Automated industrialization software for Additive Manufacturing
An efficient way to perform a feasibility study

WHAT FOR?

AM ELIGIBILITY/DETECTOR

In just few clicks, find AM eligible parts from your inventory

PRINTABILITY ASSURANCE

Ensure clean and successful productions

SOFTWARE FEATURES

COSTING

Accurate cost estimation and cost breakdown

ORIENTATION

We analyze more than 5000 orientation to find the best one

RISK ANALYSIS

Visualize risk factor in our 3D viewer

LEAD TIME

Improve your production cycle

Automated & user friendly
Time saving and efficient
Optimize your print results

SUPPORTED MATERIALS AND PROCESSES

POLYMERS

DLP - Digital Light Processing
SLS - Selective Laser Sintering
FFF - Fused Filament Fabrication

METALS

Powder Bed Fusion
FFF - Fused Filament Fabrication
Binder Jetting

MAJOR MACHINES AND MATERIALS AVAILABLE

- PLA
- PETG
- ABS
- PEEK
- ULTEM 9085
- TA6V
- 316L
- Inconel 718
- Maraging
- 17-4HP
- AlSi10

This list of machines and materials is not limited to the examples mentioned above
The software allows you to add machines and materials of your own
**MODE OF OPERATION**

**USER INPUTS**
- **IMPORT**
  - STL
  - STEP
  - STP

**PROGRAM OUTPUTS**
- **EXPORT**
  - Excel CSV - Manufacturing KPI
  - STL - Nested Model
  - PDF - Report Summary
  - GLB - Colored Model

**RISK ANALYSIS**
- printability analysis
- mesh analysis

**COST ANALYSIS**
- manufacturability analysis
- batch cost analysis
- lead time

**VISUALIZE MANUFACTURING RISKS**
- MIN FEATURES SIZE
- DELAMINATION
- WALL DEFORMATION
- HOLE DEFORMATION
- SUPPORT ZONE
- SURFACE ROUGHNESS
- STRESS CONCENTRATION
- THERMAL CONCENTRATION

**PART SCREENING**
- Screen, compare and identify AM parts

Different machines
- Various materials
- **KPIs**
  - Printing time
  - Part cost
  - Printability
**Use Cases**

Cognitive Additive is a software solution for additive manufacturing that performs automated feasibility studies and part screening.

Our in-house-developed artificial intelligence compares different additive technologies and materials to quickly orient, nest and analyze parts or assemblies.

**Aeronautics**

**Screening eligible parts for additive manufacturing**

A French aircraft manufacturer wanted to analyze a complex assembly of more than a thousand parts. The purpose of this study was to screen eligible parts for additive manufacturing, and to compare their costs and technical advantage with conventional manufacturing.

Cognitive Additive was used to conduct this part identification study in an automated fashion.

The software ran the full assembly analysis under four hours, saving the client months of engineering work. Analyzing parts geometry and different ratios, the study revealed the manufacturable parts that could be printed using additive technologies, as well as their associated cost for specific machines and materials. Finally, the CPS team was able to also push the study further, highlighting assemblies that could be redesigned and consolidated into a lesser number of parts.

**Aerospace**

**Identifying optimal materials and machines for parts**

A Japanese space company with the intention of designing new products, needed to identify the parts amongst their inventory that could be done in additive manufacturing.

Classification of their inventory was an important aspect, as they wanted to find the best match for the different machines and materials available on site, in order to optimize the production based on volume and cost.

Cognitive Additive provided a full comprehensive report for each part and combination of machines x materials, including batch and unit cost of each part, as well as the lead time.

Today this client is also using the software during early stage of the design phase for future components.

**Automotive**

**Ensuring pristine print results**

Inappropriate designs resulting in AM failure is common. For this, engineering design bureaus use Cognitive Additive to guarantee the print quality of their production and adapt designs. Engineers modify and iterate their design based on the visual KPI and the printability score returned by our software.

Cognitive Additive helps you to ensure prints results, saving you from manufacturing failures that are often costly, especially for metals. The rapidity of our solutions allows to quickly understand the risks associated with a production and prevent failures.
WHO ARE OUR USERS?

AM DESIGNER
- Smooth integration with the product design cycle
- Instant quotation for each design iteration
- Printability analysis for each design iteration
- Shorten design cycle
- .STL or .STEP import
- Command line integration

PROJECT MANAGER
- Part screening for additive
- Dashboard reporting
- Risk and cost analysis
- Competitive analysis based on machine and material
- Dashboard PDF/Excel export
- Detailed technical KPIs
- Multiple parts and assembly analyzer
- .STL or .STEP import

AM SALES
- Instant quotation using pre-defined parameters
- Customizable quotation template - per client
- Adjustable cost models - printing & post processing
- Clear and simple KPIs
- .STL or .STEP import

Boost your additive manufacturing capabilities with Cognitive Additive