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| **Challenge** | **Code** | **Proposition** |
| Hedged Sourcing Strategy (Demand Risks) | O1 | Integrating conventional manufacturing and additive manufacturing can minimize demand-related supply chain risks |
| Hedged Sourcing Strategy (Supply Risks) | O2 | Integrating conventional manufacturing and additive manufacturing can minimize supply-related supply chain risks |
| Resilient Supply Chain | O3 | Adopting AM can reduce and/or mitigate the impact of supply chain disruptions since it allows to produce on demand and close to the point of use |
| Environmental Sustainability | O4 | The possibility provided by AM to produce parts close to the point of use reduces the environmental footprint of the supply chain since shorter transportation routes are required |
| Reduced Need of Employees | O5 | AM requires less workforce than conventional manufacturing techniques (an operator can operate more than one AM machine) |
| Customization | O6 | AM enables a higher degree of customization than conventional manufacturing techniques, derived mainly from a higher design freedom (e.g. topology optimization procedures) |
| Responsiveness (On-Demand Production) | O7 | AM assures quick responses to new orders due to the on-demand production |
| Responsiveness (Geographical Convenience) | O8 | AM assures quick responses to new orders due to the production close to the point of use |
| Waste Reduction | O9 | AM assures a buy-to-fly ratio of almost 1:1, thus drastically reducing waste compared to conventional manufacturing techniques |
| MTO Production | O10 | AM enables the possibility to switch from make to stock (MTS) to make to order (MTO) and hence to lower inventory levels (and hence costs) |
| Simpler Supply Chain | O11 | AM simplify the supply chain since it encompasses less actors in the supply chain |
| Part Consolidation | O12 | AM enables to consolidate existing part assemblies made from many components into a single part |
| Shareability | O13 | AM allows to easily share products design as they only need to be shared via STL files to be ready to be printed |

**Table D1.** Summary of the challenges identified and corresponding propositions