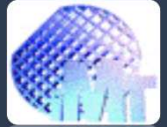


BUSINESS MODEL FOR SMEs IN THE FIELD OF ADDITIVE MANUFACTURING

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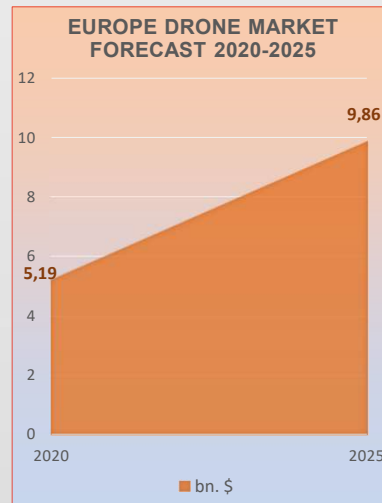
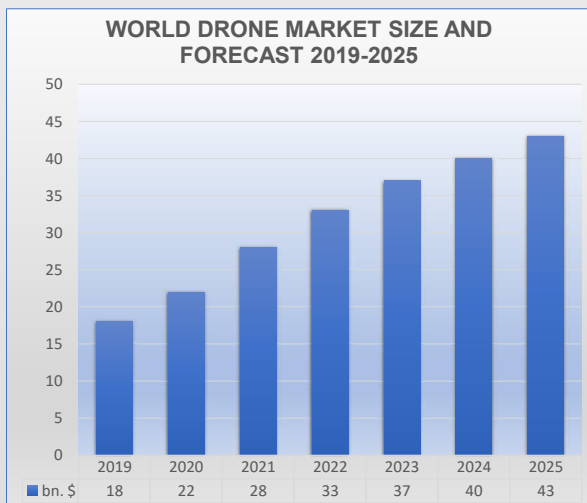


SUMMARY

The paper presents a business model used by a SME that operates in the field of additive manufacturing (AM), focused on Selective Laser Sintering (SLS) technology, and using an industrial 3D printing system, Formiga P 100 from EOS. The SME develops specific parts for UAVs, starting from the identification of the client's need, and customizing different components for various types of UAVs. The decision of making these products imposed a detailed cost – benefit analysis and a new direction of commercial activity. Under these circumstances, the new business model consists of set-up a spin-off business from the NIRD in Microtechnologies.

BUSINESS MODEL

In the last years the market demand for the purchase of UAVs has expanded. Drone Industry Insights prepared a Drone Market Report in June 2020. They present the growth trends of the drone industry market over the next five years.



We have identified the opportunity on the Romanian market to make products such as accessories for UAVs. The products are made by the SLS technology.

SWOT ANALYSIS

Strengths	Weaknesses
S1 Technologies that offer high efficiency	W1 low manufacturing volume.
S2 State-of-the-art equipment.	W2 Limited financial resources.
S3 Experience in 3D nylon manufacturing.	W3 Lack of business relations
S4 Well-trained workforce.	W4 SME is newly established and is not yet recognized in the market.
Opportunities	Threats
O1 Growing trend for the UAVs market	A1 Continuous change of technology.
O2 Growing demand for related accessories	A2 Direct competitors
O3 Possibility of setting up a spin-off business	A3 The effects of the pandemic
O4 Possibility of non-reimbursable grant	A4 Market entry of new competitors.
O5 Increasing the number of potential customers	A5 Instability of the business environment.

MAIN COMPONENTS OF THE BUSINESS MODEL



RISKS

Market risks	
Risk 1	Decreased market demand - the emergence of direct competitors
Risk 2	Lack of an extensive portfolio of clients
Financial risks	
Risk 3	Risk of delayed deliveries - by companies supplying raw materials
Risk 4	Risk of bankruptcy due to the manager's lack of practical business experience
Risk 5	Risk of lack of funding
Risk 6	Unforeseen expenses
Legislative risks	
Risk 7	Legislative regulations in the field of pollution

CONCLUSION

The establishment of a SME in the field of additive manufacturing by SLS for the customized manufacture of objects for UAVs is feasible in case of scenario three. The SME use know-how on the market by associating with the Institute in Microtechnologies. The assumptions regarding the increase of the number of sales in the drone industry until 2025 support the establishment and sustainability of the business.

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