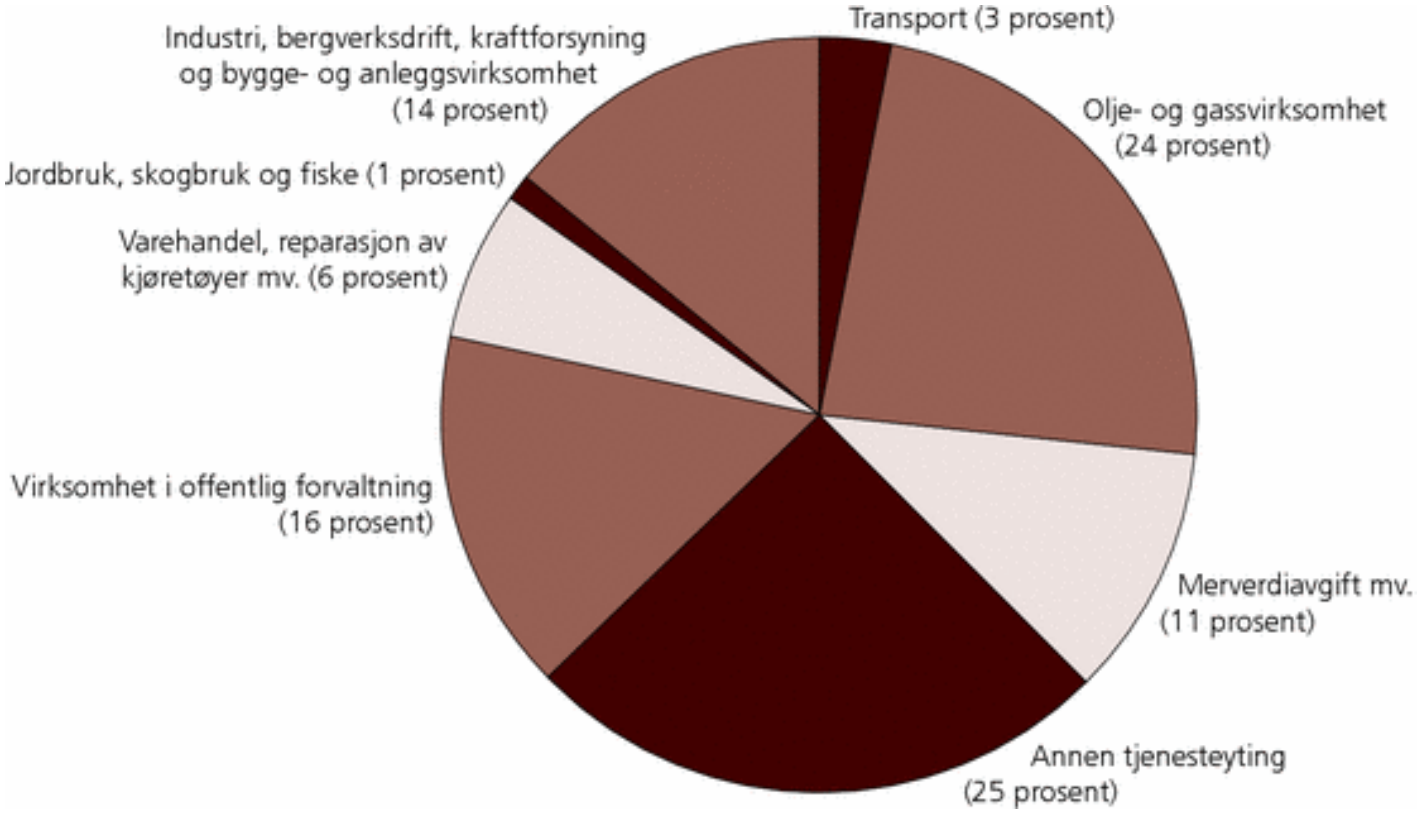
Computer Aided Design (CAD)

DataAssistert Konstruksjon (DAK)

Bakgrunn [1]

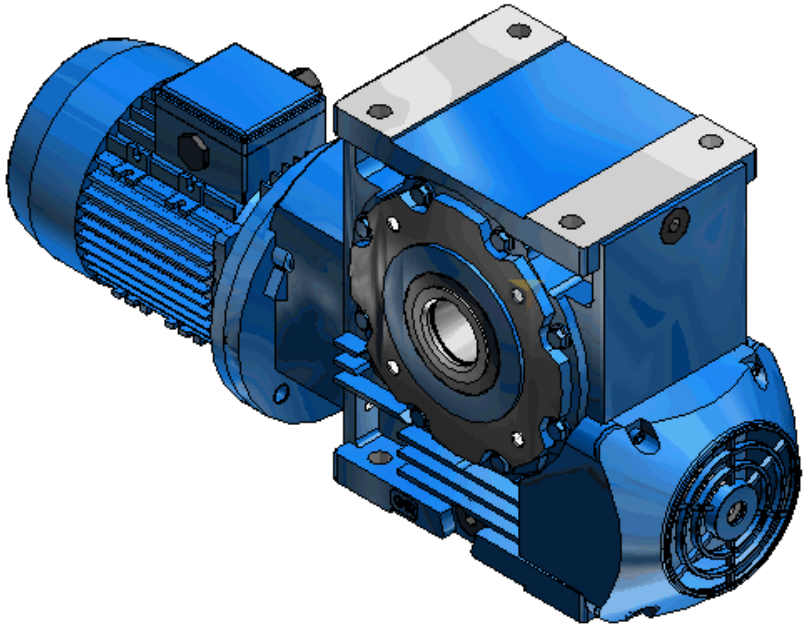
- Produkter og tjenester
- Økonomi



Figur 1. Fordeling av bruttonasjonalprodukt i Norge 2012, etter hovednæring [2].

Hva er CAD/DAK [3–4]

- 3D-modellering
- Teknisk tegning
- Analyse
- Optimalisering

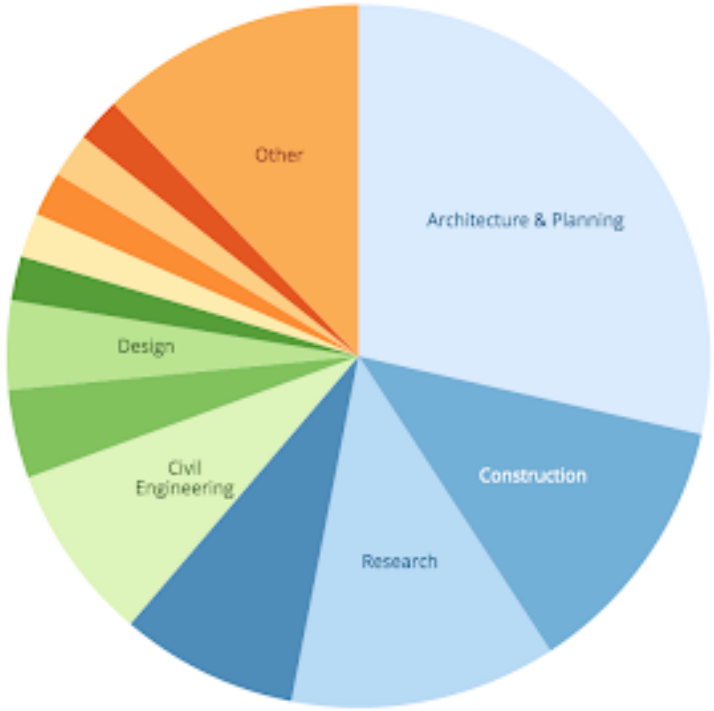


Figur 1. 3D-modell av elektrisk motor [3].

Hvem bruker det [3–4]

- Ingeniører, arkitekter og designere
- Industrier

Architecture & Planning	14	28.6%
Construction	6	12.2%
Research	6	12.2%
Marketing and Advertising	4	8.16%
Civil Engineering	4	8.16%
Facilities Services	2	4.08%
Design	2	4.08%
Government Administration	1	2.04%
Computer & Network Security	1	2.04%
Internet	1	2.04%
Military	1	2.04%
Computer Software	1	2.04%
Other	6	12.2%



Figur 3. Bransjer som benytter CAD/DAK. Mellom 2012 og 2015 [5].

Hvorfor er det viktig [3–4]

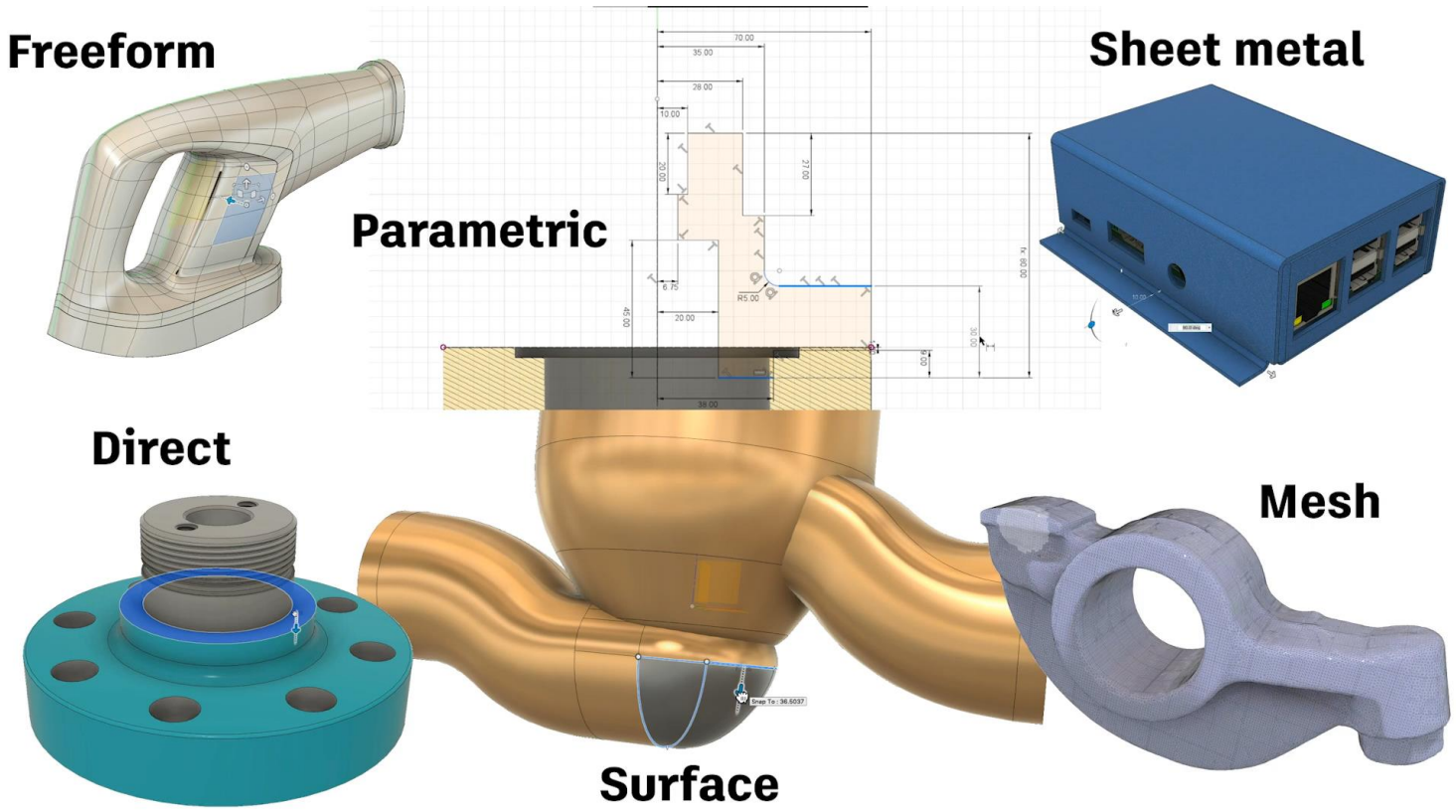
- Produktivitet
- Kvalitet

Trender [6 – 10]

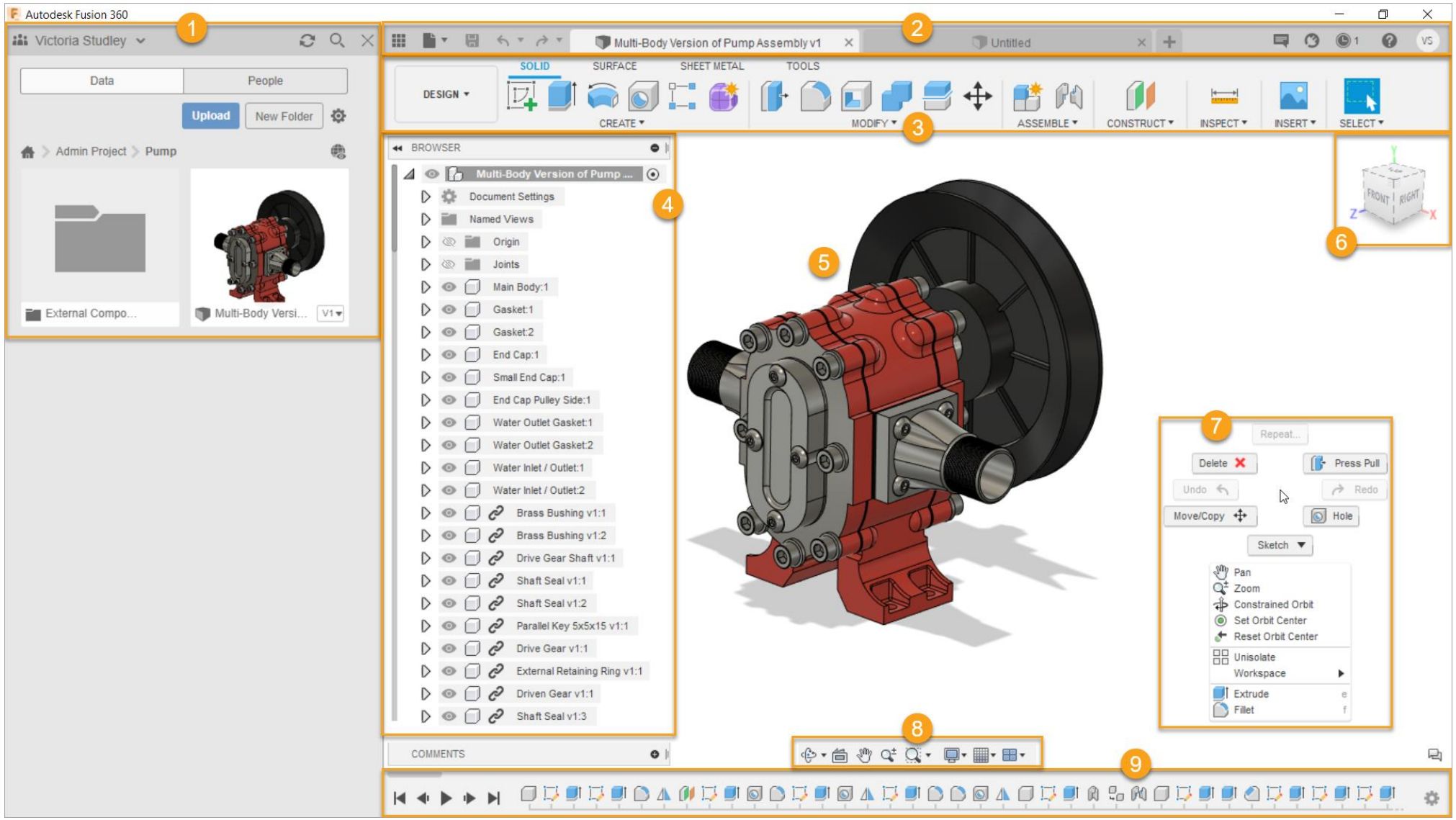
- Generativt design
- Sanntid simulering
- Utvidet virkelighet, IoT-platformer, Digitalisering
- SaaS (Software as a Service)
- Automatisering og personalisering

Autodesk Fusion 360 [11]

- Hva er det
- Integrert plattform
- 3D-design og modellering



Autodesk Fusion 360 - Brukergrensesnitt [12]



1 – Data Panel

2 – Application Bar

3 – Toolbar

4 – Browser

5 – Assembly

6 – ViewCube

7 – Marking Menu

8 – Navigation Bar

9 – Timeline

Videre lesing

- Fusion 360 introduksjon
- Fusion 360 dokumentasjon
- Fusion 360 brukergrensesnitt
- Fusion 360 forum

Kilder

[1] Z. Bi og X. Wang, «Computers in Manufacturing,» i *Computer Aided Design and Manufacturing, 1 utg.,* John Wiley & Sons Ltd*, 2020.*

[2] Statistisk sentralbyrå. «Bruttonasjonalprodukt, etter hovednæring. 2012. Prosentvis fordeling.» ssb.no. Hentet fra: https://www.ssb.no/a/aarbok/fig/fig-285.html (Hentet: 31.05.2022)

[3] Wikipedia. «Computer-aided design.» wikipedia.org Hentet fra: https://en.wikipedia.org/wiki/Computer-aided_design#Technology (Hentet: 31.05.2022)

[4] Wikipedia. «Dataassistert konstruksjon.» wikipedia.org Hentet fra: https://no.wikipedia.org/wiki/Dataassistert_konstruksjon (Hentet: 31.05.2022)

[5] M. Gigante. «Computer-Aided Design (CAD): State of Category.» g2.com Hentet fra: https://www.g2.com/articles/computer-aided-design-cad-state-of-category (Hentet: 31.05.20212

[6] M. Gigante. «2020 Trends for Computer-Aided Design (CAD).» g2.com Hentet fra: https://www.g2.com/articles/computer-aided-design-cad-trends-2020 (Hentet: 31.05.2022)

[7] R. Morss. «Top CAD Trends for 2021.» ptc.com Hentet fra: https://www.ptc.com/en/blogs/cad/top-cad-trends-2021 (Hentet: 31.05.2022)

[8] Advenser. «Evolution of CAD in the Engineering sector.» advenser.com Hentet fra: https://www.advenser.com/2021/10/07/top-5-cad-trends-of-2021/ (Hentet: 31.05.2022)

[9] Autodesk. «Future of Product Design and Manufacturing.» autodesk.com Hentet fra: https://www.autodesk.com/solutions/future-of-product-design-and-manufacturing (Hentet: 31.05.2022)

[10] Dassault Systèmes. «Designing Disruption: the critical role of Virtual Twins in accelerating Sustainability.» 3ds.com Hentet fra: https://www.3ds.com/sustainability/designing-disruption (Hentet: 31.05.2022)

[11] Autodesk. «Fusion 360.» autodesk.com Hentet fra: https://www.autodesk.com/products/fusion-360/overview (Hentet: 31.05.2022)

[12] Autodesk. «Tour the Interface.» autodesk.com Hentet fra: https://help.autodesk.com/view/fusion360/ENU/?guid=GUID-E647CA56-7187-406A-ACE4-EAC59914FAE4 (Hentet: 31.05.2022)