

Rozvoj moderného strojárskeho vzdelávacieho programu v oblasti zelenej inteligentnej výroby

Aktivita 4: Kurz aditívnej výroby
Téma: SLS tlač
Prednášajúci: Oliver Hinca, eRobots

BIN SGS02: Výzva na podporu inštitucionálnej spolupráce medzi inštitúciami vysokoškolského vzdelávania, strednými školami a súkromným sektorom



ŽILINSKÁ UNIVERZITA V ŽILINE
Strojnícka fakulta

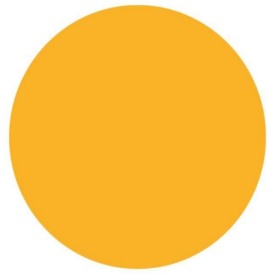
Katedra obrábania
a výrobnjej techniky



UiT The Arctic University
of Norway, Narvik



Stredná priemyselná škola
Dubnica nad Váhom



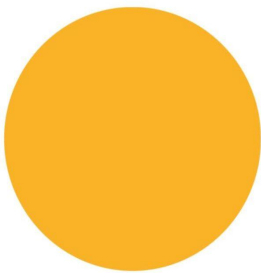
e-Robots

Rapid manufacturing

About us

- Industrial 3D printing from powder and resins
- SLS, SLA, FDM technologies
- Mediation of metal parts production





Our technologies - Everything for custom 3D printing

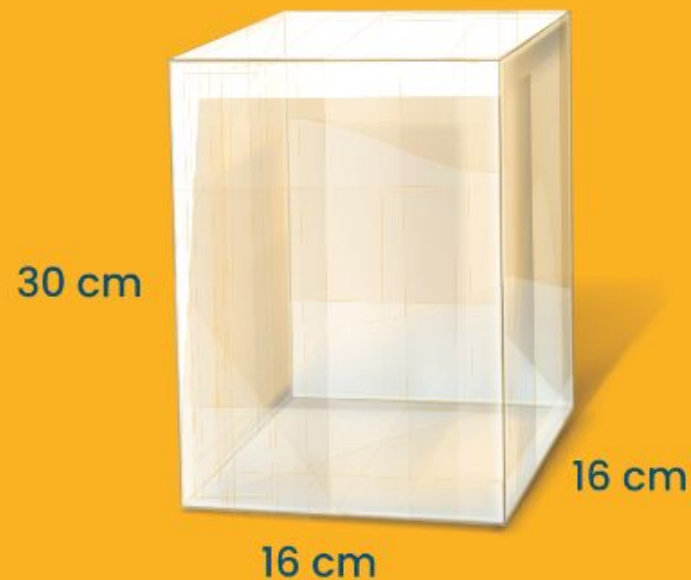
SLA 3D TLAČ

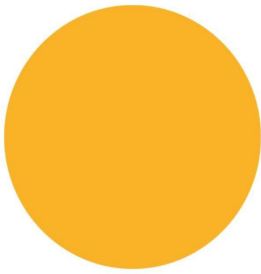
s rozmermi



SLS 3D TLAČ

s rozmermi





Advantages of SLS and SLA

Ultra-fast production and high precision.



- Selection of method according to application
- Wide range of materials
- Different material properties
- Fine details
- Shape freedom
- Low waste
- Price

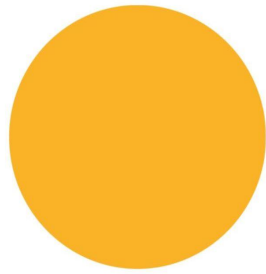


Popular materials

We can find the right material for your application.

- Nylon PA12
- Materials for rapid prototyping
- Rigid materials
- Temperature resistant materials
- Tough and durable materials
- Elastic materials



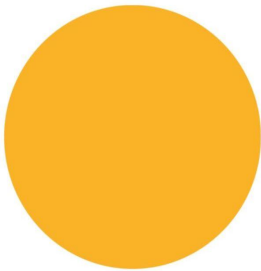


Surface treatment of parts - according to customer requirements.



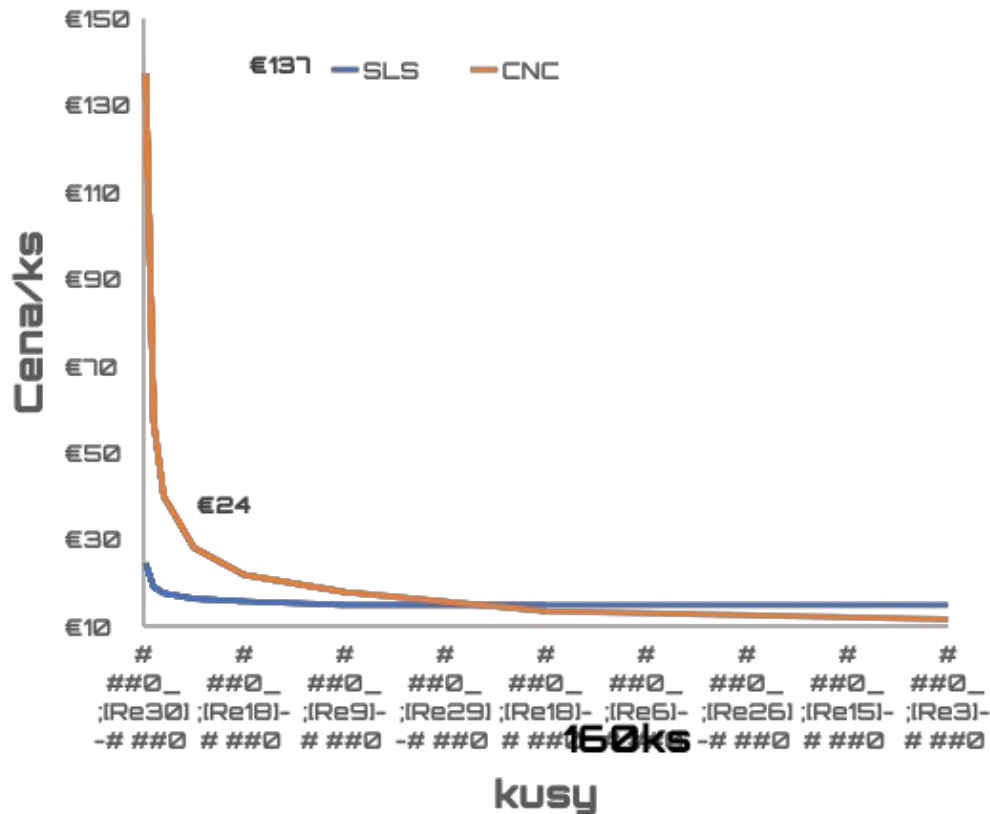
- Sandblasting
- Pickling
- Colouring
- ESD spray
- Protection against staining
- Anti-scratch protection

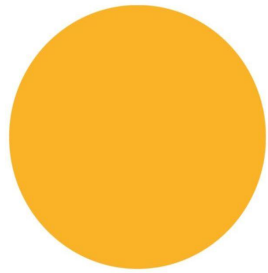




3D printing for prototypes and small batches

Comparison of CNC and SLS production prices.



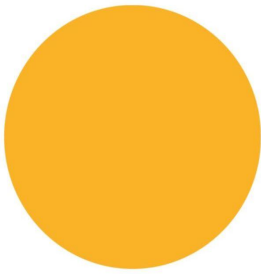


e-Robots

Rapid manufacturing

We make 1000 and 1 piece
Examples of our production.



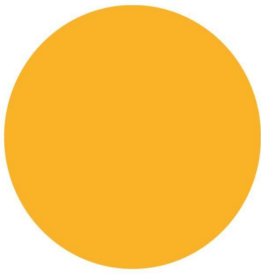


Prototyping

For now we need one piece, then maybe we will modify it.

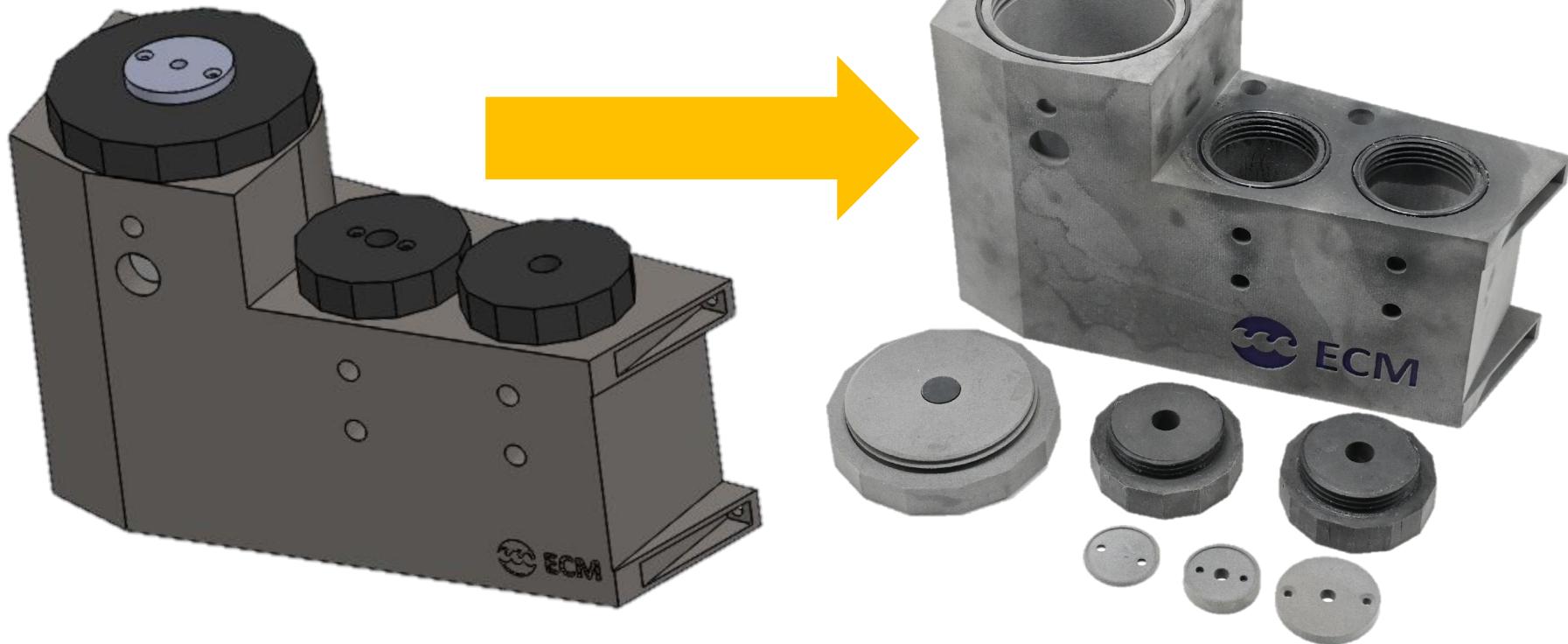


- Affordability
- Speed of delivery



Filter block

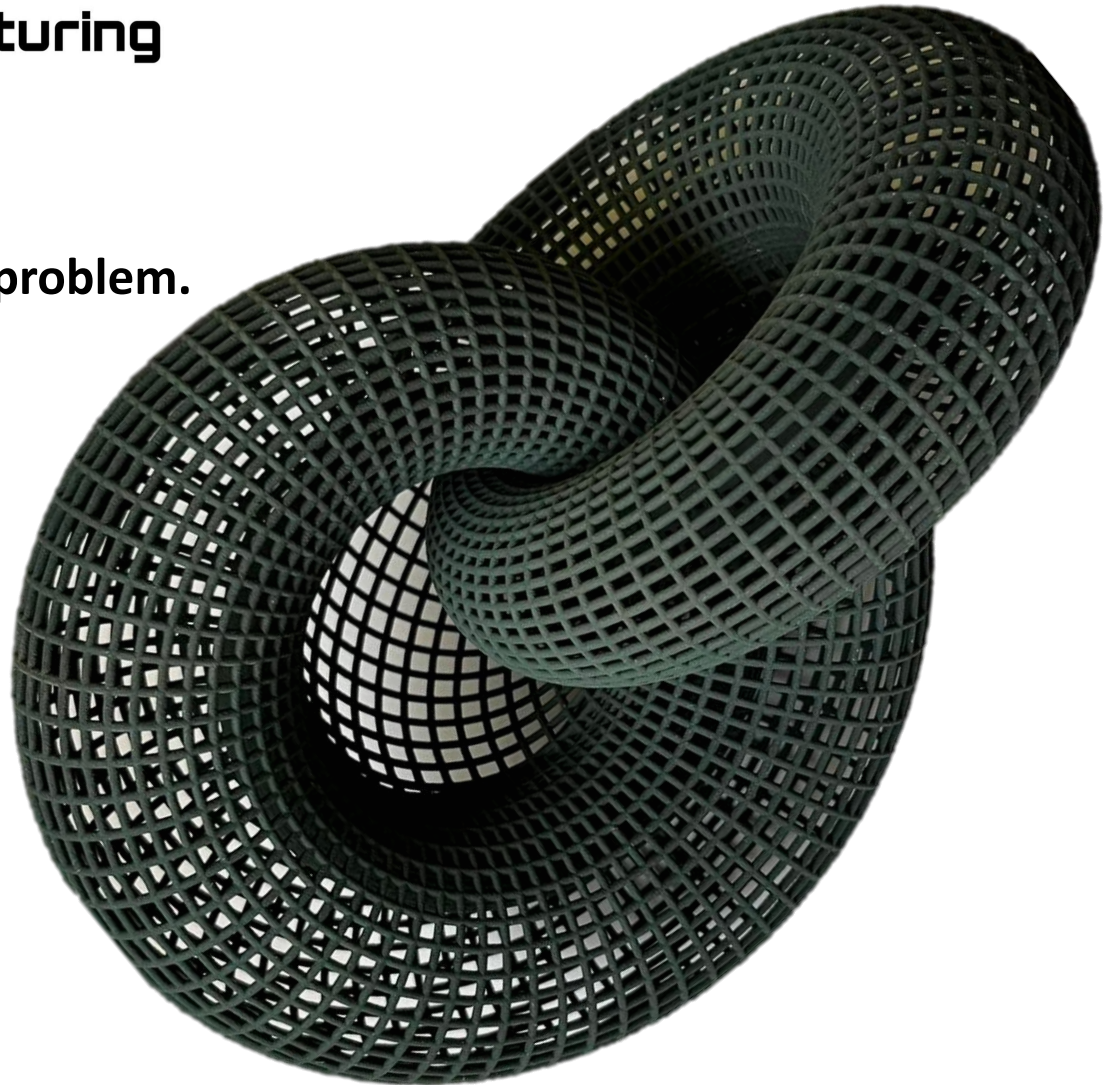
From design to manufactured piece in 3 days.



Art objects

A formally complex work? No problem.

- Shape complex parts
- Moving models



Film and theatre props

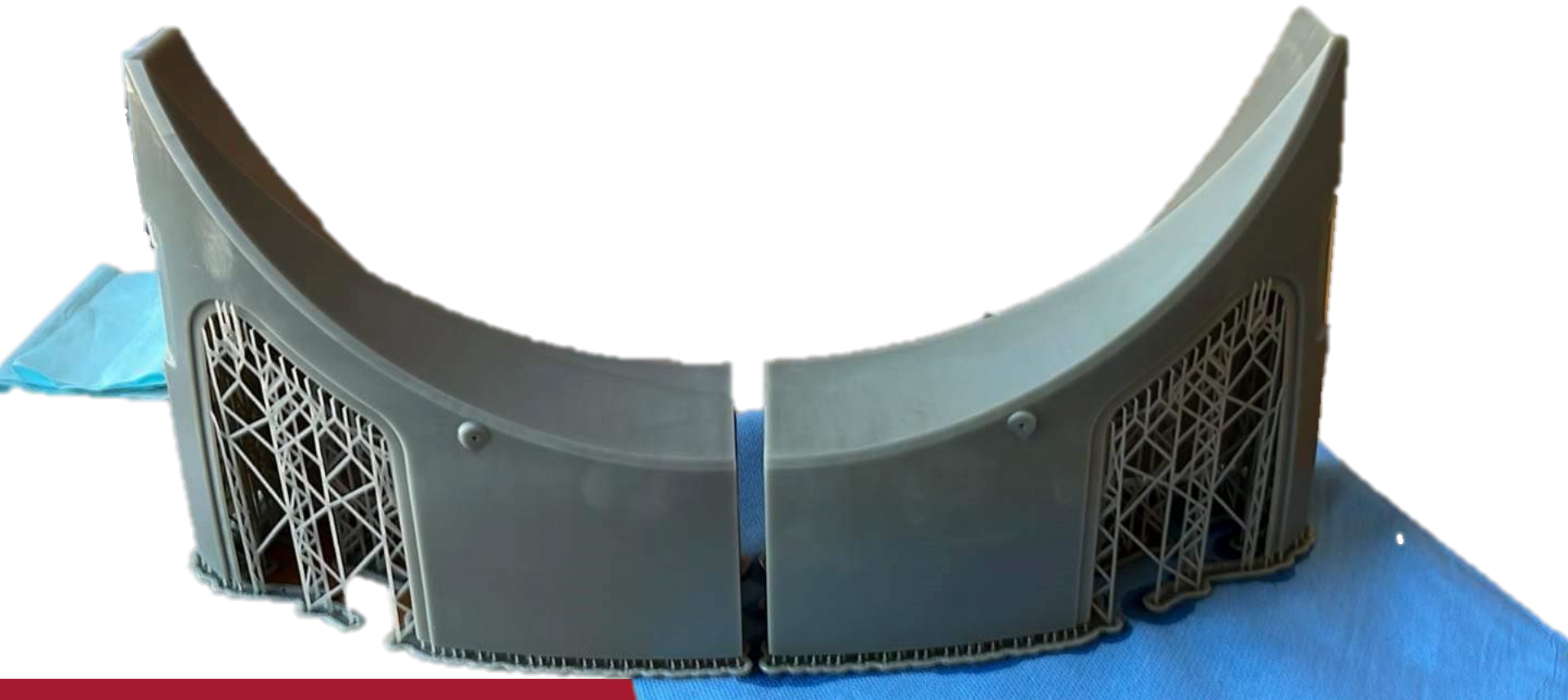
And can we come get it tomorrow night?

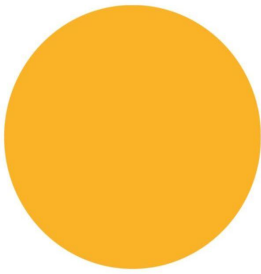
- Fast production
- Fine details



Models for exhibition

Detailed model of a robotic craft in 1:2 scale.





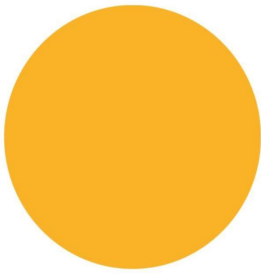
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Rapid manufacturing

Product design

Tire and shoe design.





Signalling modules

A case study using SLS, SLA and reverse engineering.



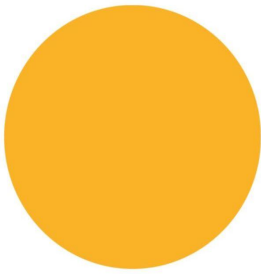
- 3D scanning
- Optics - SLA Clear resin
- Bottom - SLS PA12
- Custom electronics

Spare parts

Parts for candy production line.

- Spare parts
- Broken parts
- Unavailable parts





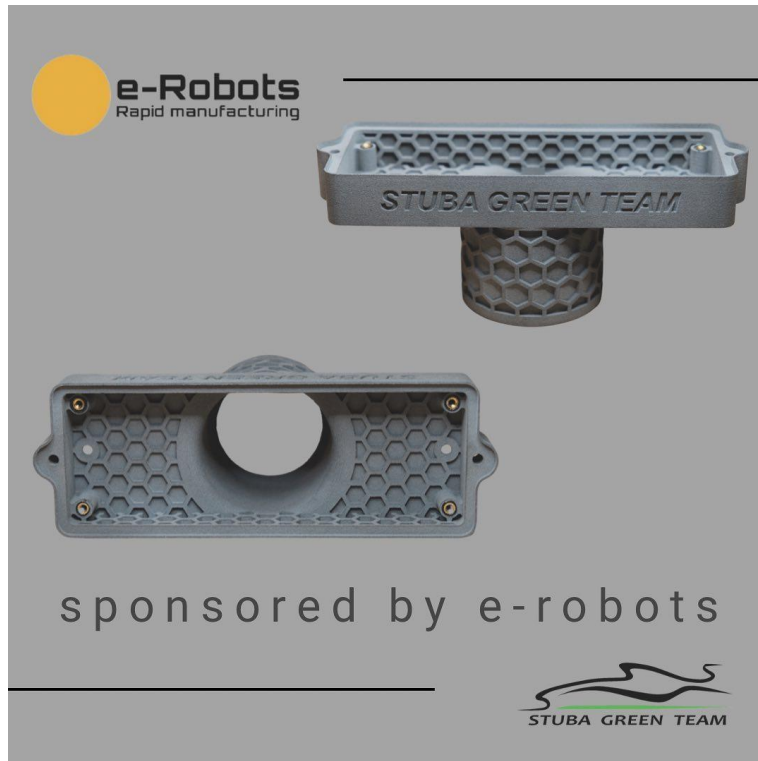
Custom packaging not only for electronics Control units for robotic applications.

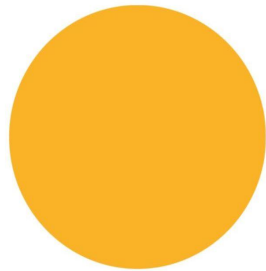
- SLS PA12
- ESD Resin



Parts for STUBA Green Team

Sponsorship of the only electric student formula in Slovakia.





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Thank you for your attention

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