

Decision Variables

x_1 = Team Size,	$3 \leq x_1 \leq 9$,
x_2 = Sprint Length (days),	$7 \leq x_2 \leq 30$,
x_3 = Project Budget (EUR),	$0 \leq x_3 \leq 1\,000\,000$,
x_4 = Story Points per Sprint,	$10 \leq x_4 \leq 50$,
x_5 = Testing Hours per Feature,	$1 \leq x_5 \leq 40$,
x_6 = Releases per Year,	$1 \leq x_6 \leq 12$,
x_7 = Sprints per Release,	$1 \leq x_7 \leq 12$,
x_8 = Features per Release,	$1 \leq x_8 \leq 20$,
x_9 = Tasks per Sprint,	$5 \leq x_9 \leq 100$,
x_{10} = Scrum Master Hours per Sprint,	$0 \leq x_{10} \leq 40$,
x_{11} = Retrospective Duration (min),	$30 \leq x_{11} \leq 180$.

Auxiliary Metrics

v_1 = Velocity (story points/sprint),
v_2 = Defect Rate (bugs/sprint),
v_3 = Customer Satisfaction (score),
v_4 = Budget Variance (%),
v_5 = On-time Delivery (%),
v_6 = Cycle Time (days),
v_7 = Code Coverage (%),
v_8 = Technical Debt (count),
v_9 = Feature Throughput (features/quarter),
v_{10} = Team Satisfaction (score),
v_{11} = Scope Changes (count/sprint).

Objective (Multi-objective)

$$\max (v_1, -v_2, v_3, -v_4, v_5, -v_6, v_7, -v_8, v_9, v_{10}, -v_{11}).$$

Constraints

- C1: $x_1 \leq 9$,
- C2: $a_{\text{dev}} \geq 0.8$,
- C3: $s_{\text{level}} \geq 3$,
- C4: $x_2 \leq 14$,
- C5: $t_{\text{planning}} \leq 120$,
- C6: $t_{\text{daily}} \leq 15$,
- C7: $n_{\text{retro}} \leq 5$,
- C8: $t_{\text{defect}} \leq 2$,
- C9: $v_7 \geq 80$,
- C10: $x_4 \geq 20$,
- C11: $v_{11} \leq 20$.