Appendix Writing in a Report

Appendix 1 – Figures and Tables

List of Figures and Tables

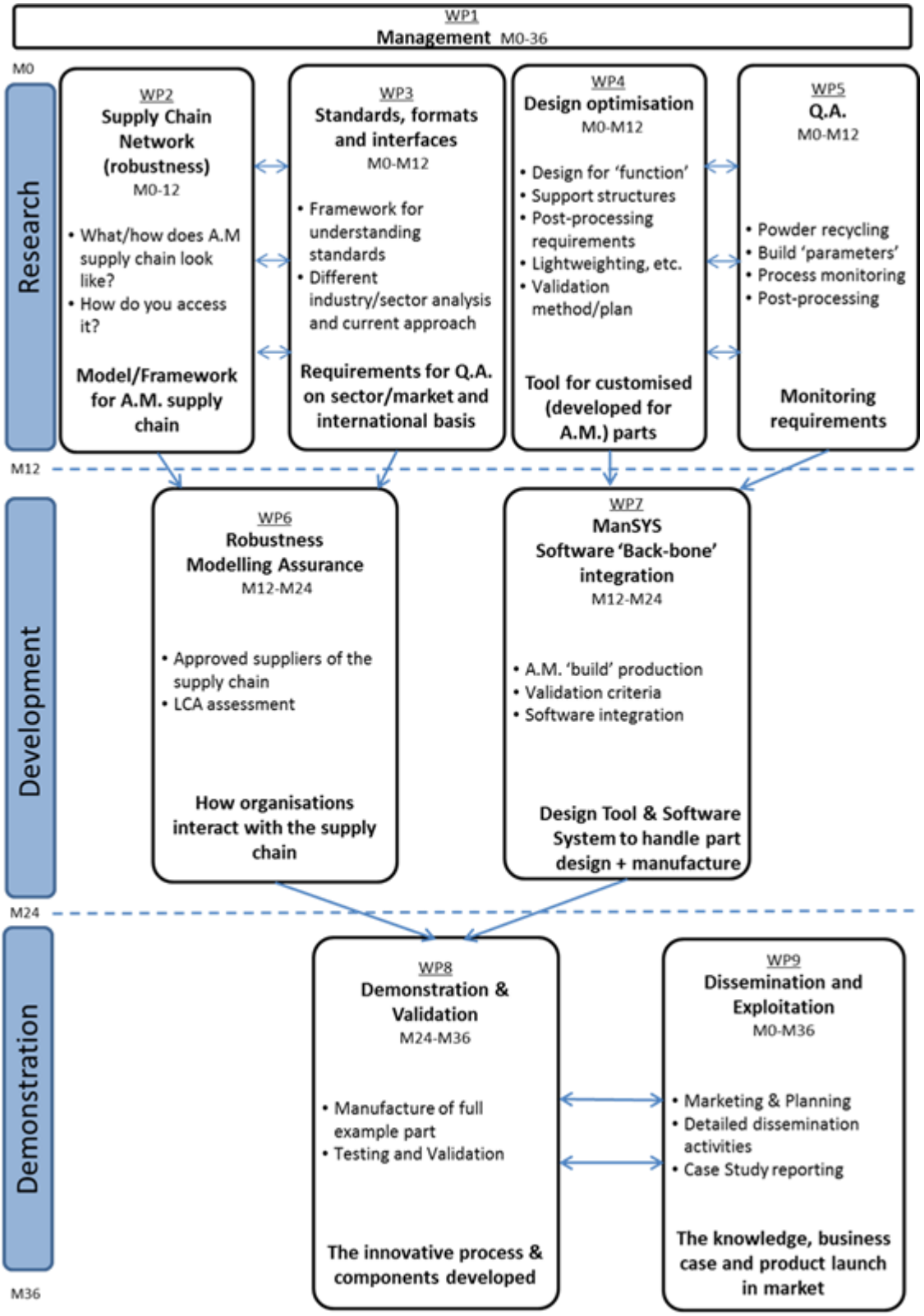

Figure 1 Timing of Work Packages and their components

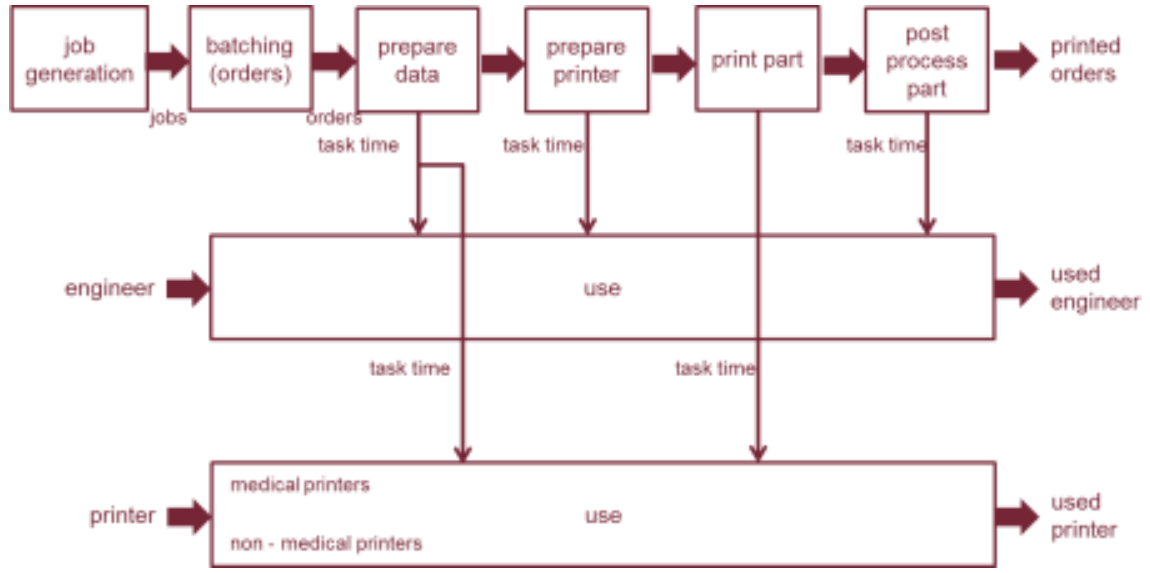

Figure 2: Overview of discrete event simulation process.

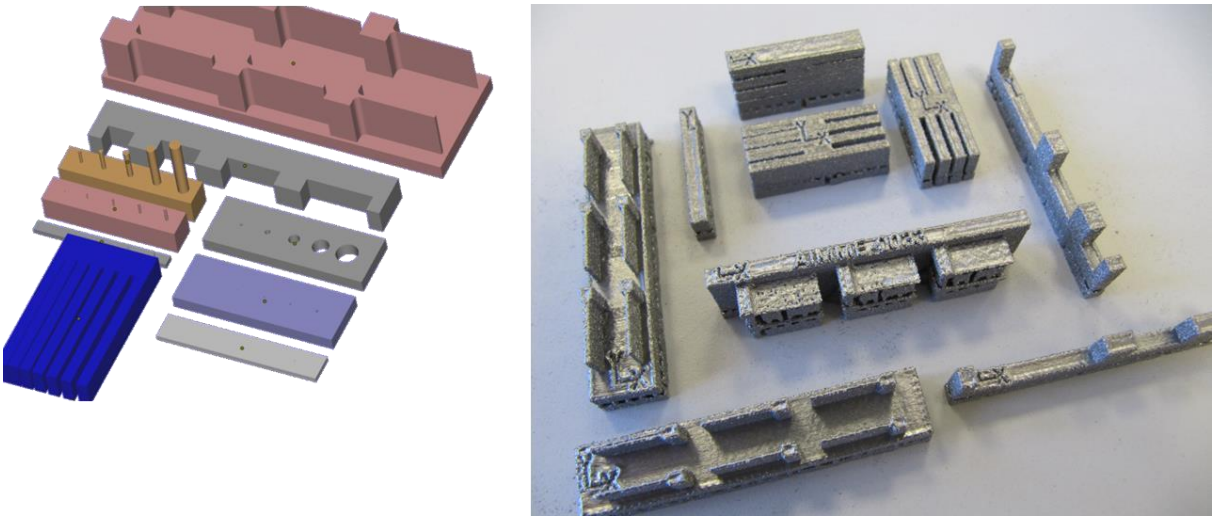

Figure 3: Design file of test artefact (left). Actual manufactured test artefact (right).

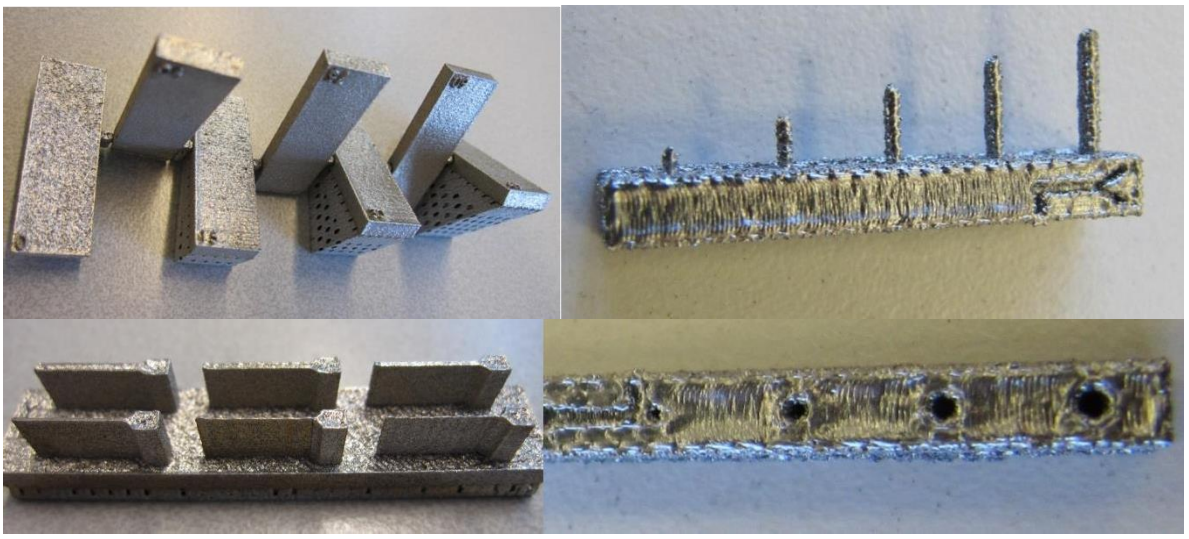

Figure 4: Surface finish, pins, thin walls and holes assessed.

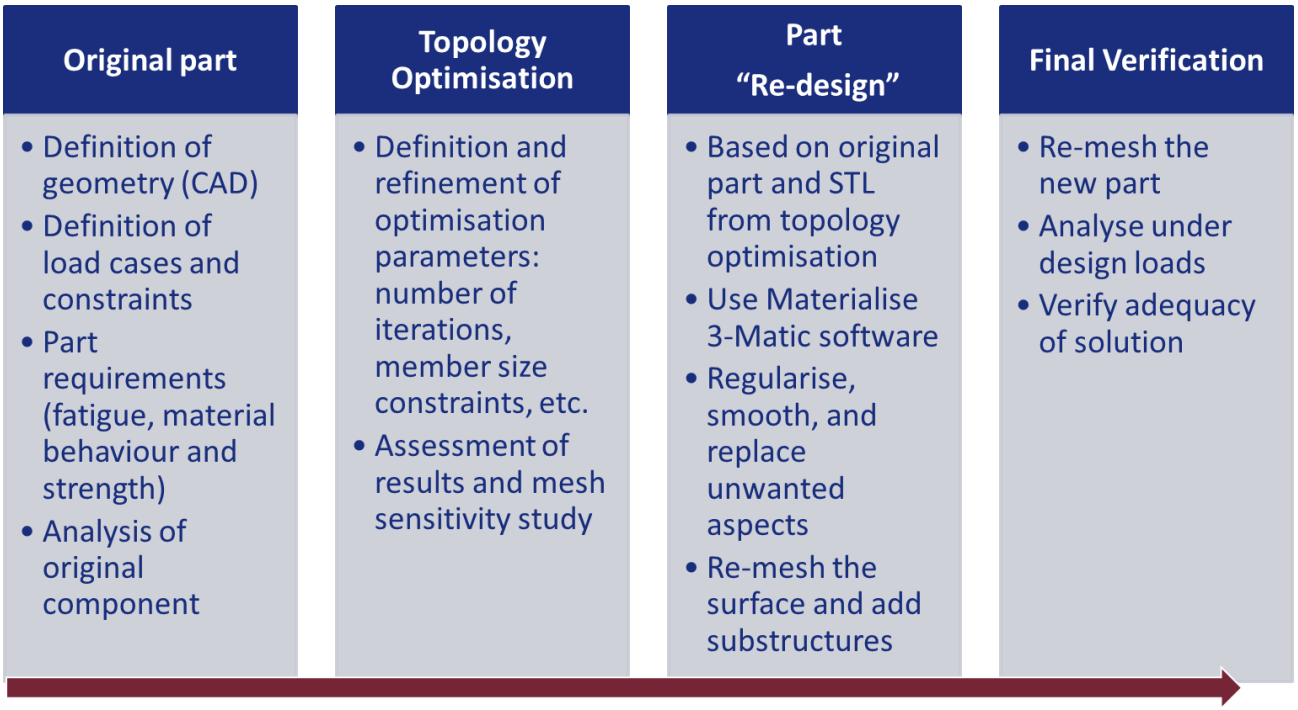

Figure 5: Topology Optimisation Process-flow (Credit: TWI)

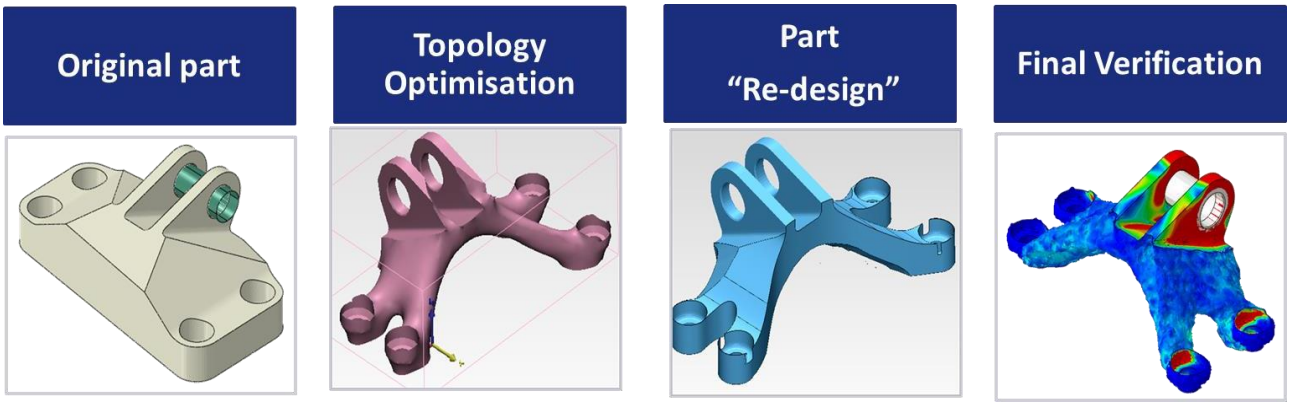

Figure 6: GE engine bracket (Credit:TWI).

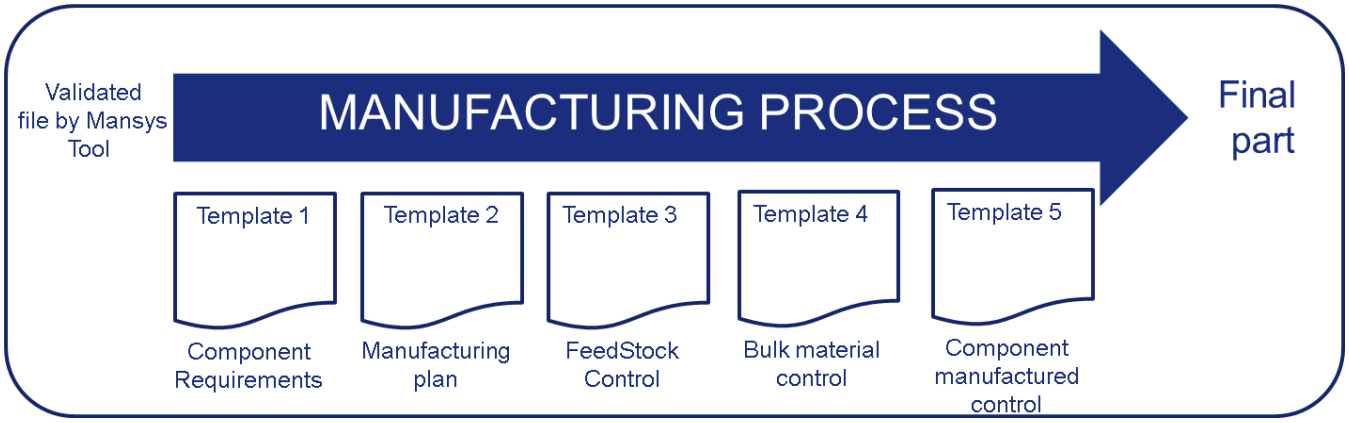

Figure 7: ManSYS Manufacturing quality validation process.

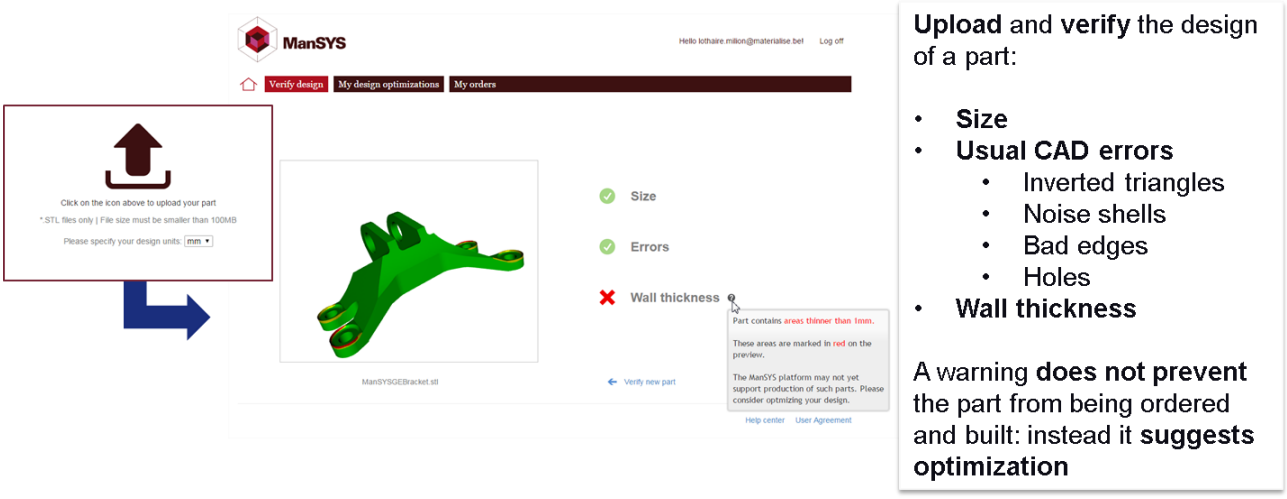

Figure 8: Example of the ManSYS decision making tool analysis.

Figure 9: ManSYS web portal interface.

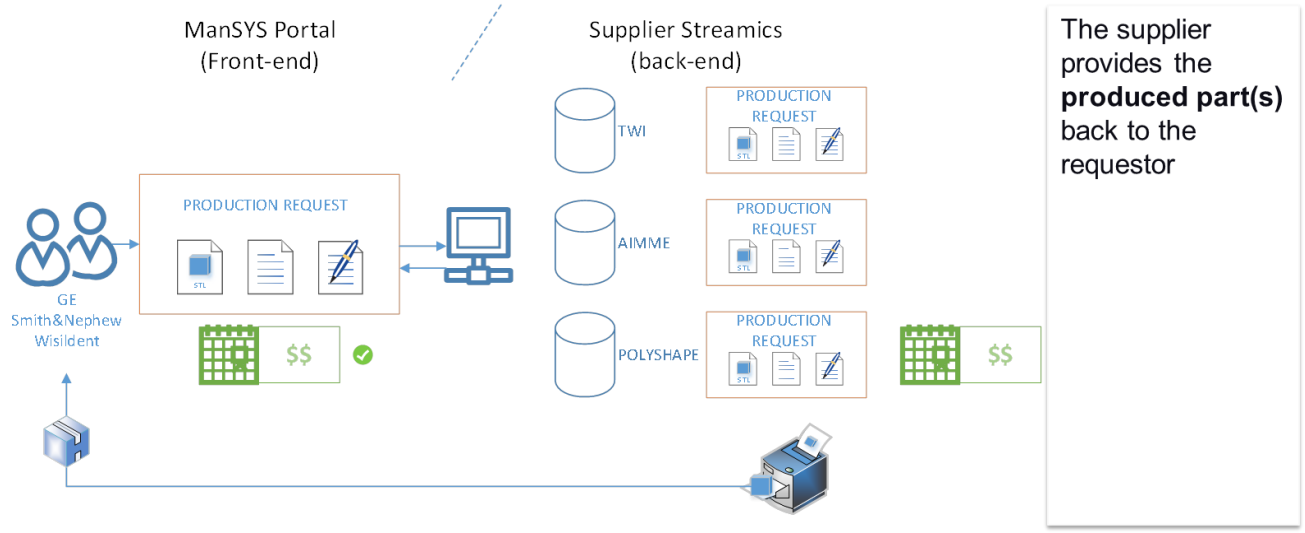

Figure 10: ManSYS Production Requests.

Table 1 list of participants

Participant no.	Participant organisation name	Participant short name	Country		Organisation Type
1	TWI Ltd	TWI	UK		RTO
2	Materialise	MAT	Belgium (USA)		LE
3	LPW Technologies Ltd	LPW	UK		SME
4	BCT GmbH	BCT	Germany		SME
5	Polyshape	POL	France		SME
6	Berenschot	BER	Netherlands		LE
7	TNO	TNO	Netherlands		RTO
8	AIMME	AIM	Spain		RTO
9	Smith & Nephew	SN	UK (USA)		LE
10	Wisildent (& Twocare)	WIS	Italy		SME
11	GE	GE	Turkey (USA)		LE

Table 2: Overview of Demonstrator Results Achieved from ManSYS for each of the Demonstrators.

	GE	S&N	Wisildent
Optimization Tool Analysis	75% weight reduction		
Supply Chain Analysis	86% improvement in total purchase ordering and delivery period		
Decision Making Tool Analysis	Automated thin wall detection Automated size limitation detection Automated part error detection for inverted surfaces		
Life Cycle Analysis	8.3kWh of specific energy consumption for the optimized bracket	4kWh of specific energy consumption for the optimized nail	0.4kWh of specific energy consumption for the optimized bridge
Business Impact	75% weight reduction from one bracket,	90% reduction in manufacturing time	75% reduction in manufacturing time

	equating to $1,254,000 cost savings per year.	and 68% less raw material, equating to 1,060.000€ cost savings annually.	
Environmental impact (material)	0.003% reduction in fuel consumption per bracket.	240gr less raw material per nail	75% shorter manufacturing time