerfoMiner

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Management of SAP systems and the role of PerfoMiner

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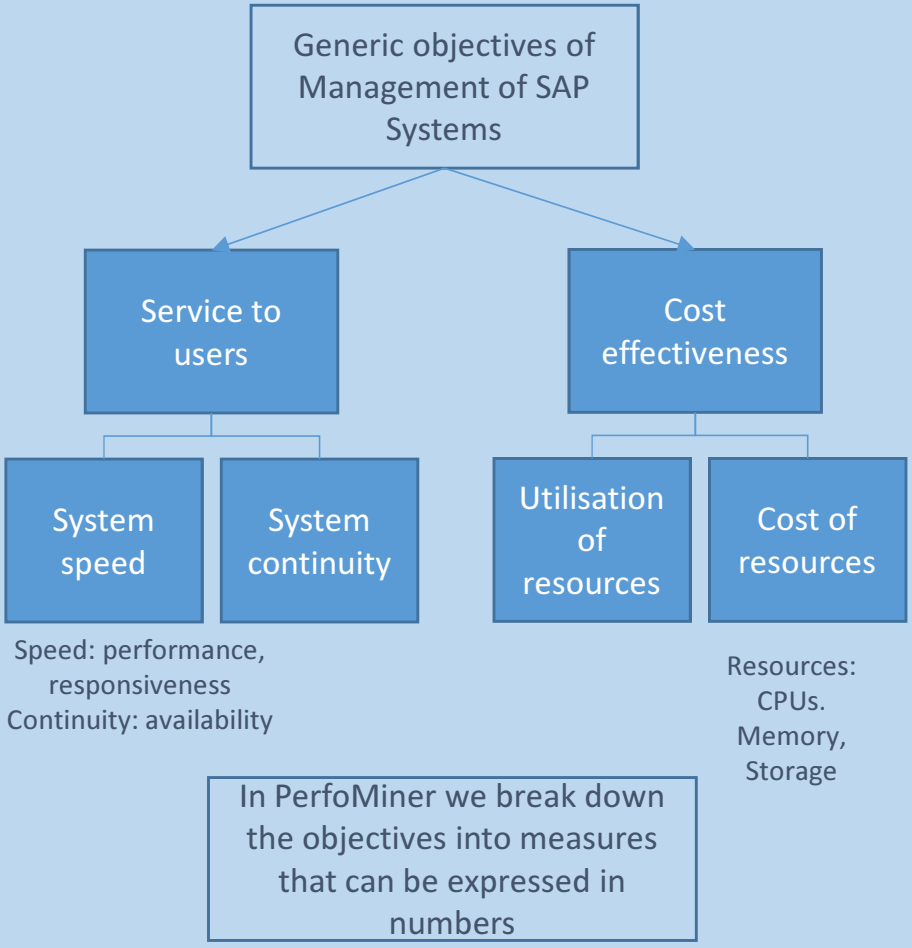
The management of SAP systems is a set of activities done for two main objectives. First, the systems should function well to serve their users. Second, the systems should be cost effective.

These two objectives should be defined in further detail that allow to measure their achievement in numbers.

The proper function of systems is considered by two goals – system speed and system continuity. In industry terms these are known as 'performance' or 'responsiveness' and 'availability'.

The purpose of cost effectiveness includes the objectives of utilisation of resources and their cost. Here by resources we consider three main components of a computational system – computer processors (CPU), memory and storage.

PerfoMiner is designed as a tool supporting the management of SAP systems. More specifically PerfoMiner measures the achievement of the objectives of management.



How is a SAP system represented in PerfoMiner

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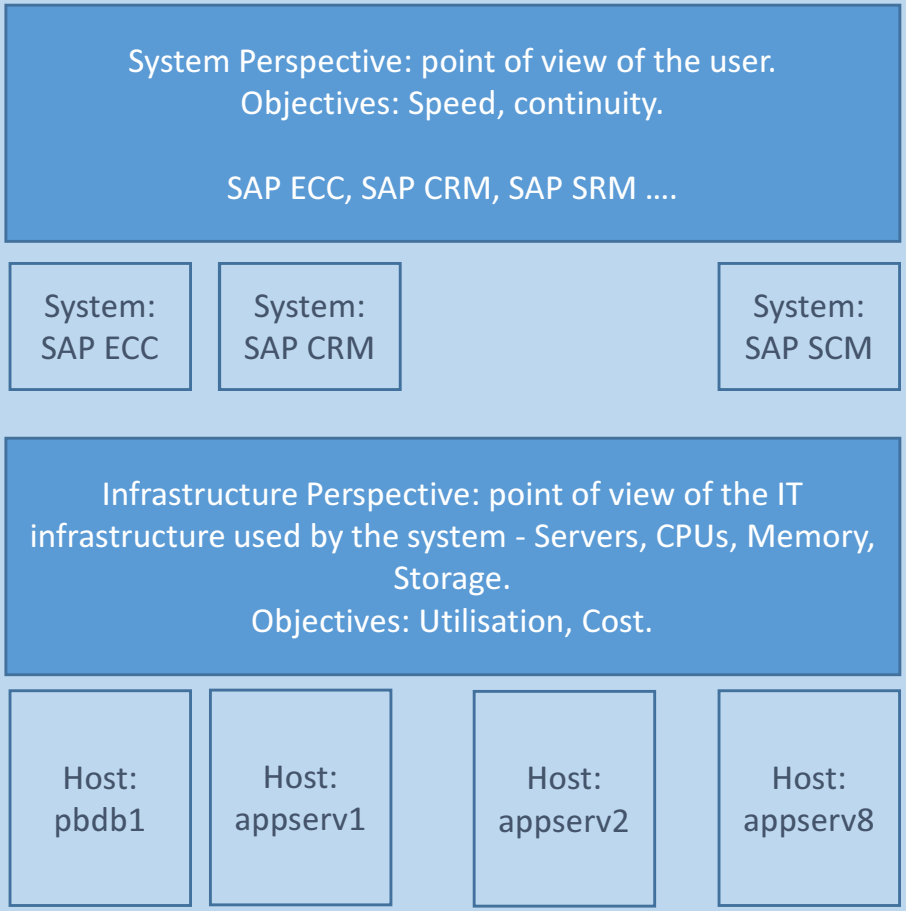
In PerfoMiner a SAP system is represented in two perspectives – a system (application) perspective and an infrastructure perspective. The system perspective looks at the system from the point of view of the functionality of the system for a user (a person or another system). The infrastructure perspective views the system as a set of servers consisting of CPUs, memory and storage.

For the system perspective the entities in PerfoMiner are 'systems' – SAP ECC, SAP CRM etc. For the infrastructure perspective the entities are the servers of the systems – 'hosts'.

The objectives related to speed and continuity are measured from the system perspective. The objectives related to effectiveness are measured from the infrastructure perspective.

A specific SAP system, for example an ECC, is represented in PerfoMiner with a set of measures from a system perspective – "SAP Metrics", and a set of measures from an infrastructure perspective – "Infrastructure Metrics".



A system is represented in PerfoMiner in two perspectives: System and Infrastructure

What support for cost management does PerfoMiner provide

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PerfoMiner provides support for cost management when the systems are hosted by external providers such as AWS, Virtustream, IBM and others.

In most cases these providers base their charging on the usage of infrastructure resources.

PerfoMiner contains data about the actual use of infrastructure resources at 2 to 5 min intervals. This data is sufficient to re-construct the charging approaches of most providers.

PerfoMiner provides a detailed breakdown on resources usage in the charging method of the provider. This allows to verify the charges from the provider and understand the cost significance of systems and infrastructure elements.

Perfominer can also support evaluation of changes of charging schemes and price lists.

To take advantage of this functionality customers can maintain in PerfoMiner some of the pricing information of their providers.

PerfoMiner provides support for cost management in external hosting of systems

What SAP systems and technologies are supported in PerfoMiner

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SAP systems are based on different software technologies. For example some systems such as ECC are defined by SAP as ABAP-based systems, where ABAP is a specific application platform developed by SAP AG. Other systems, such as IDM, are not based on ABAP and are known as Java-based systems. The different software technologies at the systems level require different ways to capture data for the system perspective of PerfoMiner. Currently PerfoMiner supports ABAP systems for all database types including SAP HANA. For no ABAP systems Forability implements specific additional solutions to capture data – add-ons.

SAP systems can be installed on different technological platforms such as Intel x86 servers or IBM AIX servers or a combination of several technologies. Currently PerfoMiner supports all Linux x86 technologies and IBM AIX, including combinations.

SAP systems use different software technologies, such as ABAP or Java
SAP ECC, SAP CRM, SAP SRM - ABAP
IDM - Java

PerfoMiner supports all ABAP systems regardless of the database type. Java systems are supported with specific add-ons.

SAP Systems can be installed on a variety of hardware technologies, such as x86 Linux or IBM AIX

PerfoMiner supports all Linux x86 technologies and IBM AIX

What data is captured by PerfoMiner and when

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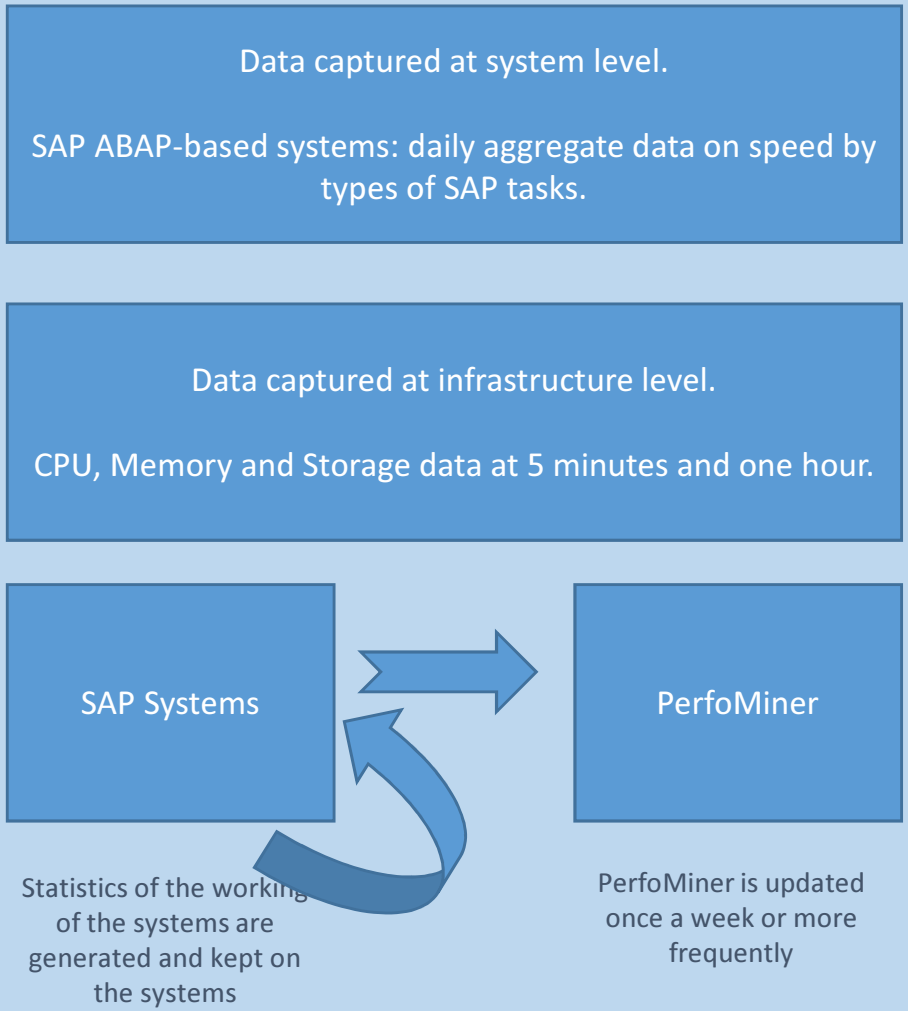
PerfoMiner collects statistics of the working of the systems. The statistics do not include any business data.

PerfoMiner relies on measurements by minute, hour and day that take place at the system and infrastructure level of SAP systems. These measurements are kept in systems logs on the systems.

The frequency of data transfer depends on the needs for information of the persons and teams using PerfoMiner. The frequency of update of PerfoMiner can vary from once a week once every 15 min.

Once data is transferred to PerfoMiner it may be removed from the system to free disk space.



Measures, thresholds and targets in PerfoMiner

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Measures in PerfoMiner are facts relevant to the objectives of management of systems such as the average number of CPUs used in a given hour by a server.

Some measures are supported by thresholds. The thresholds are part of the calculation of the measure. For example the measure: “Average Performance of Dialogue steps” with a value of 70% uses in its calculation a threshold: “Dialogue Steps Threshold” of 1000 ms.

Targets can be specified for each measure. For example, the measure of CPU utilisation for a system may be 70% and one customer target may by 65%, while another customer may set a target of 80%.

For SAP ABAP-based systems PerfoMiner maintains thresholds for the performance of every type of system task as defined by SAP AG.

At infrastructure level PerfoMiner maintains thresholds for every server: CPU, Memory and Storage Utilisation, Storage IO operations.

Every measure PerfoMiner maintains a ‘target’ that specifies the desired level of achievement for the customer.

How are best practices reflected in PerfoMiner

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SAP systems management is an important activity for all companies using SAP. The biggest part of SAP systems management is not company specific and good practices are applicable across SAP installations.

We in Forability continually search for practices that can improve SAP systems management. This is helped by our experience with various customers as well as our collaboration with SAP and technology providers.

PerfoMiner as an effective way to share best practices in SAP systems management. This is done by the choice of measures, reports and thresholds we include in PerfoMiner.

PerfoMiner contains a knowledge-base section where the used best practices are explained.

Good practices in SAP systems management are applicable for most SAP installations

PerfoMiner is designed and continually evolves based on best practices.

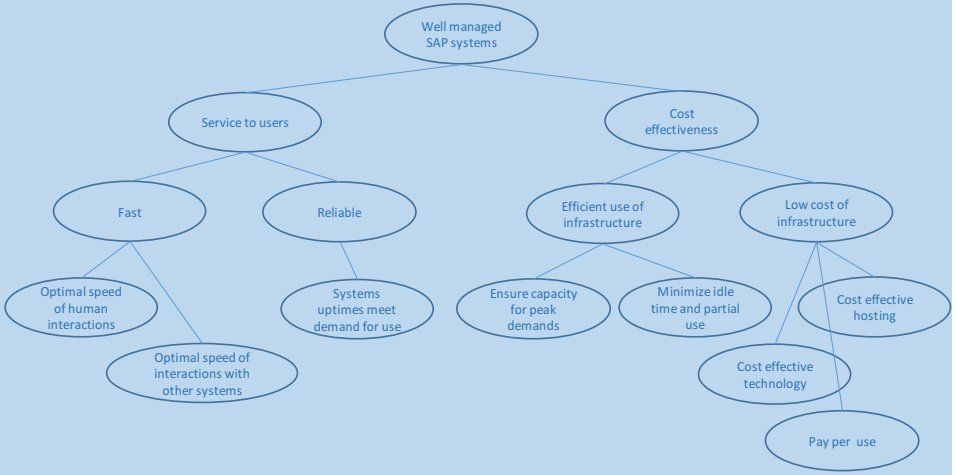
In PerfoMiner the built-in reports, measures and thresholds are based on best practices

Support for score-cards and projects in Perfominer

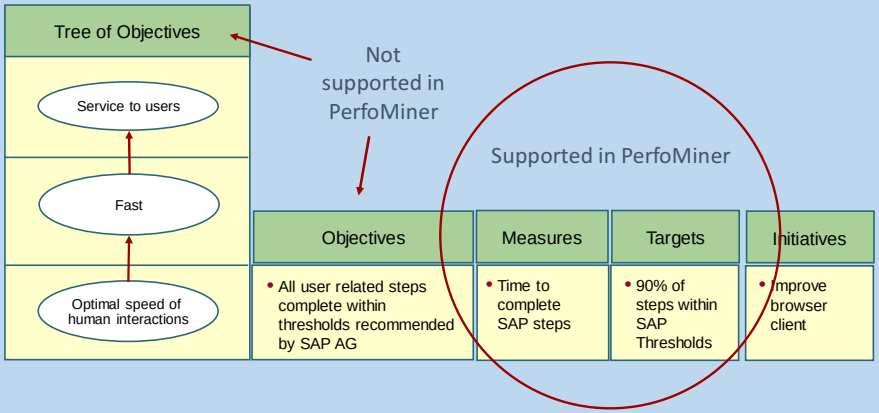
IT organisations define strategies and implement projects in the area of systems management. These strategies and projects may be supported by scorecards and other management methods.

By design PerfoMiner is not a tool, that can be used on its own for strategic management or score-carding. However, PerfoMiner contains a number of out-of-the-box measures which may be appropriate for inclusion in scorecards and projects. Additional measures may be defined at customer request.

The measures included in PerfoMiner are based on a generic tree of strategic objectives for SAP systems management designed on the basis on best practices and relevant for most SAP landscapes.



PerfoMiner contains a number of best-practice measures relevant for systems management for most SAP landscapes



Reports and measures in PerfoMiner

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PerfoMiner provides a number of measures organised in repots.

- Report: SAP Metrics: For SAP ABAP systems. Performance and availability over time
- Report: Infrastructure Metrics: For all systems. Capacity and utilisation of infrastructure for a system.
- Report: Host Metrics: For all systems. Capacity and utilisation of infrastructure per host
- Monthly Overview: For all systems in a landscape. Key measures over a month.

SAP Management Tree of Objectives as the basis of measures in PerfoMiner

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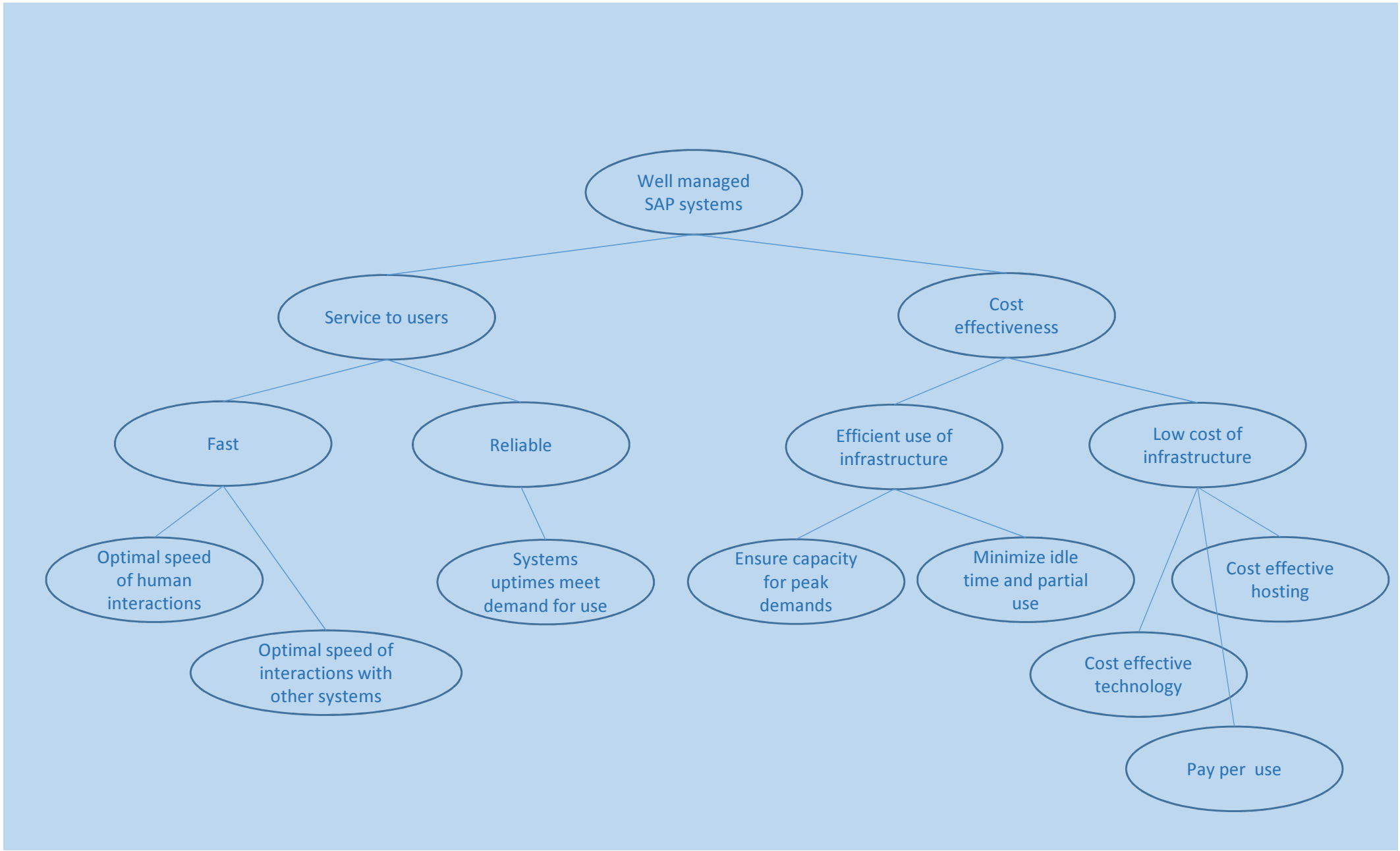
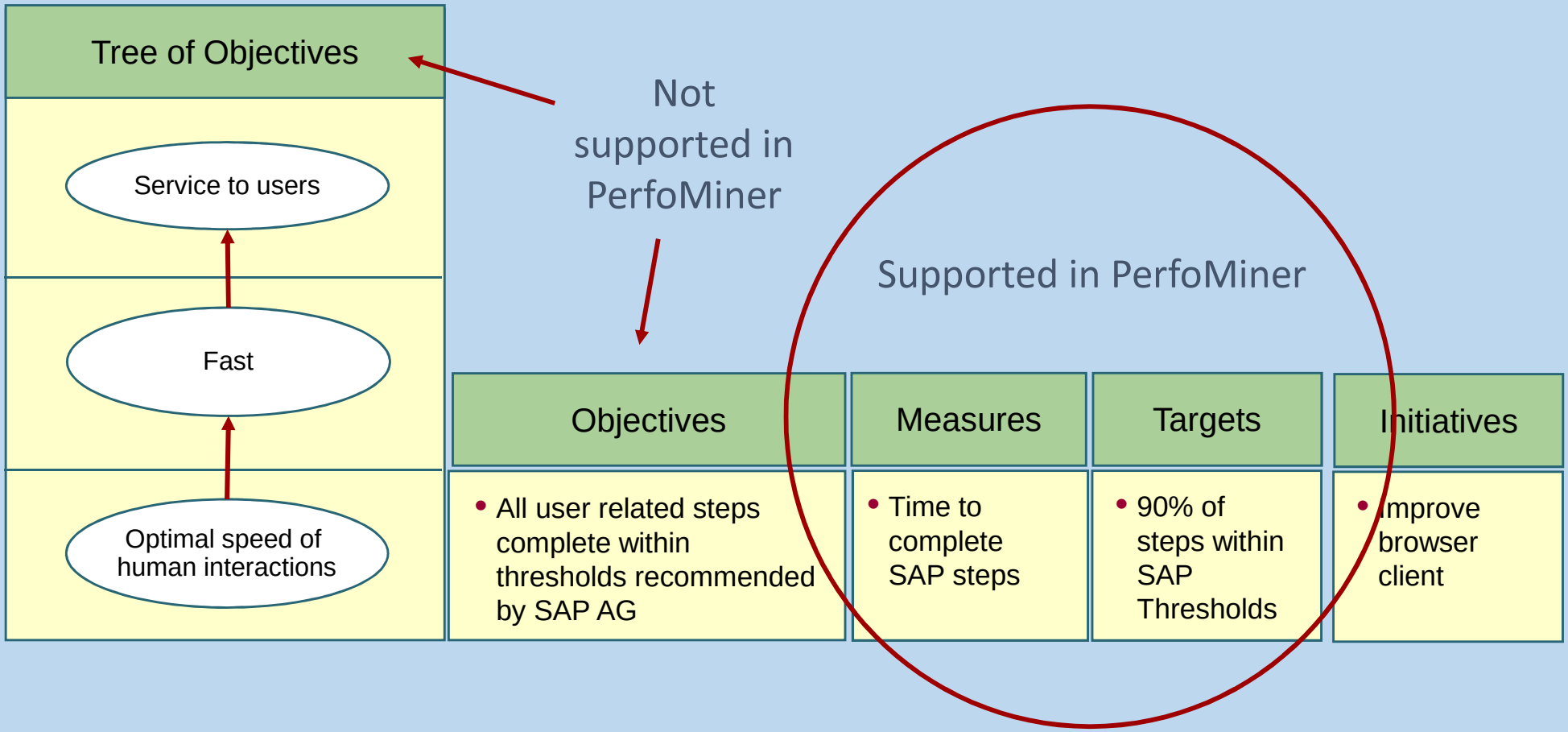


Support for Scorecards and objectives in PerfoMiner

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