



Guide to Service Offerings



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Welcome to AMable. We offer services and events to get you engaged with additive manufacturing and to dive as deep as you like. From first ideas to production ramp up – you will find support and knowledge with us.

Take a journey from design to finish, from authentication to encryption of data, from trial to on-demand individualised production. You will find here whatever you need to validate your additive manufacturing ideas and to bring it to life.

Talk to us. We are here to help.



Service Offerings

The AMable Services Arena is your entry point to knowledge and support in additive manufacturing. If you want to learn or if you search for a solution, for technical or economical support. This is the right place to go. Take your journey, stage by stage.

Stages

AMable has defined four key stages which act as entry points:

Four stages from start to finish.

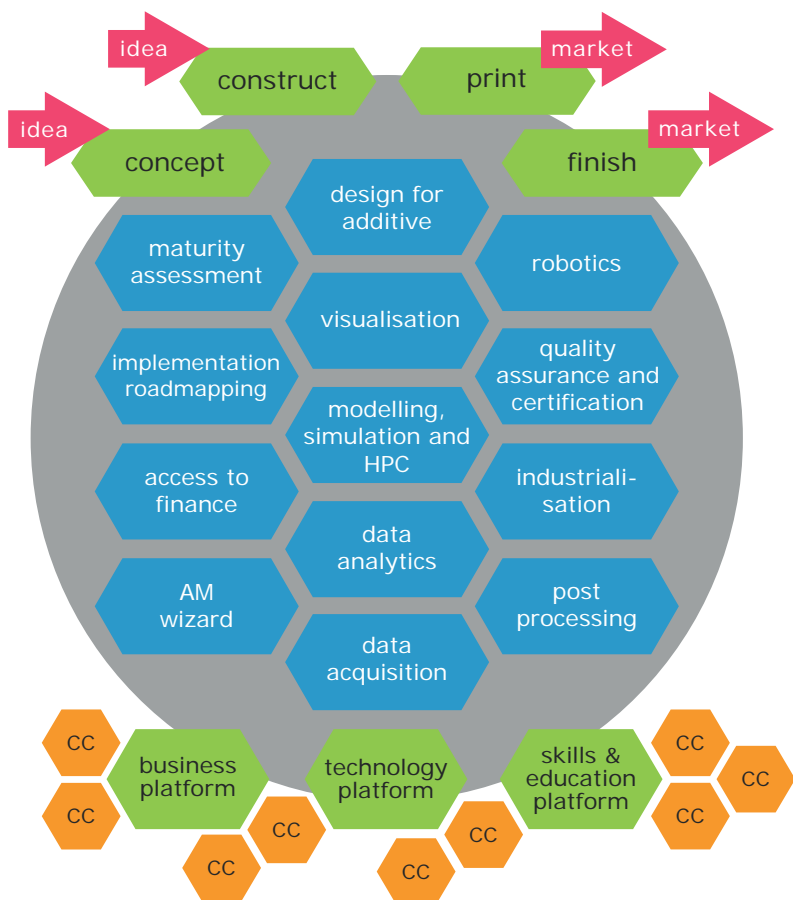
Concept Stage

The concept stage deals with the very beginning of the AM product lifecycle – with your idea or innovation. You can discuss your business case with our experts and plan the best journey to make your idea enter the market. This includes a discussion of sales figures and production cost. But we also discuss with you the benefit that additive manufacturing can bring to your product. At the end, you should have a clear perspective on sales figures and how to construct your product.

STAGES

SERVICES

PLATFORMS



Construct Stage

The construct stage supports the transfer of the design idea into a construction that can be printed. The use of simulation and topology optimisation for example will enable you to come up with a model that meets all requirements of the envisioned product and additive manufacturing design rules. The end of this process is a 3D model that is created for the specific additive manufacturing process and material that you will use and we will help you in selecting them.

Print Stage

The print stage now enables the transfer of the construction to the actual printing process. Build simulation, slicing and variability testing can be elements of this phase of your product creation. At the end, you will have a print file that enables the reproduction of the part at hand.

Finish Stage

The finish stage supports you to do the final steps in product creation. The execution of post-processing and quality assurance round off the additive manufacturing of your part. You will have parts, documentation of their creation and you will be ready for dispatch.

How to enter, how to select services?

Now, things are easy to describe and promises are easy to make. You find services on our web, as well as several success stories.

But no matter where you enter the journey with us - how will you arrive at this final step of being able to dispatch your product and sleep well afterwards?

Keep on reading. We tell you how.

Service list at
www.amable.eu





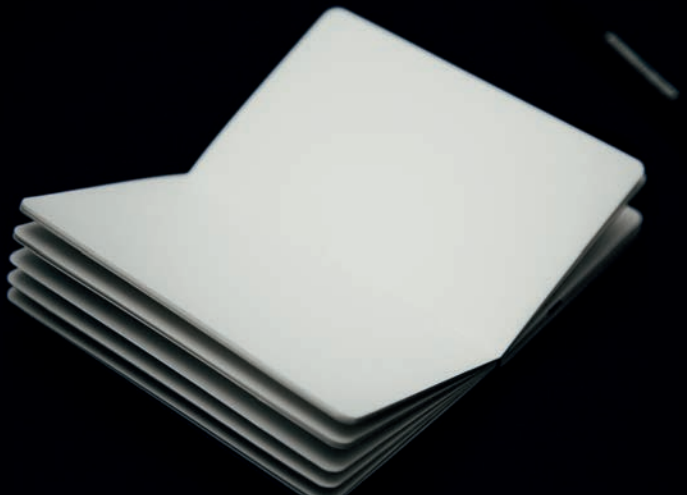
Two modes of service operation and support

AMable aims to support the uptake of AM. You can do this in two different ways: You listen, act and learn under the guidance of our experts. We call this the “skill-up” mode of providing services to you. You can also take the full-service road and just tell us what you need and we’ll do it for you. We call this the “solution” mode. Now, what does that mean in detail:

**„Skill-up“ or
„Solution“ mode. You
decide.**

Service offerings in “skill-up” mode will team you up with a tutor that guides you down the road. This tutor is an expert in the field of technology that you need to bring your idea into reality. He/she will find the best services for you and will teach you how to solve the question you have. The experts will sit with you, do exercises, ask the right questions, tell you where to look and approve your steps forward. But it will remain up to you to find the solution. At the end of this journey, you will be able to repeat this with little to zero help for the next idea you have.

Now, if you want to get a solution as quickly as possible, then the “solution mode” might be right for you. Our experts do a guided interview with you, specify the requirements and find service providers for you. The service provider you select from that offering will then develop the solution based on the specifications that you agreed with our expert. At the end of this journey, you will have a solution at hand that will allow you to proceed with your plans. And - you can go this way as many times as you need.



Define your needs

Get what you need.

Now, there are again options for you to use AMable to get ahead with your ideas:

Fast track to support through services

The fastest track to your success is to send us a request where you have already defined your requirements for a specific service . This is especially suitable for the "solution" mode. You can do this on our web site through the services arena. Based on the services that are currently available, you can select the one that best meets your requirements and define your needs. We will contact you with an offer to start the action.

Explore your options

Now, what to do if you do not know how to define the requirements for a specific service? There are a few options on this:

- Pitch your idea
 - If you tell us about your idea, your starting point and your resources, we will list the options you have and propose a plan on how to proceed. This proposal can include a combination of solution and skill-up services in different fields. What you will have at hand is a clear set of options for your next steps.
- Visit an AMable Experience Lab
 - If you visit an AMable Experience Lab, you can see what AM is capable of. You can even present your idea and discuss with experts and colleagues. This one day seminar will give you an insight into the options you have and you will be able to proceed.
- Request a Product Idea Assessment
 - If you request a product idea assessment, our experts will your specific plans in detail. They will cover the business aspects, material and technology options and also the path to production and certification, if needed. The result of this assessment is a viability check that you can use to direct your investment and to proceed.

What happens once you start with us

**We travel together
with you.**

Once you start with us we push your idea. For each product idea that enters our services arena, there will be a tutor that guides you from your entry point onwards. This tutor will proceed alongside you as closely as you want. The following offerings can accompany the journey to your liking:

Business Case Assessment

Does it make a business case? A great idea might not become a product, a proven viability might not create cash. However, the better you know the feasibility of the anticipated product and the market that you want to sell into, the better you can formulate the business case. AMable has developed tools to assess additive manufacturing specific business cases. They not only collect information about costs for design, construction, and printing but also reflect costs for certification, market entry and logistics.

Especially in additive manufacturing, the supply chain can be very much distributed which can cause lead times and unexpected variability in cost structures. The tools therefore cover the degree of industrialisation of such supply chains with individual plans for outsourcing and investments. The most valuable contribution that you will receive is to have all questions on the table that are needed to really make your idea a real business case.

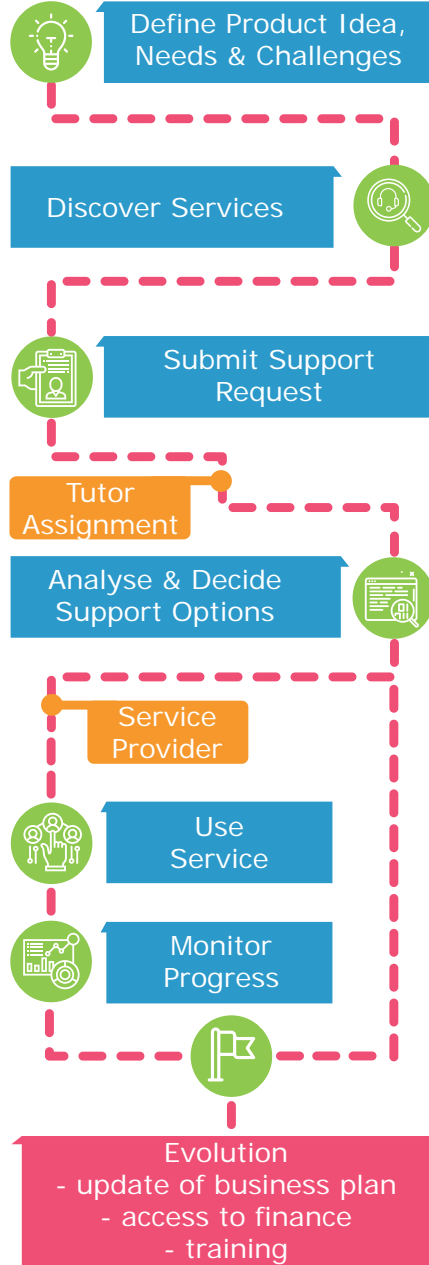
Progress Monitoring

Usually, the first question that arises when you have a new idea is: "Is your product additively manufacturable (AMable)?" Once you enter a service, we check and monitor the status of your product idea.

AMable has developed a tool called the "AMable MRL Tracker" to assess the manufacturing readiness level (MRL) of your idea. This analysis is based in different topics including design, material, process capabilities, facilities, work force, cost and funding, quality management, strategic management and industrial capacity. The aim is to evaluate for each one of these topics the entry level of your organisation and the sequential steps that you need to

AMable

Customer Journey



complete to produce your first prototype, test it in a relevant environment and demonstrate its production on a pilot line or even at full rate production.

The AMable MRL Tracker is not only applied as an initial assessment. It is also used through the different AM product development stages to evaluate and track the progress, to set new milestones and to identify and minimize risks.

On your journey through the AMable ecosystem, your tutor will assist you in the assessment of your idea's manufacturing readiness level (MRL). Based on this tool and methodology you will have at least one initial and final assessment. For longer development programmes, intermediate assessments are also done to track progress.

Therefore, the application of the AMable MRL Tracker brings the following benefits for you:

- Initial assessment of the maturity and readiness level of your idea.
- Early identification of the stoppers and potential market entrance barriers.
- Definition of development activities and milestones for successful product development.
- Real-time evaluation of AM product development progress and risks.
- Reassessment at any time that is needed or desired.
- Final assessment to evaluate product development and to conclude on market entrance readiness.

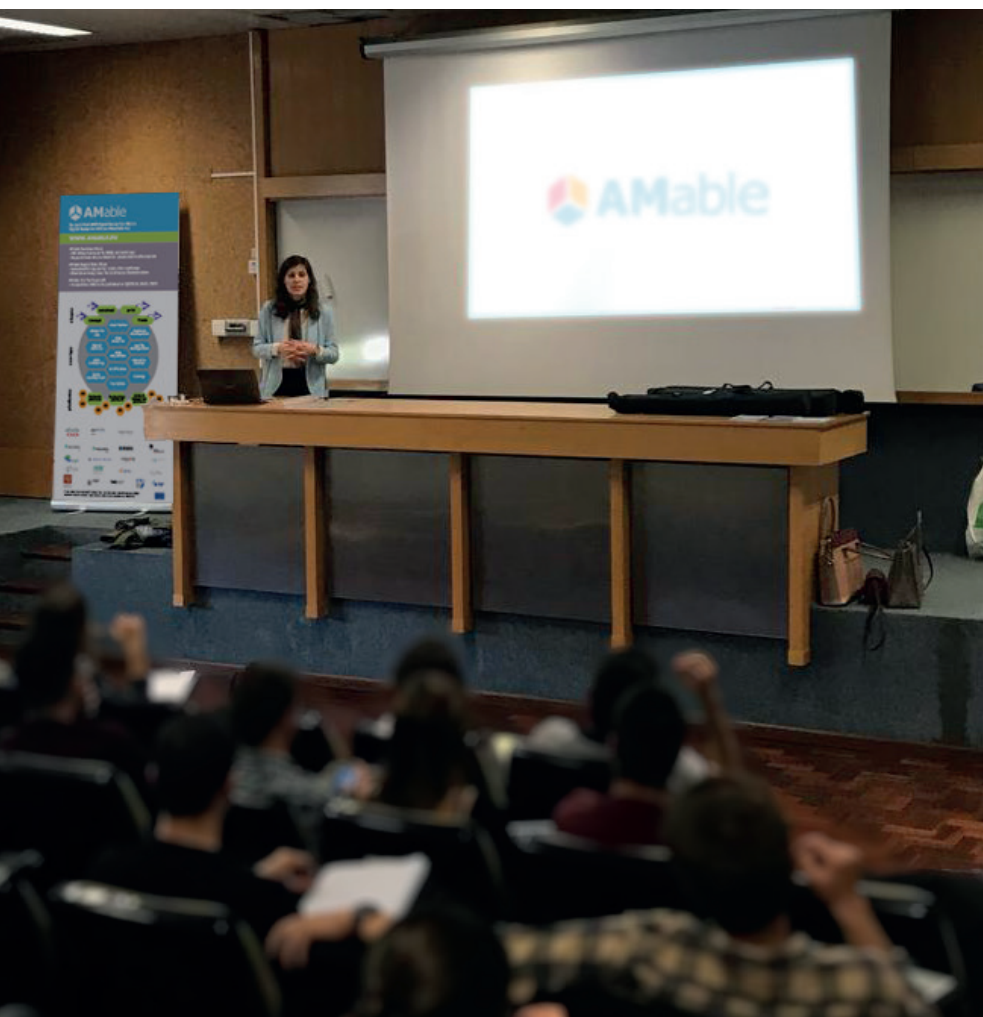


Match making & Access to finance

Once you achieve your goal, you will need additional funding to finance your next steps. We distinguish between two main implementation schemes: investment or outsourcing. Both being classic models of pursuing a production ramp up, it is clear that investment requires a structured approach to secure the investment into machines and the training of employees.

Once you have used a service, we are able to give recommendations on the options you have to make the next steps. If you created an implementation roadmap with us and in the case that the print stage and finish stages validated the technology planning, we can even provide reasoning that allows other to judge their investment in your product idea.

AMable connects you to research funding initiatives and venture capital providers. No matter which path you select, AMable will support you to get public funding as well as capital investment and provide proper reasoning. This will help you to exploit the results you achieved through our services and your effort.



Training

One key requirement for your success is your personnel. To be more specific – the knowledge and competence of your personnel in several domains of your company. This is not only true for the designers that need to think along new rules. They need to respect 3D degrees of freedom, but need to respect process limitations of the planned production technology. These might be new for them.

This is also true for the operators on your shop floor. The change from conventional manufacturing based on drawings and limited digital transfer of data to a fully digital production preparation. Less drawings that support the operators on how to carry out the process, less intermediate steps to validate quality during production. And, in most cases they need to handle new materials and prepare them differently, like sieving and de-moisturising of metal powder. Last but not least, the knowledge of personnel in charge of part quality assessment and even for those in selling must be also updated.

All this needs careful observation and thoughtful planning. AMable can determine your training needs and connect you to initiatives and providers of training schemes which are officially recognised such as the EWF training catalogue (ewf.be) or the SAM blueprints (skills4am.eu). Similar links are provided for certification (such as Lloyds) to ensure that your additively manufactured road to success is successful.



Resume

AMable offers services to guide you towards your additively manufactured product. No matter in what stage you join AMable, dedicated services will be available to address the challenge you have. We are as flexible as you need.



You decide if you want “skill-up” support or if you want to buy “solution” support. Choose an entry point like the Experience Labs, the Services Arena or send us your service request through the web forms.

Talk to us. We support you.

Contact

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Channel: AMable



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