

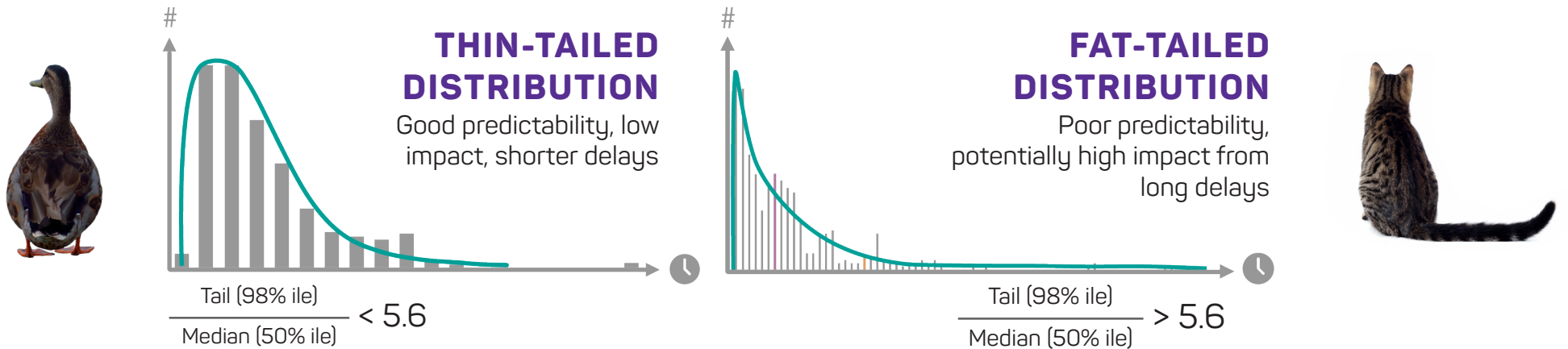


Kanban Maturity Model

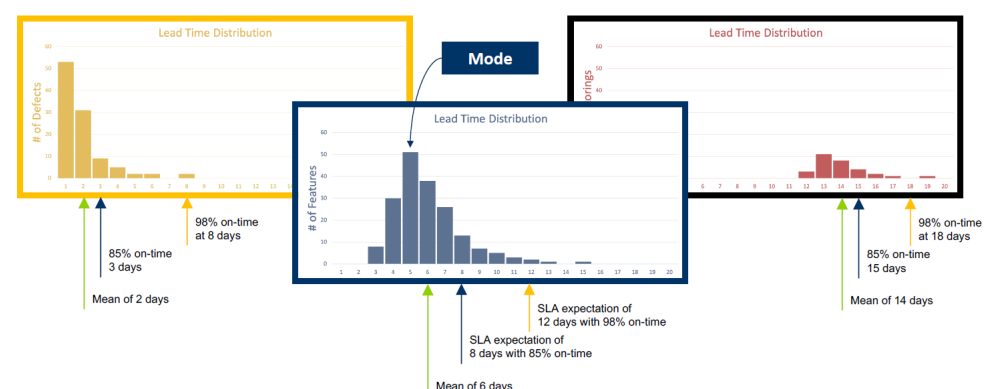
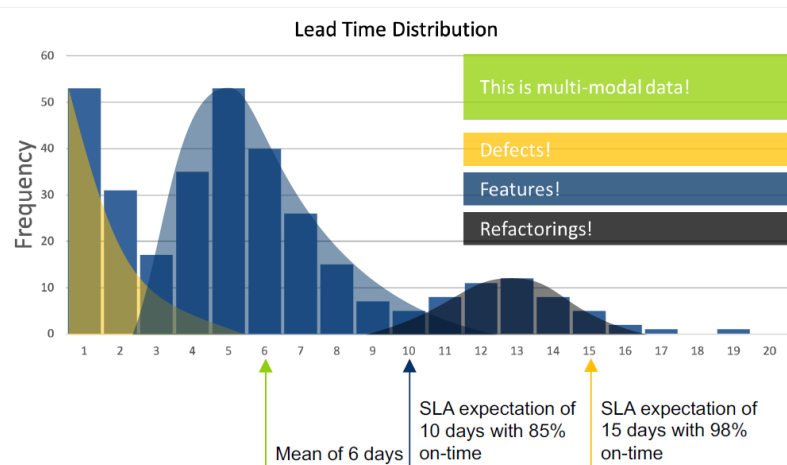
Understanding Lead Time



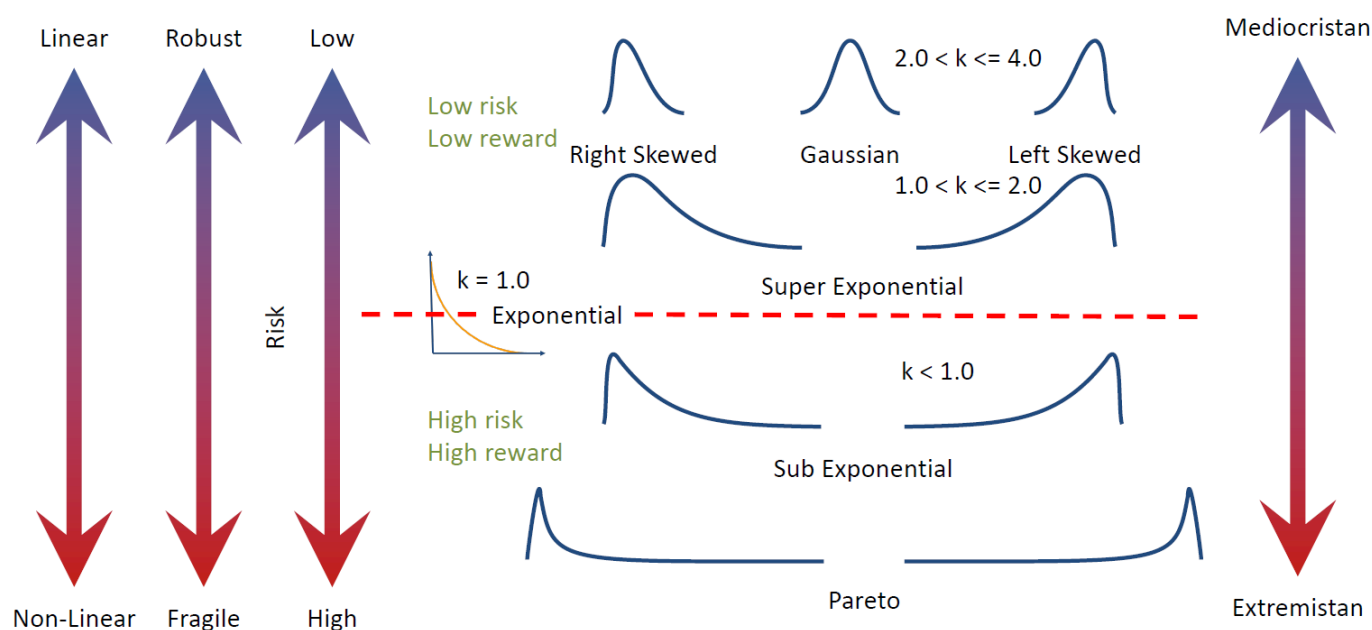
NATURE OF LEAD TIME



MULTI-MODAL DATA



MATHEMATICAL PROPERTIES OF LEAD TIME CURVES



NUMBER OF DATA POINTS REQUIRED

Regression to the mean**	Confidence in the model
15-30	1000-2000
70-100	11-30 sweet spot*
2000-10000	5-11

* sweet spot of project management forecasting - both criteria require less than 100 data points and are therefore pragmatic for most real world situations
** within 10% median error

WEIBULL DISTRIBUTION FUNCTION

$$f(x; \lambda, \kappa) = \begin{cases} \frac{\kappa}{\lambda} \left(\frac{x}{\lambda}\right)^{\kappa-1} e^{-(x/\lambda)^\kappa} & x \geq 0, \\ 0 & x < 0, \end{cases}$$

$2.0 < \kappa \leq 4.0$ Gaussian range
 $1.0 < \kappa \leq 2.0$ Super-exponential range
 $\kappa = 1.0$ Exponential function
 $\kappa < 1.0$ Pareto range