

The slide features a dark blue background with a grid of glowing white lines that recede into the distance, creating a sense of depth and digital space. In the top right corner, there is a red square containing the 'sk' logo and the text 'ARCHITECTS & ENGINEERS'. The main title 'Van BIM naar TWIN' is written in large, white, sans-serif font, with the subtitle 'Modellen met een virtueel gedrag' below it in a smaller white font. At the bottom left, the text 'KIVI – 1 juli 2020' is displayed in white. The bottom of the slide features the 'infranea' logo and 'Passion for Digital Engineering' tagline in white on a dark blue background.

Van BIM naar TWIN
Modellen met een virtueel gedrag

KIVI – 1 juli 2020

sk ARCHITECTS & ENGINEERS

infranea | Passion for
Digital Engineering

1

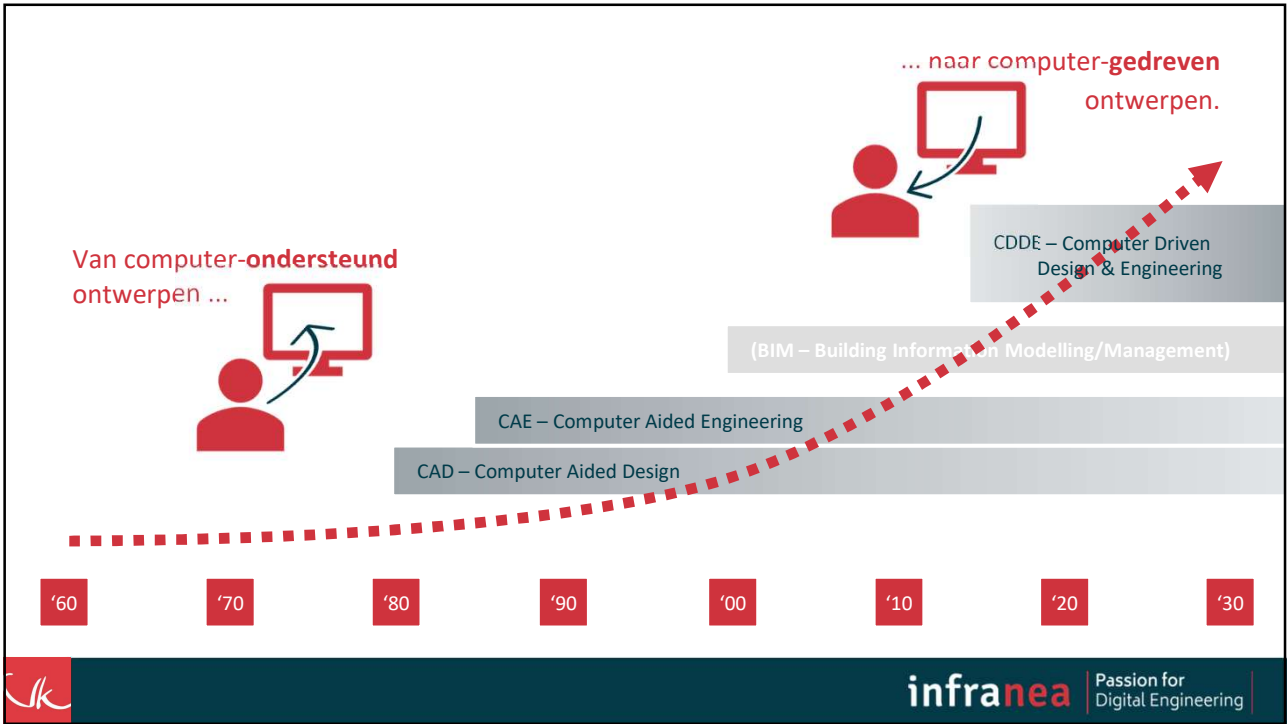
The slide has a dark teal background. At the top left, there is a large, stylized red quotation mark icon. Below it, the text 'De toekomst van hoe we dingen maken is technologie gedreven' is written in a large, white, sans-serif font. The bottom of the slide features the 'infranea' logo and 'Passion for Digital Engineering' tagline in white on a dark teal background.

”

De toekomst van hoe
we dingen maken is
technologie gedreven

sk infranea | Passion for
Digital Engineering

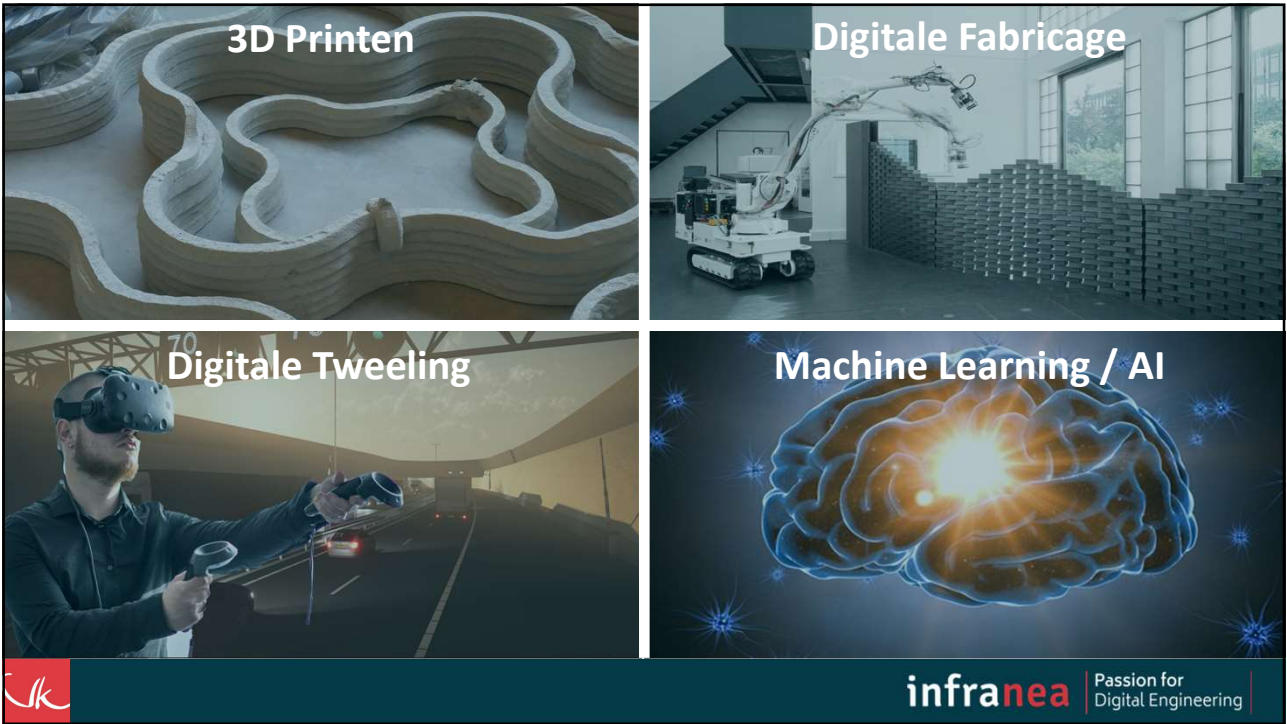
2



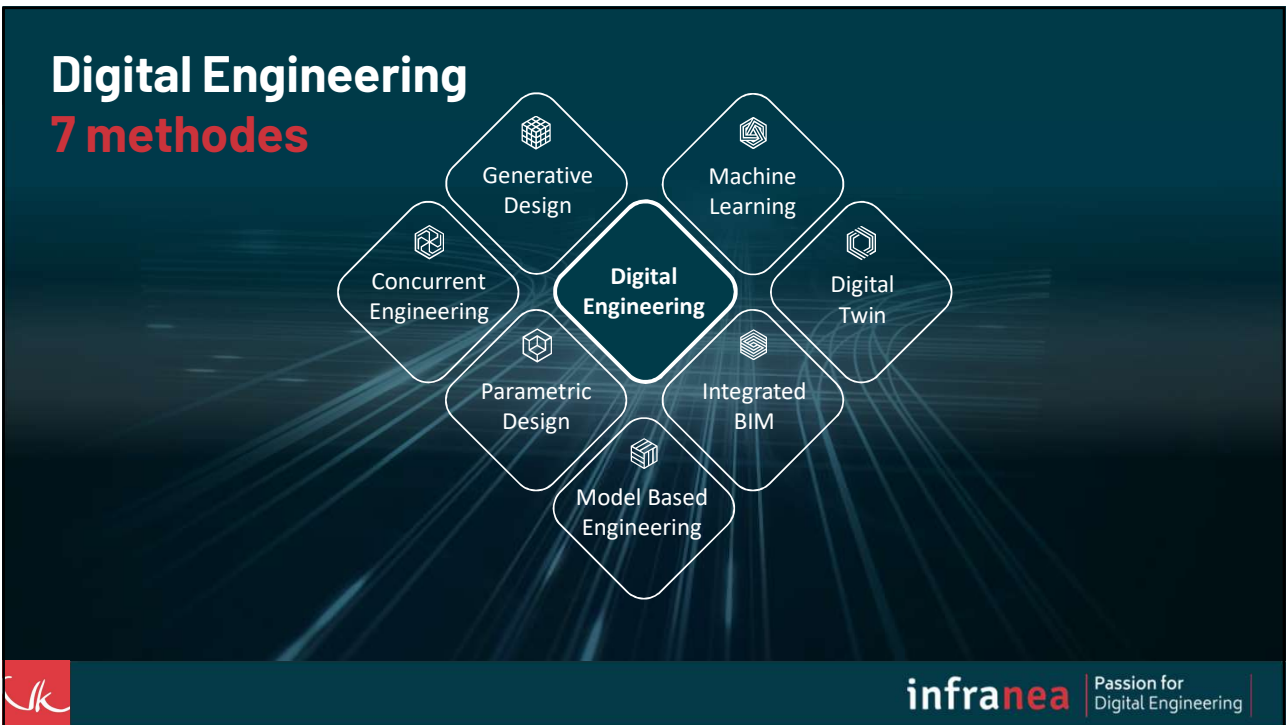
3



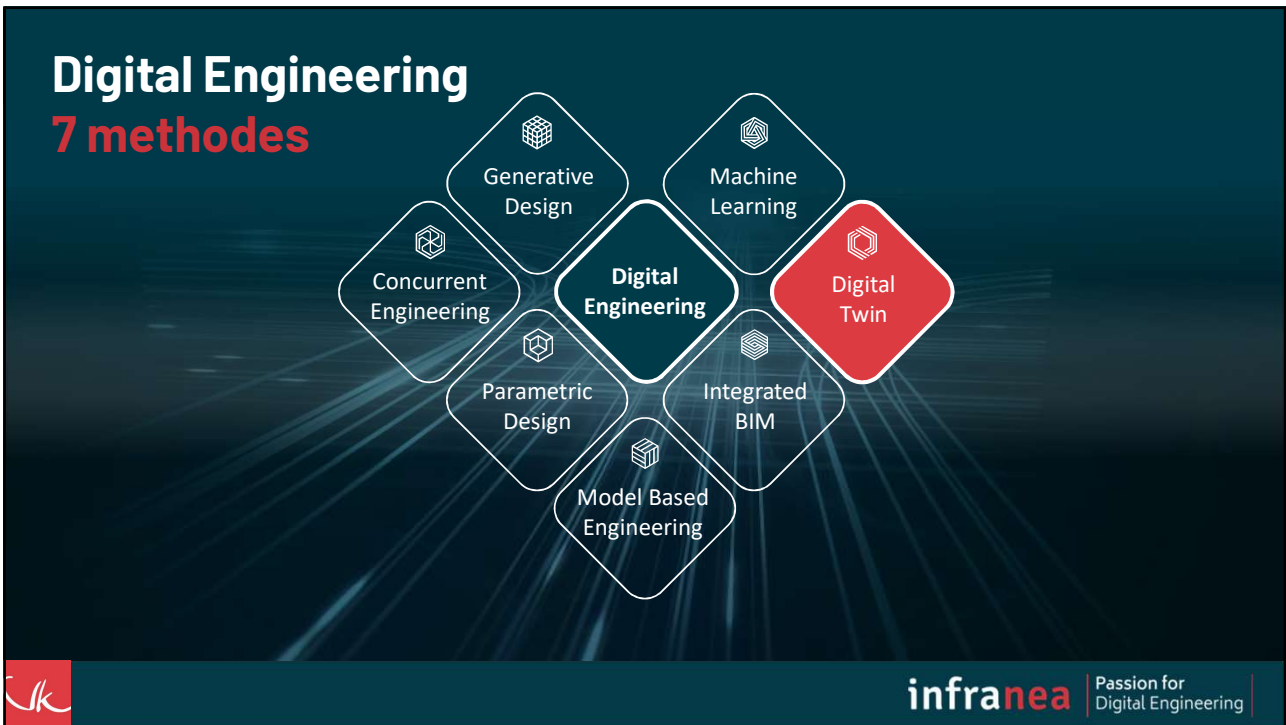
4



5



6



7

”

Digitale Tweeling is het volgende ‘grote ding’ in de 4^e industriële revolutie voor de ontwikkeling van nieuwe producten en processen

Gartner

8



Digitale Tweeling:

- de brug tussen de fysieke en virtuele wereld;
- gebruik van realtime data van o.m. sensors;
- data wordt òf lokaal òf in de cloud opgeslagen;
- data wordt geëvalueerd en gesimuleerd in virtuele omgeving;
- na ontvangst van data uit de simulatie worden de paramaters toegekend aan de echte assets;
- helpen de prestaties van de echte assets te verbeteren.



Digitale Tweeling:

- de brug tussen de **fysieke** en **virtuele** wereld;
- gebruik van **realtime data** van o.m. sensors;
- data wordt òf lokaal òf in de cloud opgeslagen;
- data wordt **geëvalueerd** en **gesimuleerd** in virtuele omgeving;
- na ontvangst van data uit de simulatie worden de paramaters toegekend aan de echte assets;
- **helpen de prestaties van de echte assets te verbeteren.**





11



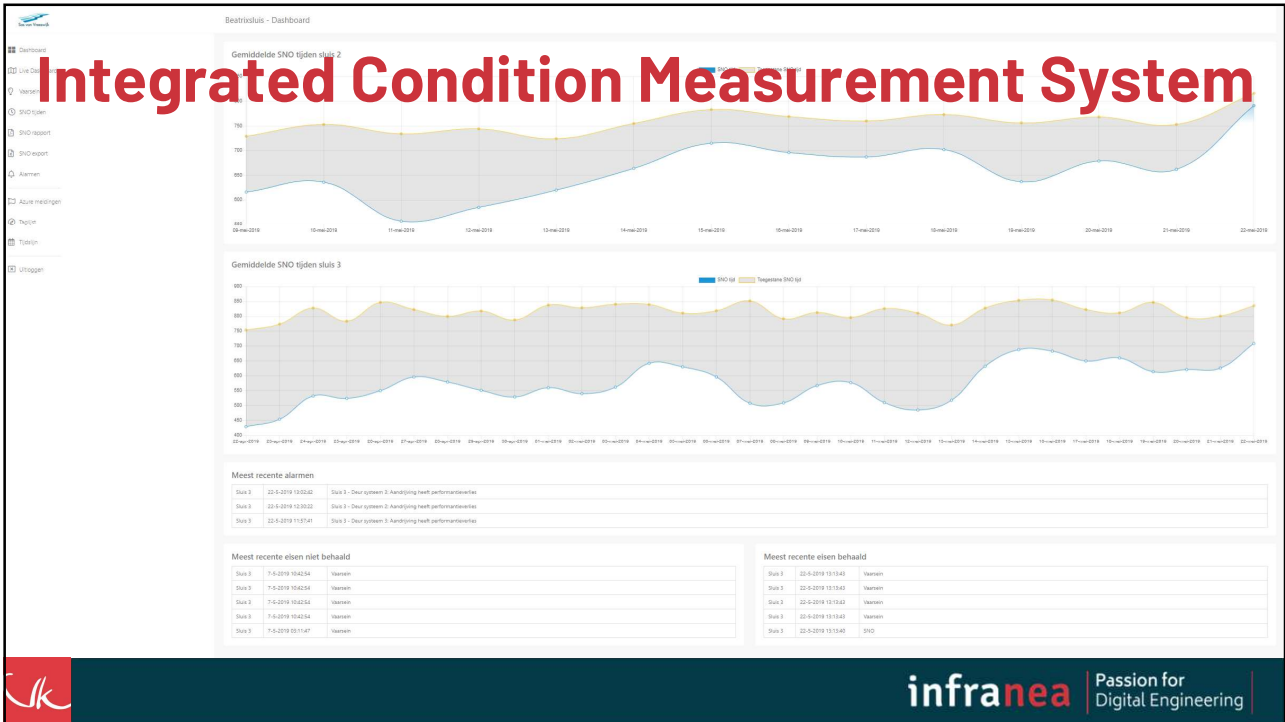
12



13



14



15



16



17



18



19

Kernpunten aanbieding

- Continue verbetering door gezamenlijk 'Team-EMVU' en Thematafels
- **TWIN16, de eerste digitale tweeling van nieuw te realiseren infrastructuur**
- De eerste energie neutrale tunnel / snelweg
- Bouwhinder en overlast beperken door vrijliggende bouwweg en trillings- en geluidsarm bouwen
- Gedurende de bouw van de A16 willen we het verhaal vertellen!

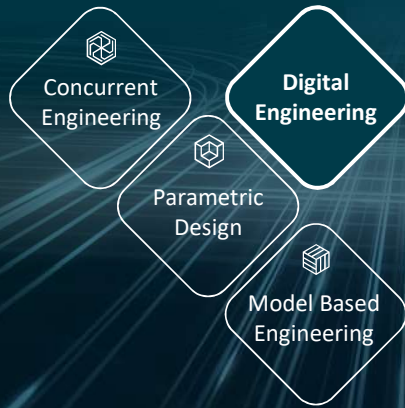


infranea

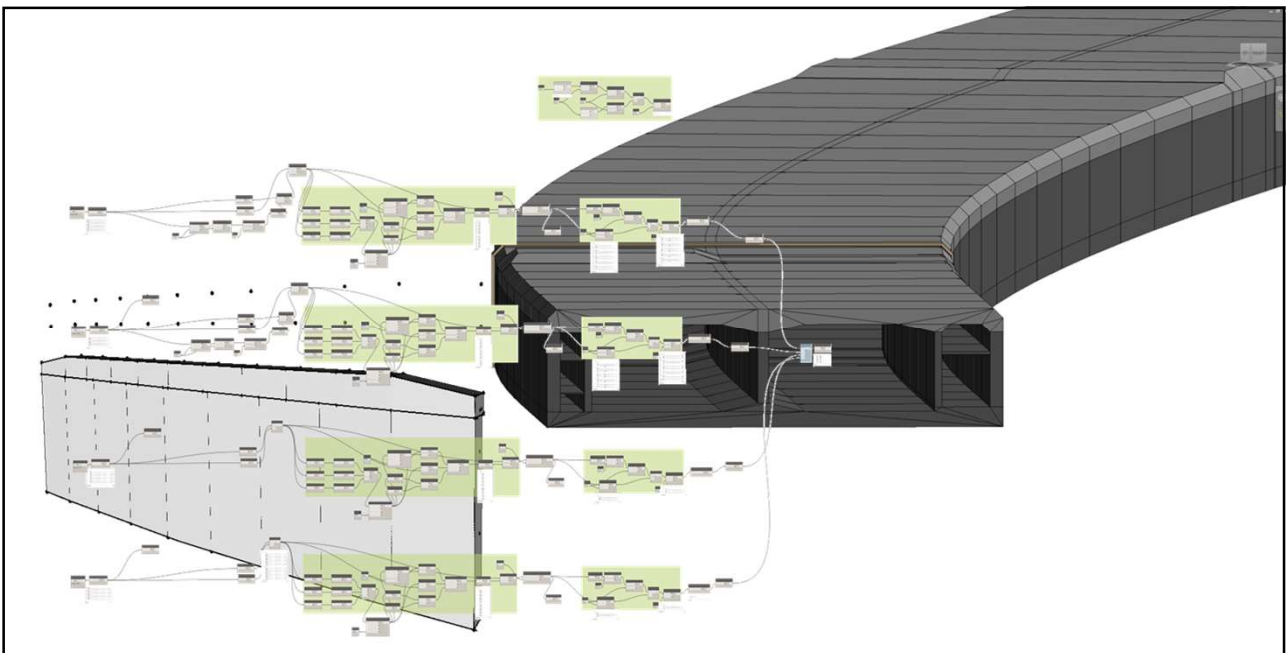


20

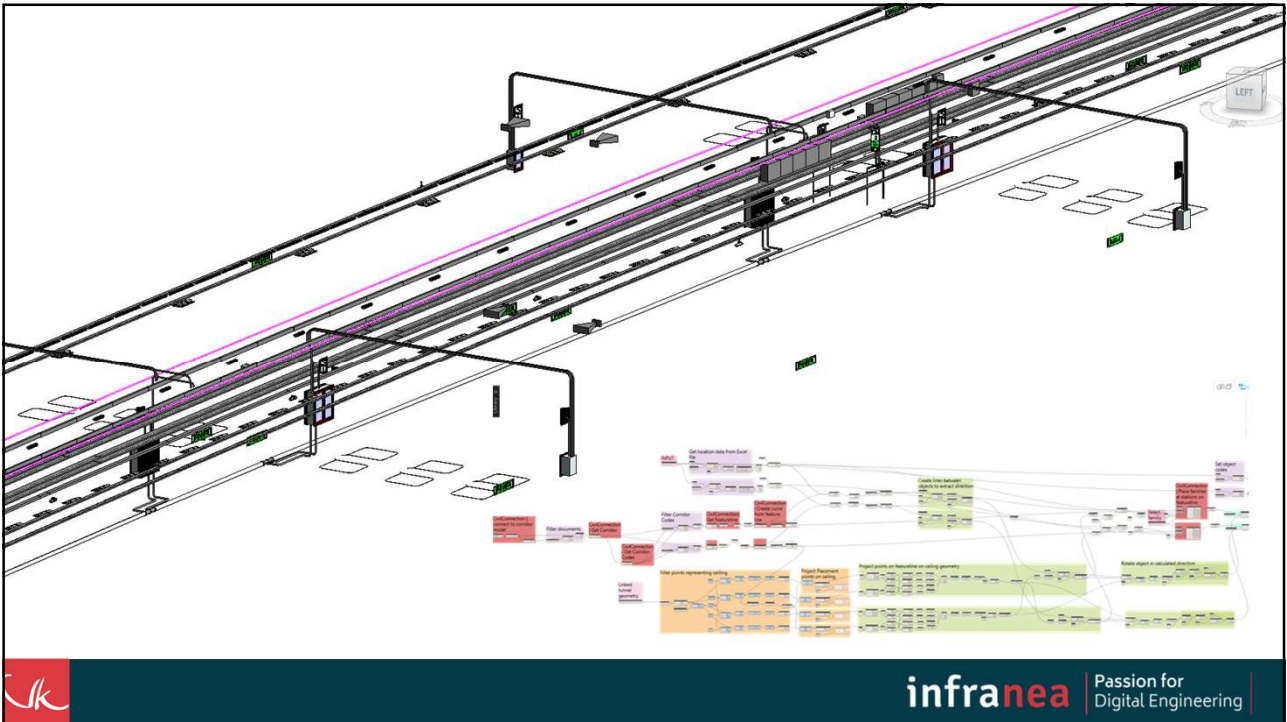
Digital Engineering methodes




21

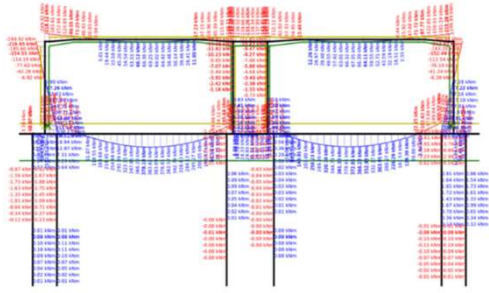


22

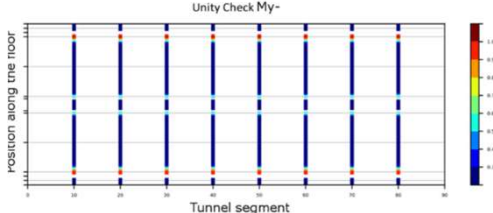


23






Voor de tunnel worden meer dan 6000 funderingspalen en 4000 damwanden ontworpen.

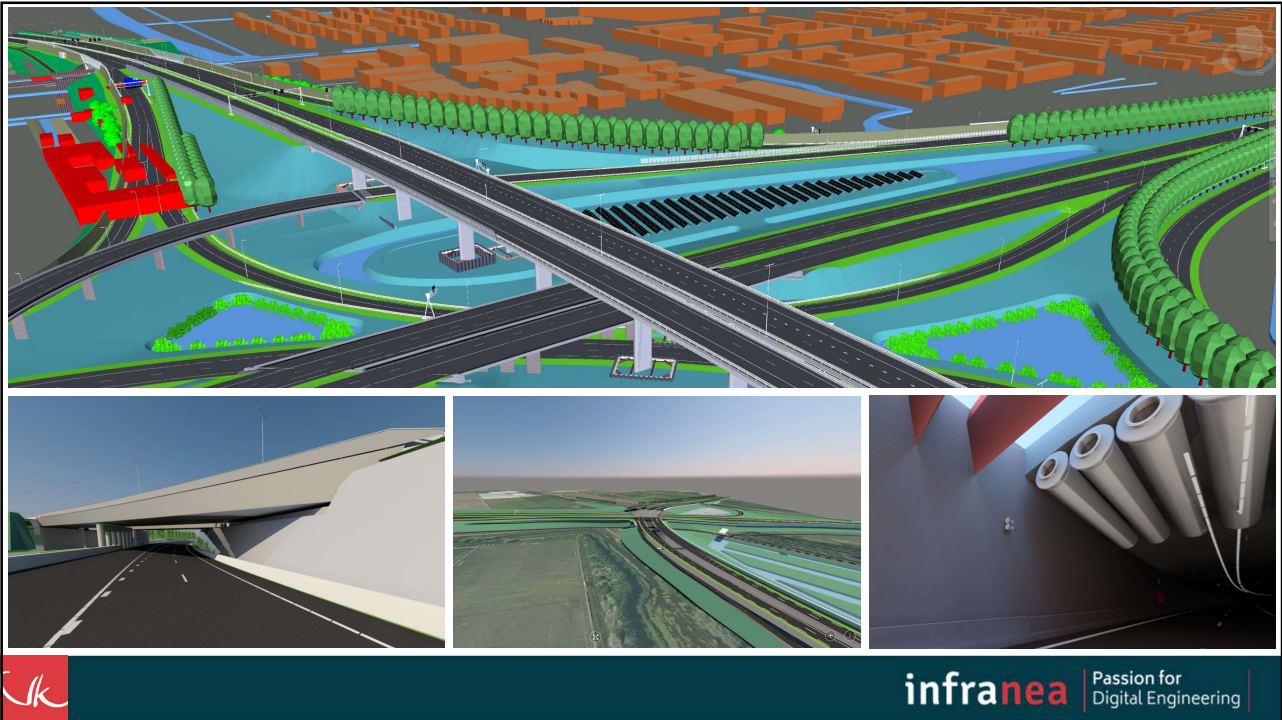


<https://www.viktor.ai/posts/besix-design-and-production-automation-for-the-a16-tunnel-in-rotterdam/>

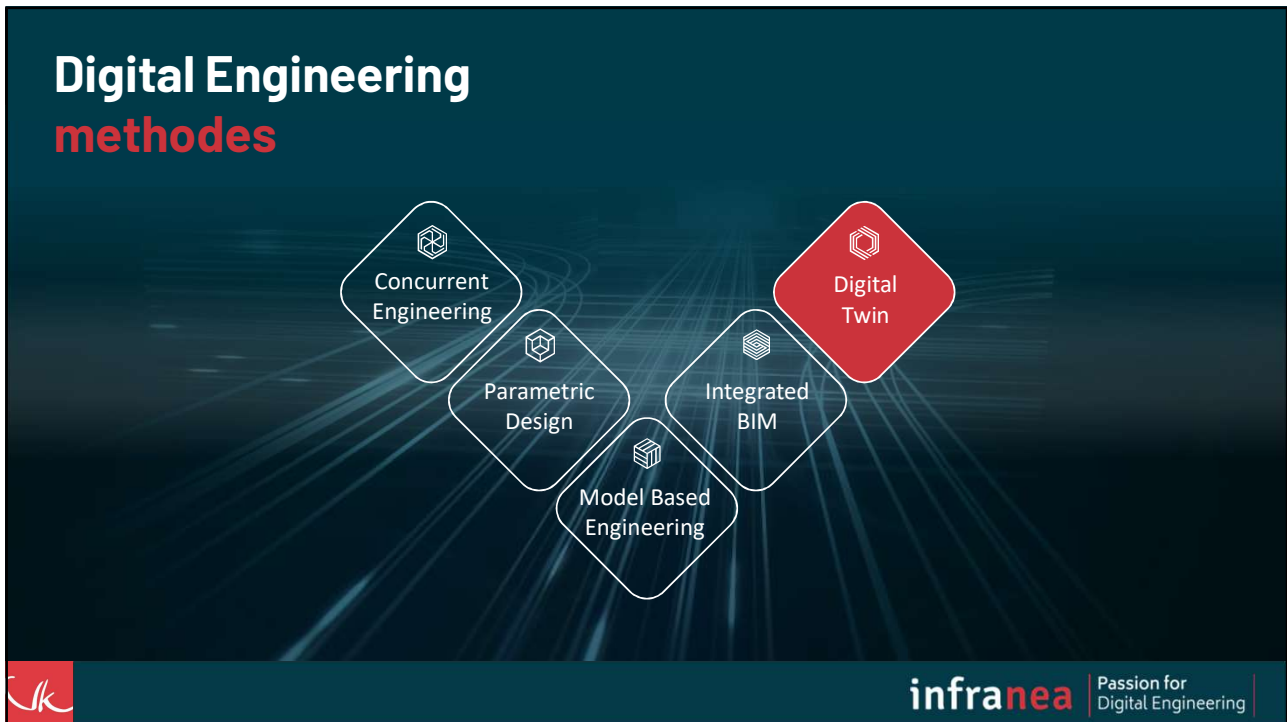


infranea | Passion for Digital Engineering

24



25



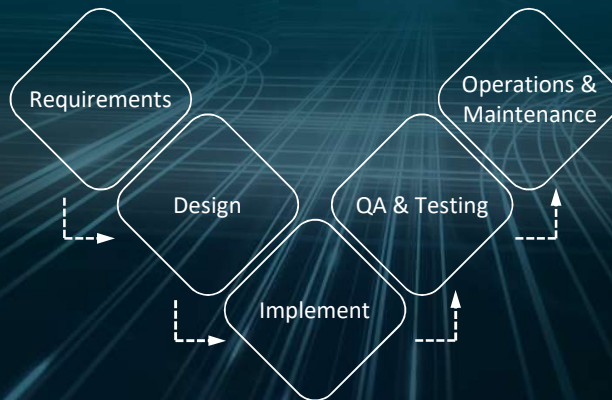
26

Simulatie statische omgevingsfactoren

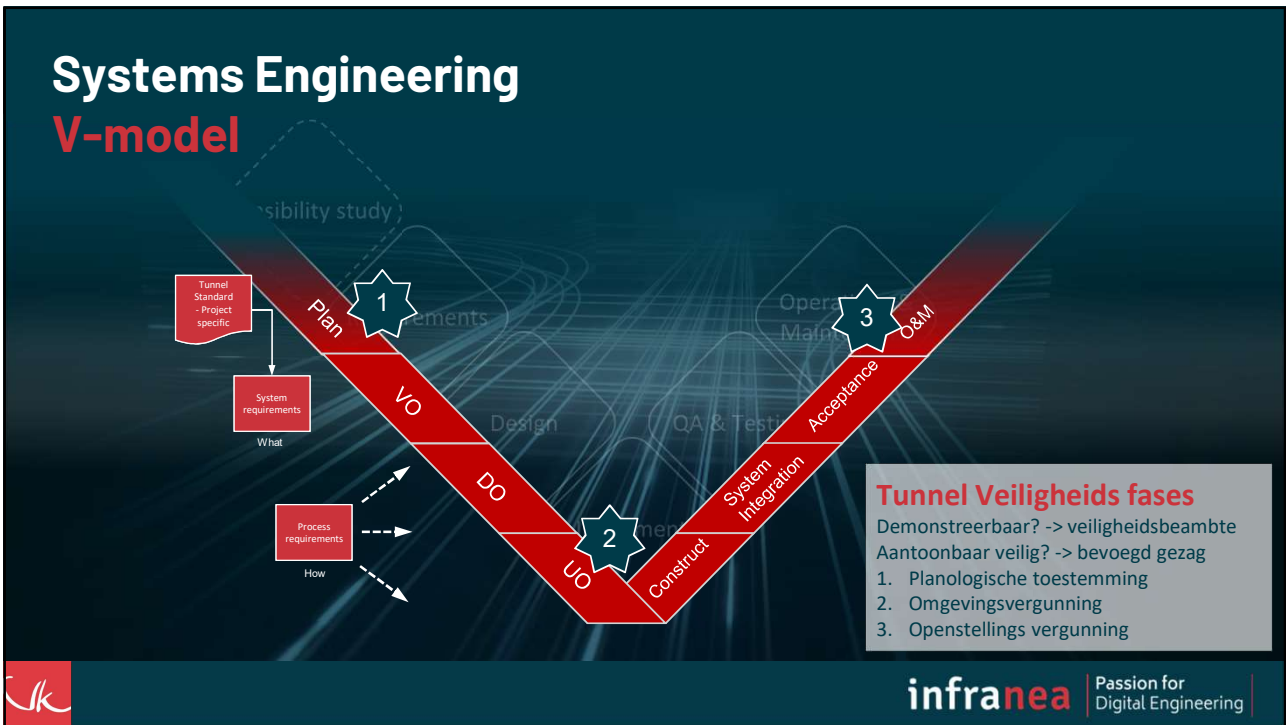


27

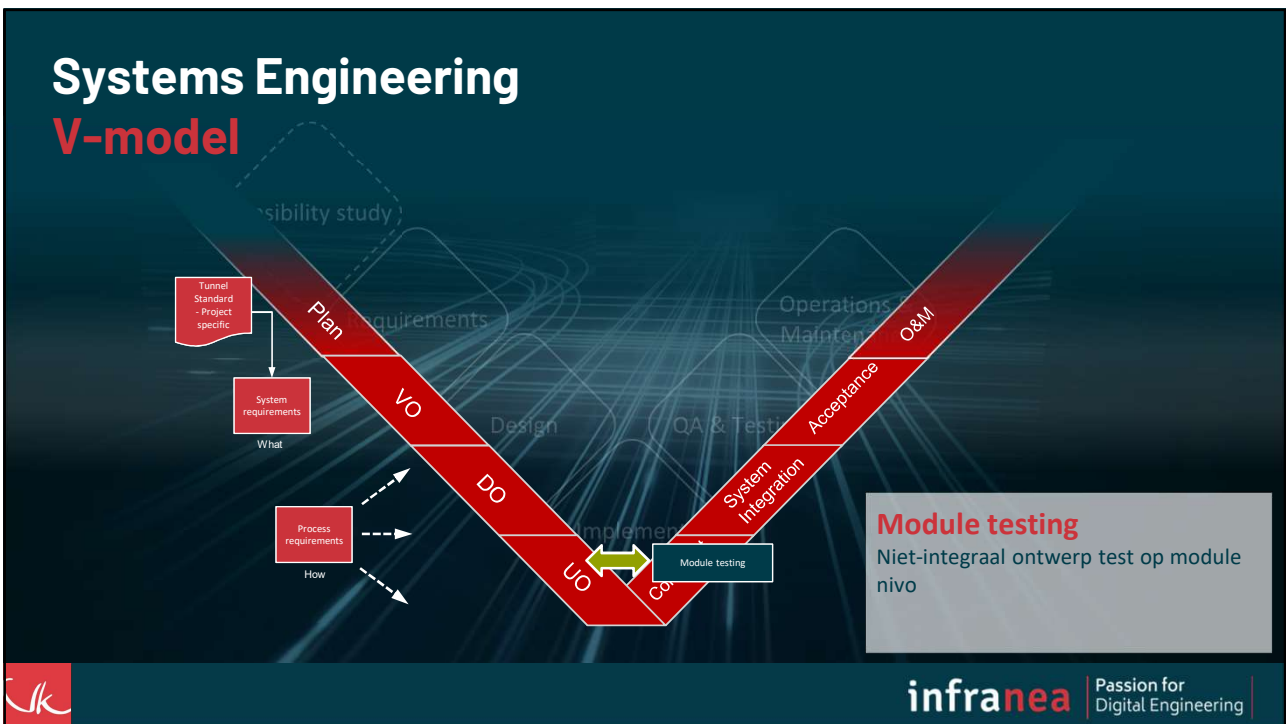
Systems Engineering V-model



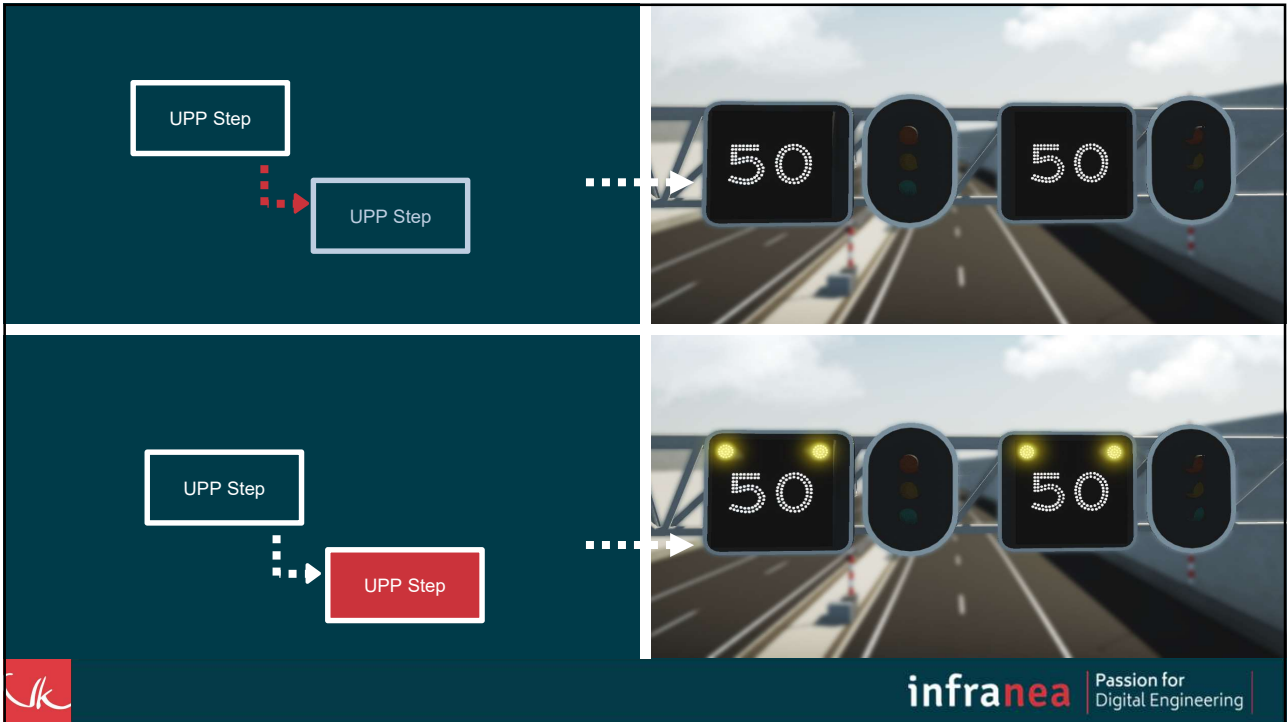
28



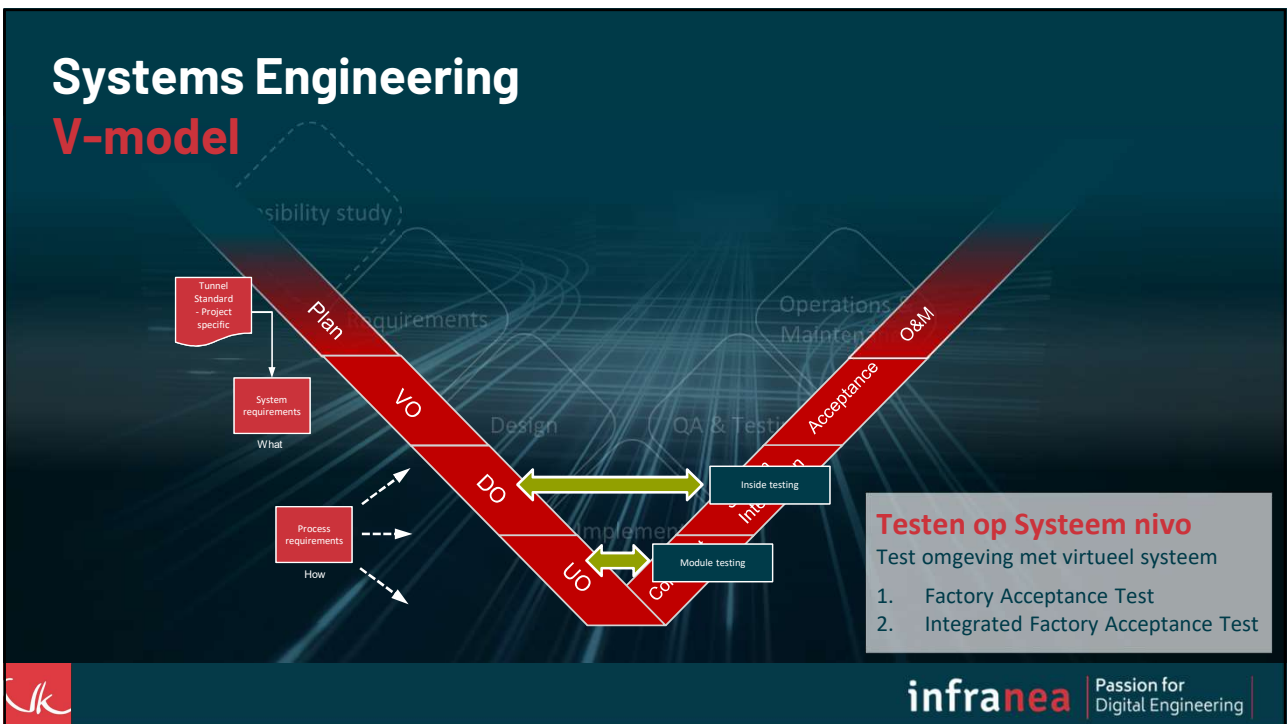
29



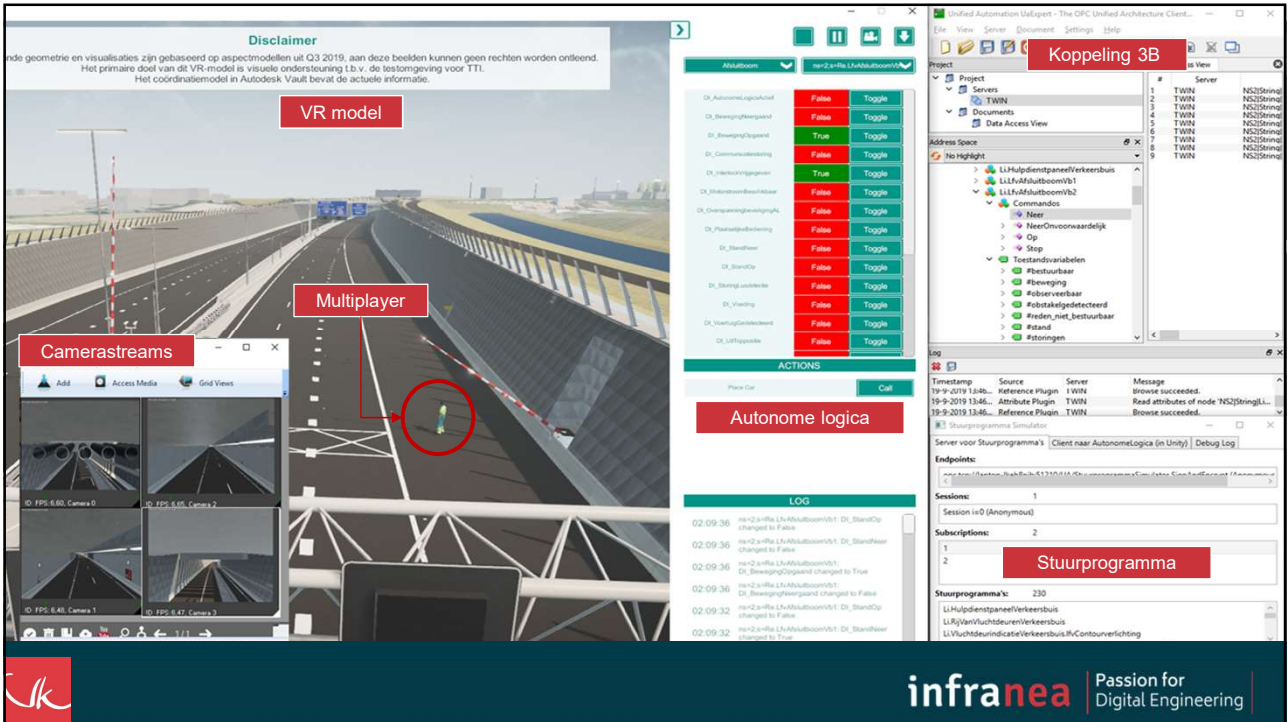
30



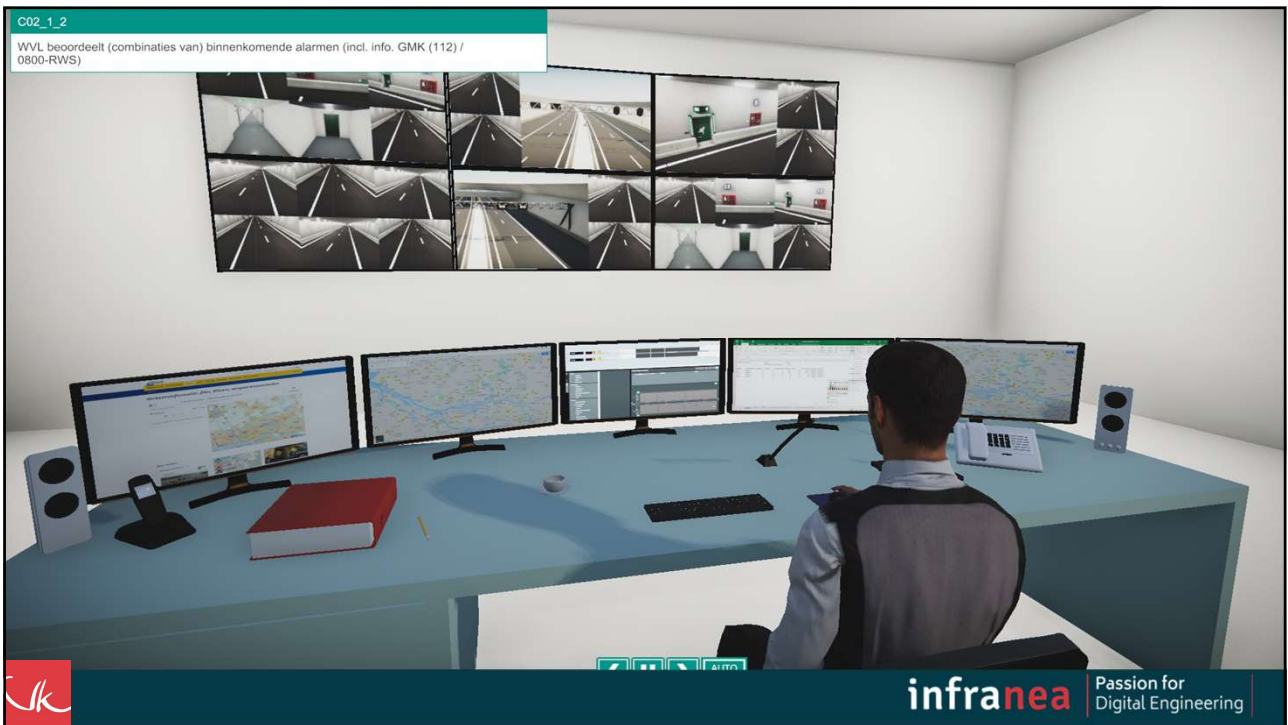
31



32



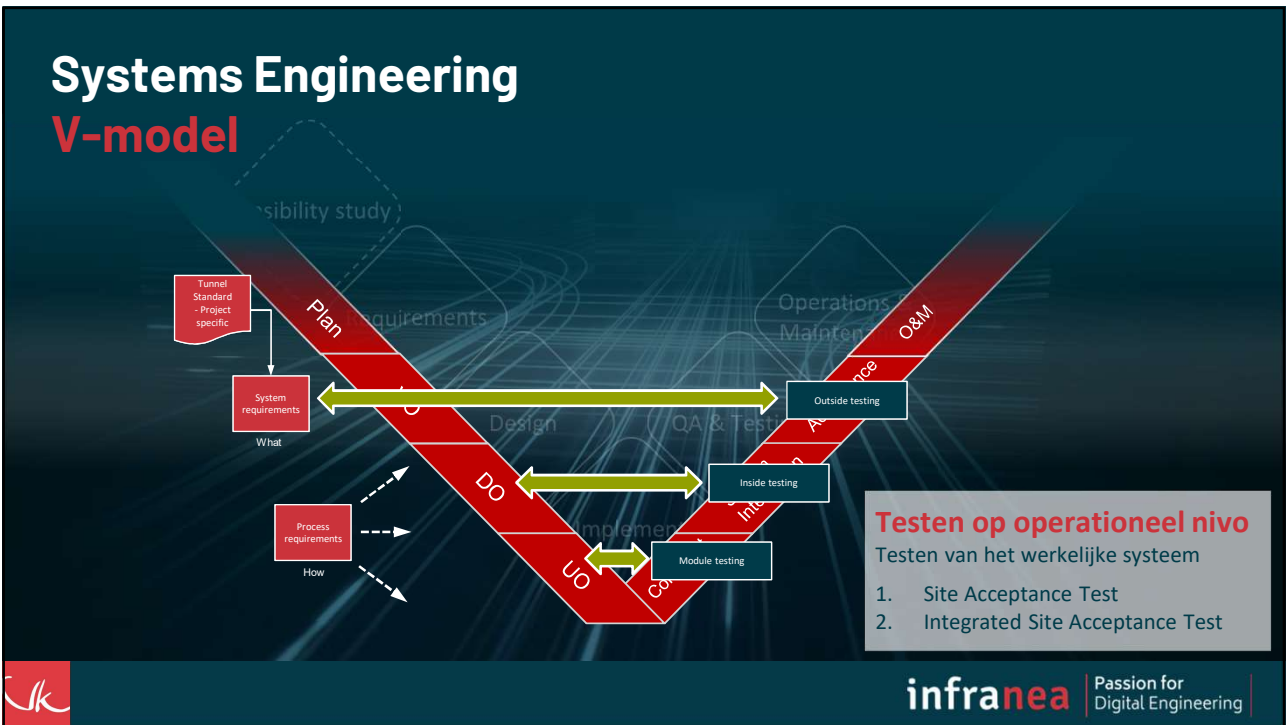
33



34



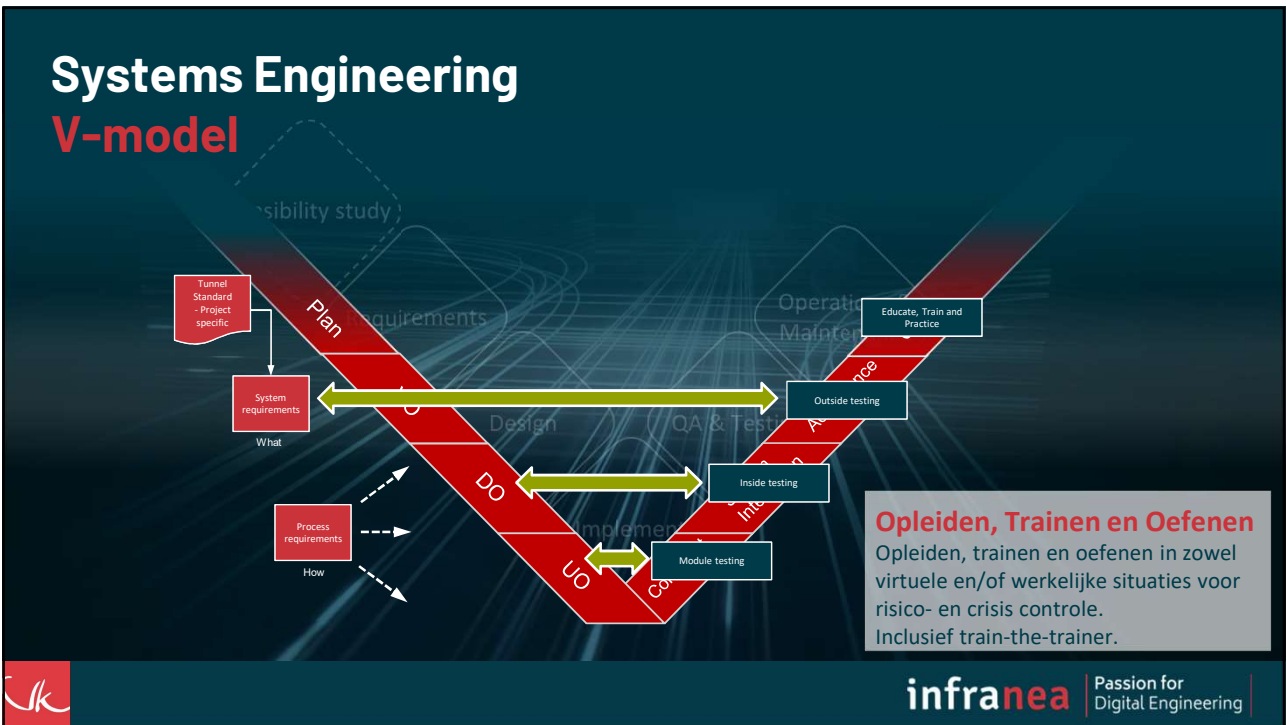
35



36



37



38



39



ARCHITECTS & ENGINEERS

infranea

Passion for Digital Engineering

Jaap de Boer
Operational Director
jaap.deboer@infranea.com



Passion for Digital Engineering

40