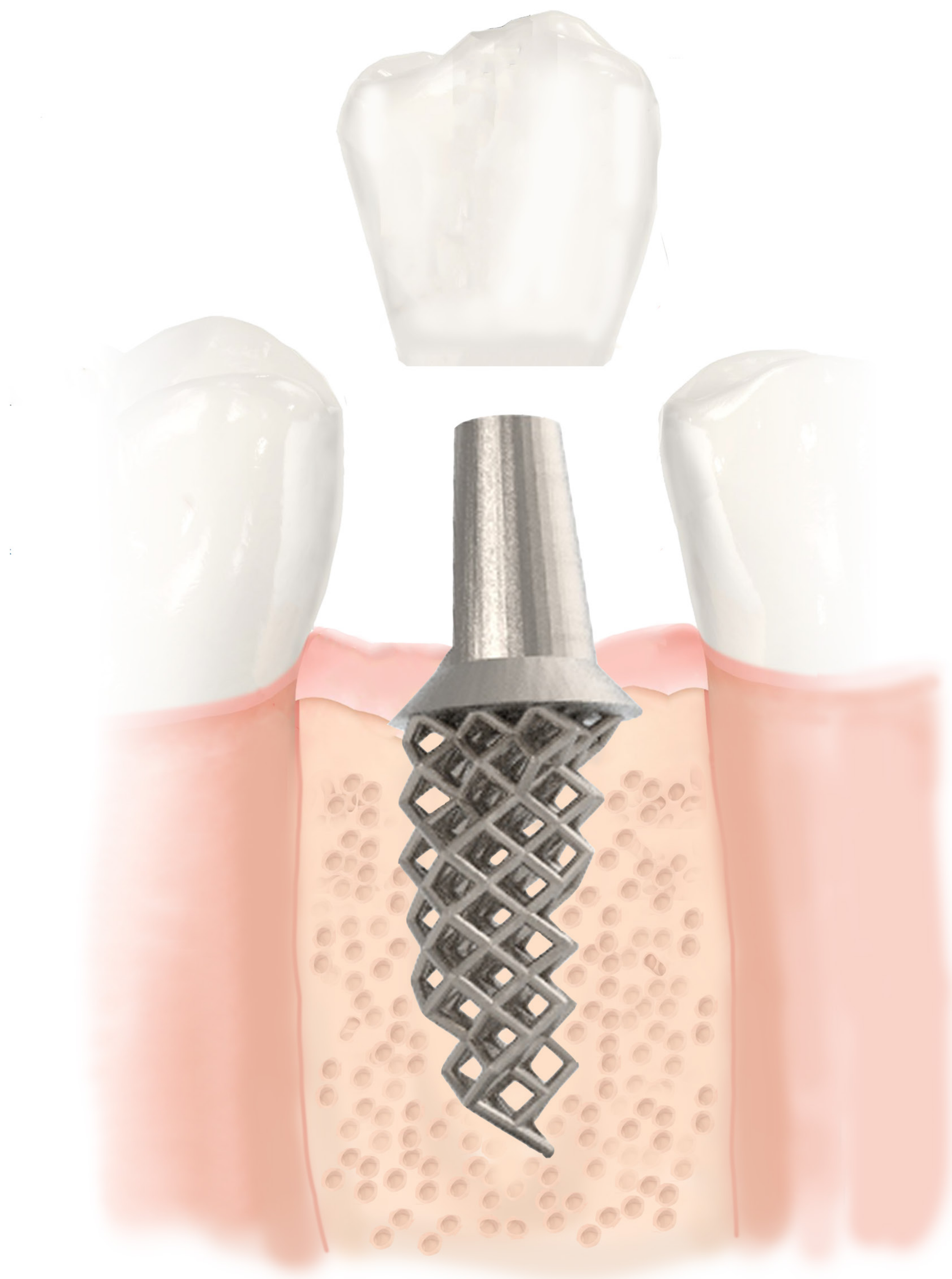


A PATIENT-SPECIFIC DENTAL IMPLANT

promotes osseointegration and reduces the risk of infection



DENTAL IMPLANTS

Dental implants are used to replace missing teeth.

SHAPE

The shape of this patient-specific implant is based on the root shape of the original tooth that will be replaced. This ensures a perfect fit of the implant in the extraction socket.

POROUS STRUCTURE

The porous structure is created to promote osseointegration. Bone can grow into the pores of the structure for a good fixation.

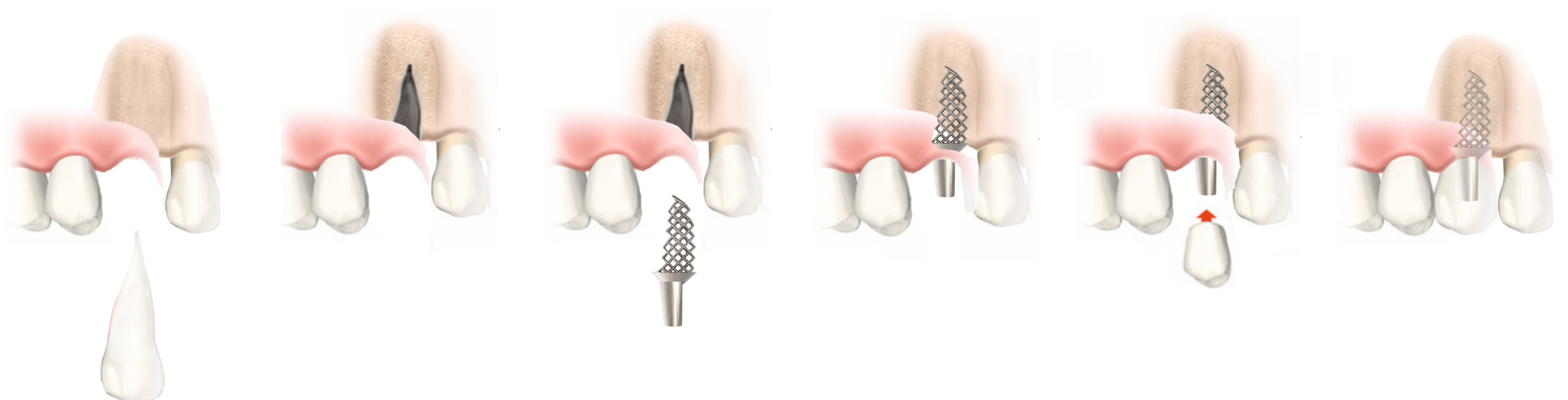
ANTIMICROBIAL SURFACE

Silver nanoparticles are incorporated on the surface of the implant, to lower the risk of infection.

PRODUCTION

The implant is made from a titanium alloy using additive manufacturing. After manufacturing the implant is surface treated to create the antimicrobial surface.

SURGICAL PROCEDURE



Xandra van Megen
Design of a new personalized dental implant and
its surgical procedure
11th of January 2019
Integrated Product Design

Committee Prof. dr. ir R.H.M. Goossens
Dr. Y. Song

 TU Delft