Explanation of f/a plot

Quantifying IT forecast quality
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Introduction

- f/a plot stands for forecast to actual plot.

- The plot is identical to the now famous *cone of uncertainty* of Barry Boehm.

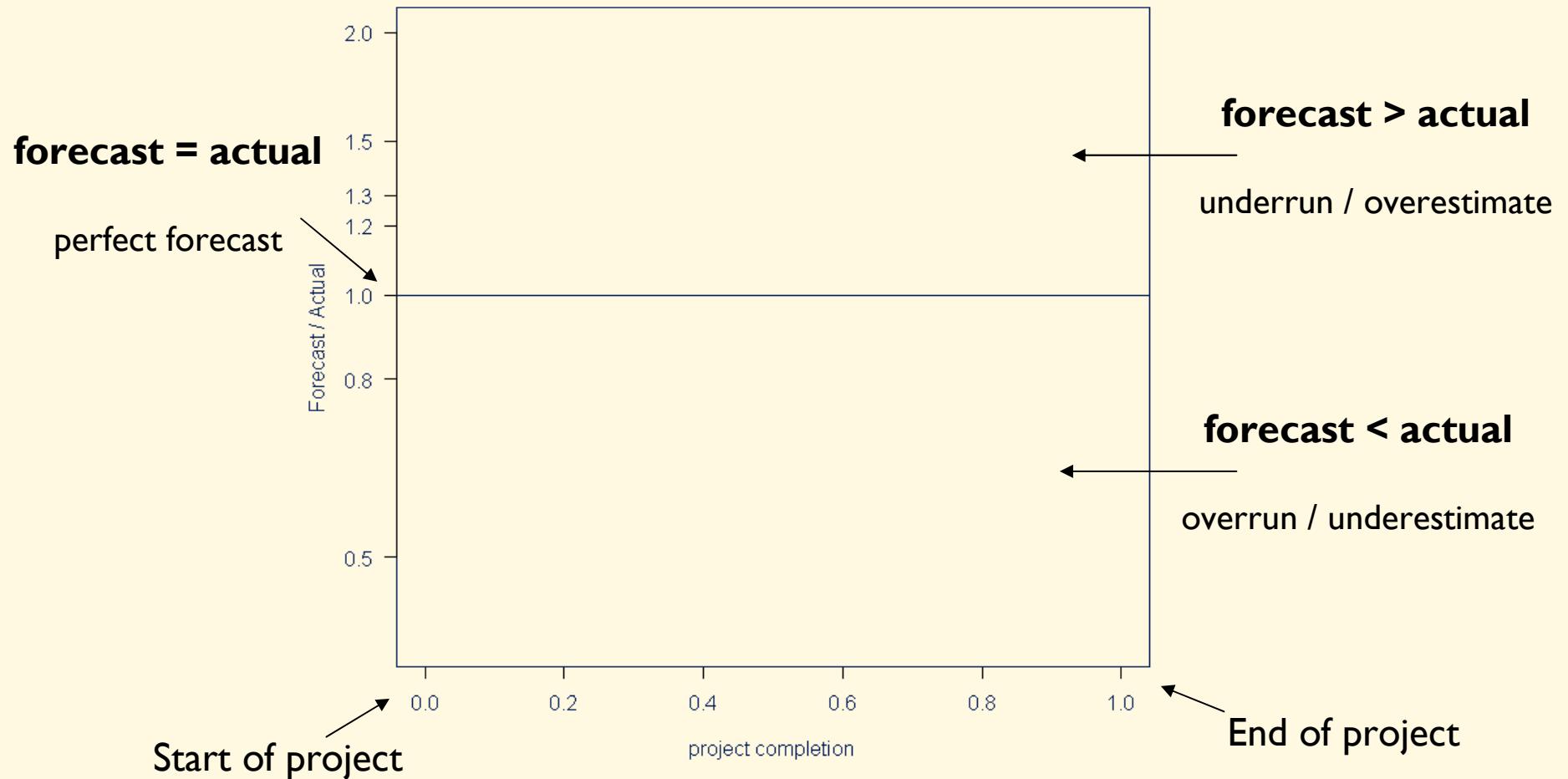- It allows for assessing the quality of forecasts and detect possible biases.

Example forecasts

- Suppose a project started 1/1/2008 and ended 1/9/2008. The project costs were 20 million euro.

- During the project the following forecasts were made:

Forecasted costs (millions)	Date of forecast	Project progression	f/a ratio
30	1/1/2008	0	1.5 (=30/20)
16	19/2/2008	0.2 (= (19/2 - 1/1) / (1/9 -1/1))	0.8
26	2/5/2008	0.5	1.3
24	8/6/2008	0.65	1.2

- It is possible to assess these forecasts using an f/a plot

f/a plot

forecast = actual

perfect forecast

forecast > actual

underrun / overestimate

forecast < actual

overrun / underestimate

Start of project

End of project
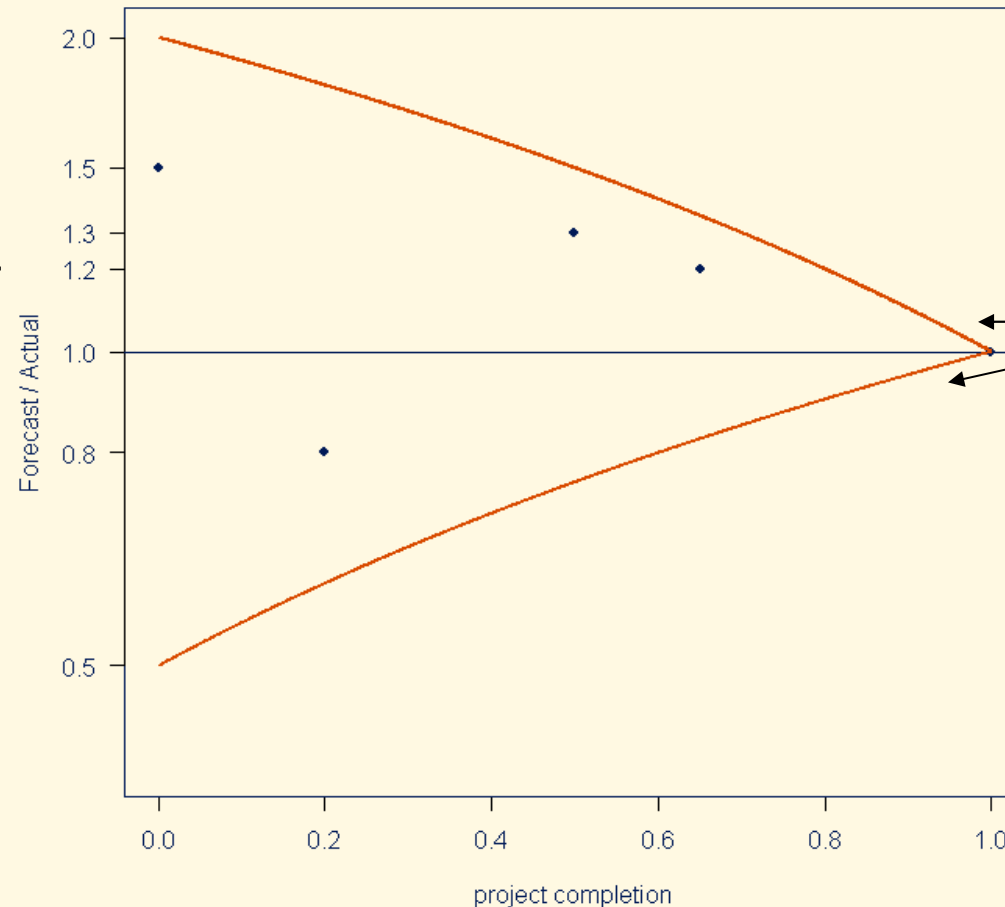
Example forecasts in f/a plot

The closer the forecasts are to the horizontal line f/a = 1, the better the forecast is.
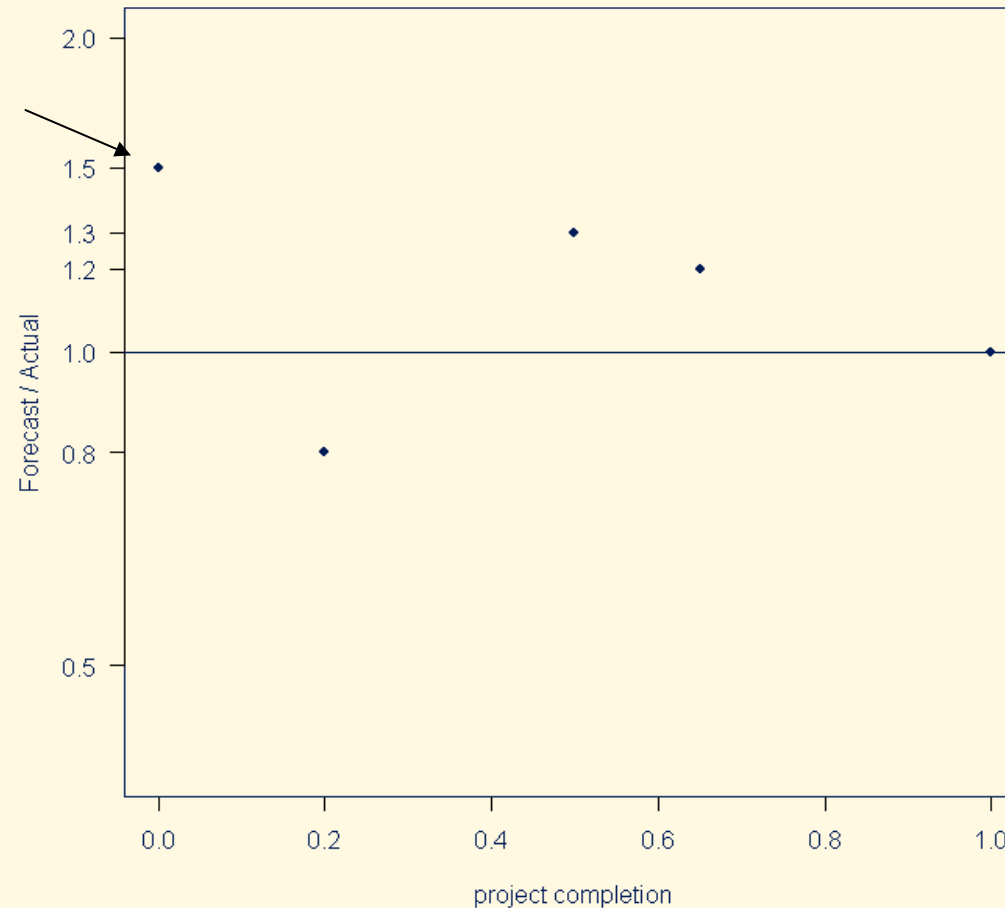
Forecasts of example project plotted in an f/a plot

Example forecasts in f/a plot

EXUITY
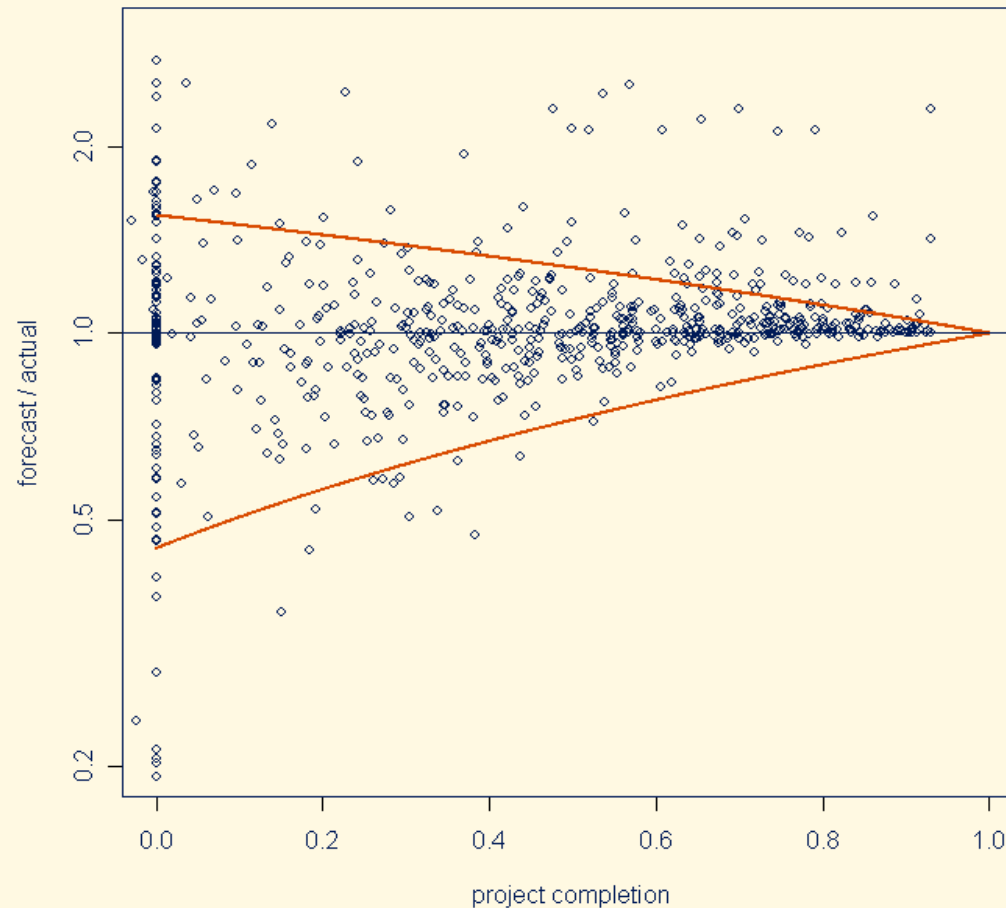*"exploring quantifiable IT yields"*

The example forecasts are of sufficient quality. The forecasts are well within the reference cone.

Reference cone for more information see reference cone explanation.

Usually, forecasts made early in the project have a larger possible deviation to the actual than forecasts made later in the project.
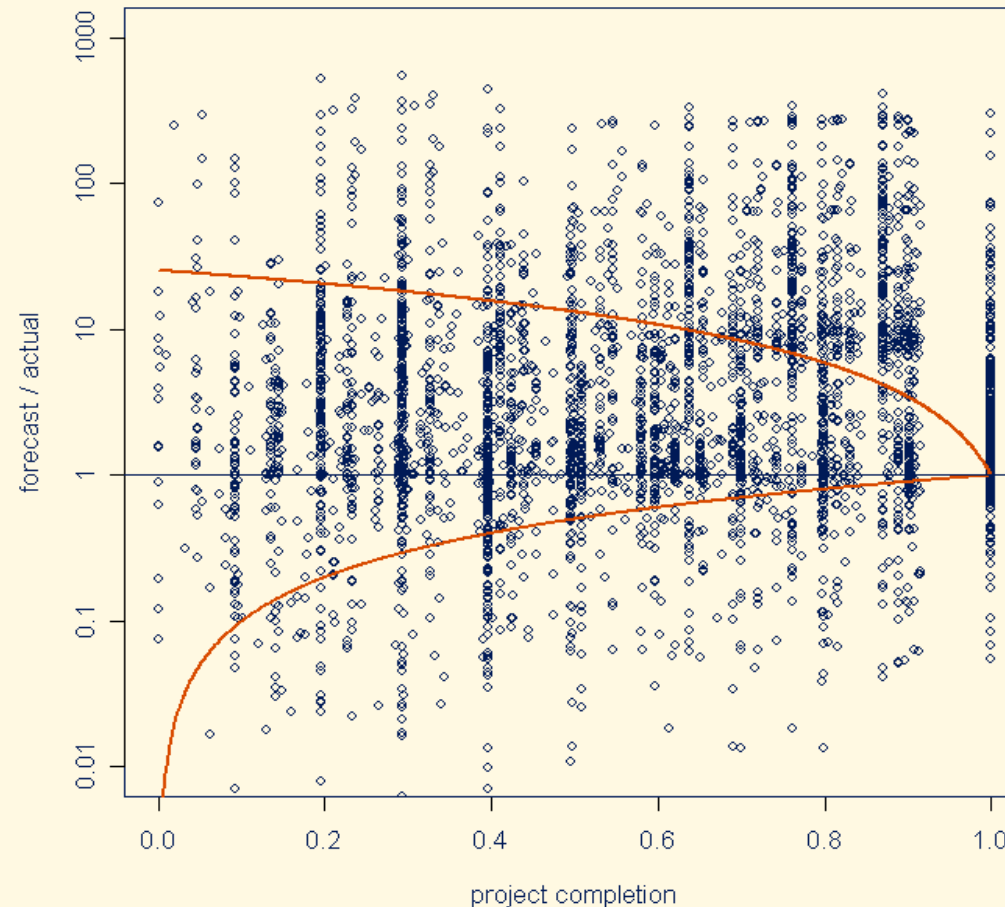
Real-world example

Forecasts of this organization show no bias.

Both underruns and overruns occur more or less equally.

Forecasts are mostly within reference cone and deviations to the actual are reasonable.
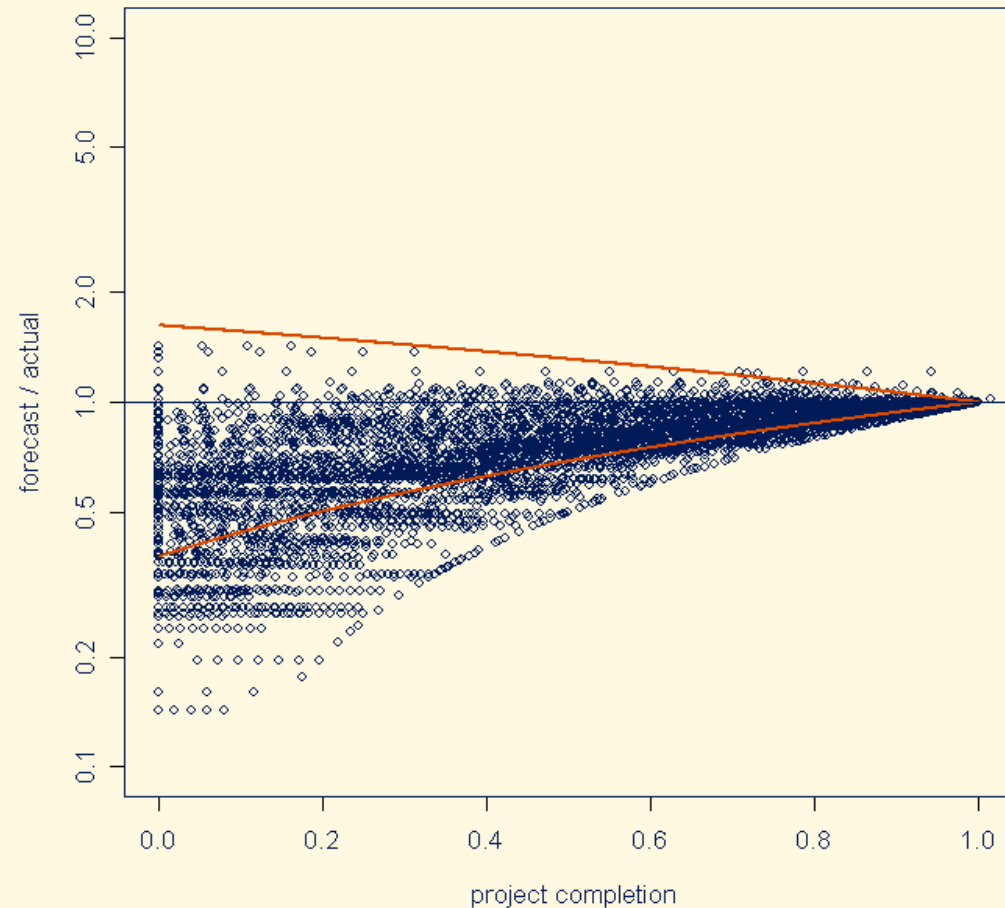
Real-world example

Forecasts of this organization show bias toward overestimating.

Forecasts do not converge to the actual and are not well within reference cone.

Deviations to the actual have large variation.

Real-world example

Forecasts of this organization show bias toward underestimating.

Forecasts pattern resembles reference cone, but it is lowered.

Deviations to the actual reasonable.