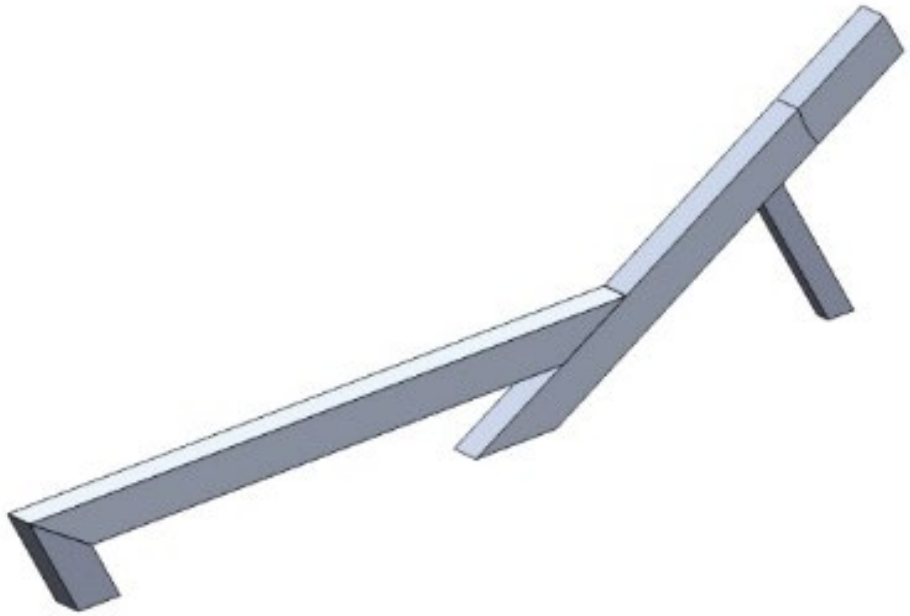
DESP:2000 PROJECT 2 *PART A*

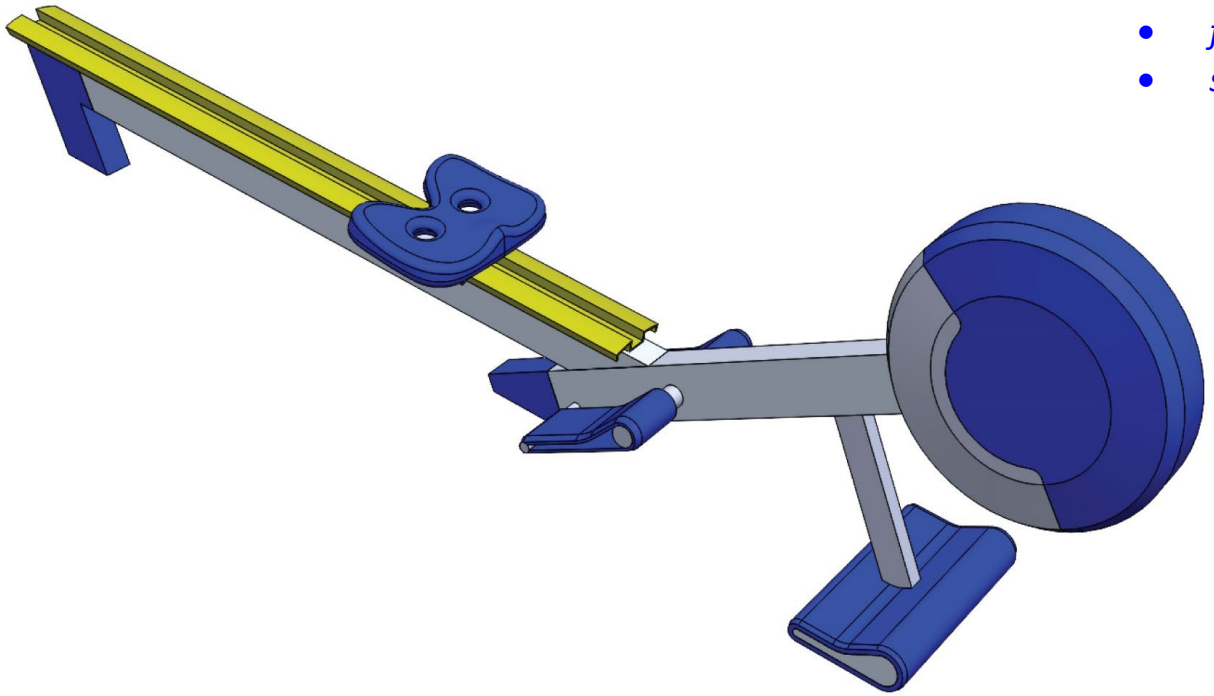
WEEK 3 INTO WEEK 4

MODELLING *GEAR TRAIN + ROWING ACTION MECHANISM*

GENERATING THE PARAMETRIC FILE SET

- PART A 'concludes' on week 5





TO DO

Develop a detailed + resolved edition of your ***rowing machine master model*** – *this model needs to be ready to receive the rowing machine mechanism* ***– which we will build as part of the week 4 modelling activities****.*

As part of this preparation, insert the following models into your master model or your own worked version of these SW product forms - **https://www.designthink.space/virtual-prototyping**

- *seat-pad*
- *handle*
- *foot pad models*
- *seat track bearing mechanism*

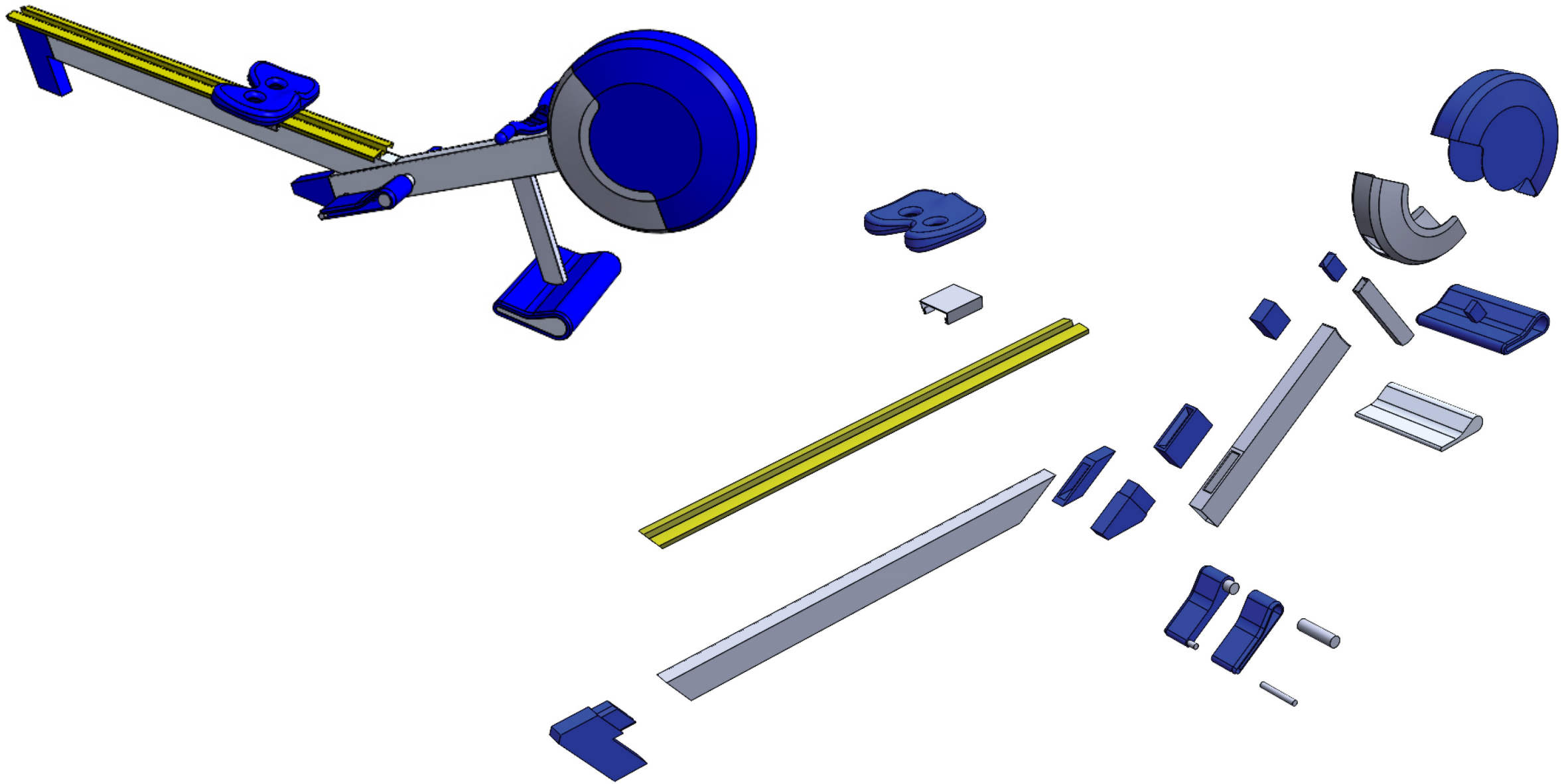
Bearing mechanism links – for example

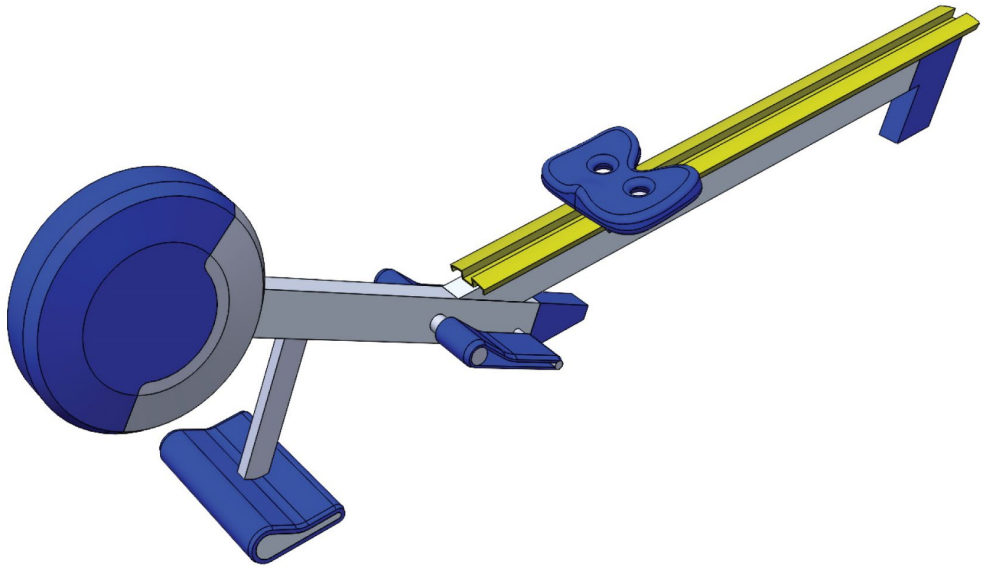
HEPC motion

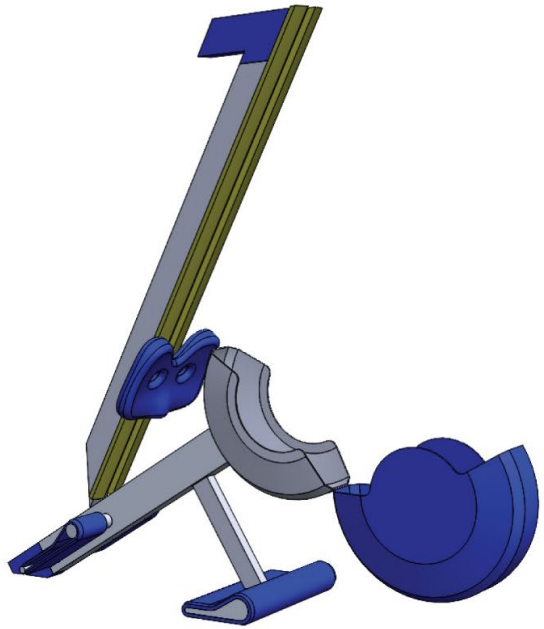
SKF Bearings

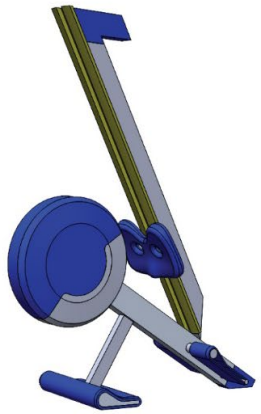
RS components

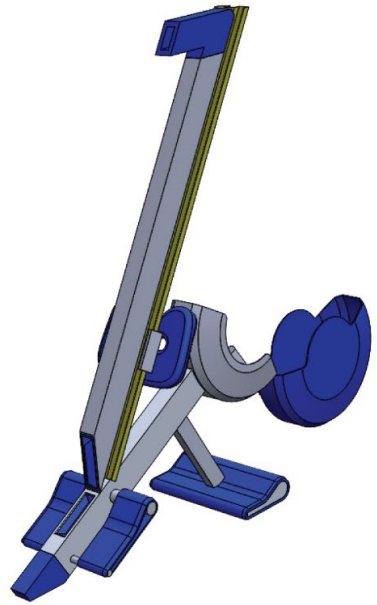
Review the case study ***video clips / press tableau / SW model*** to help you to identify what is required and at what level of detail

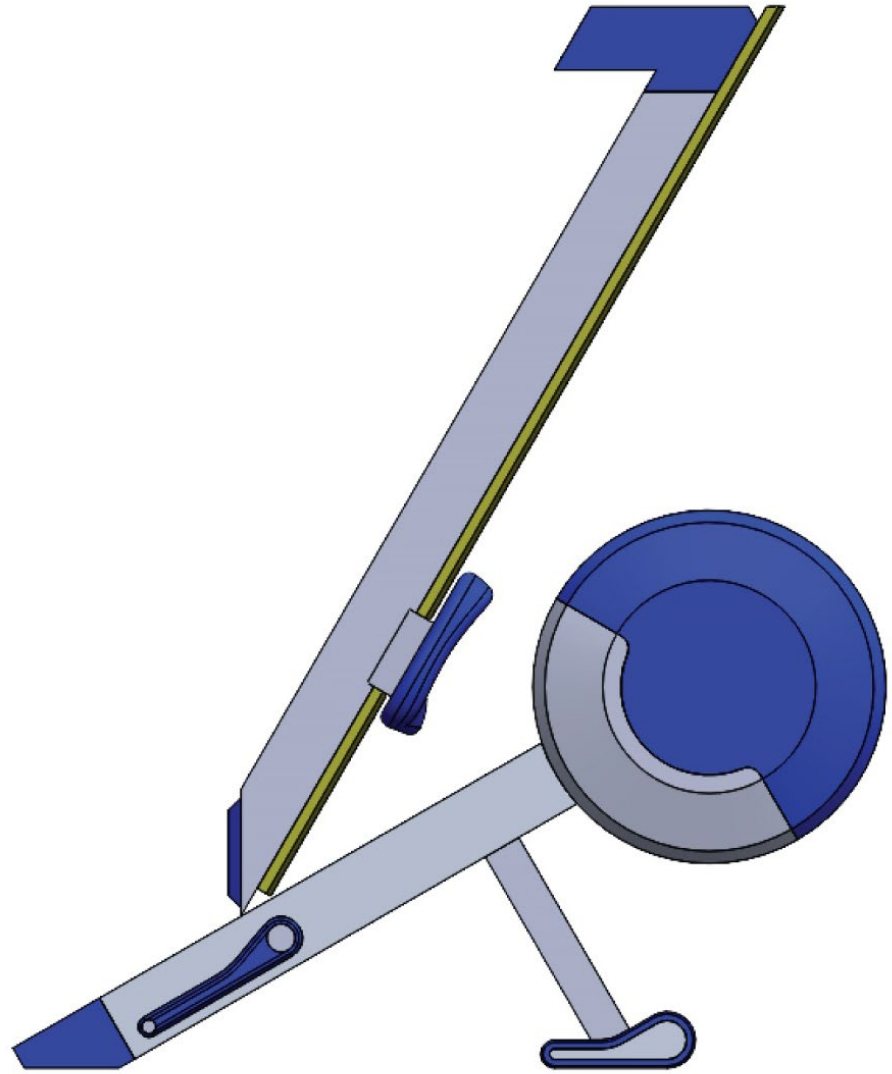


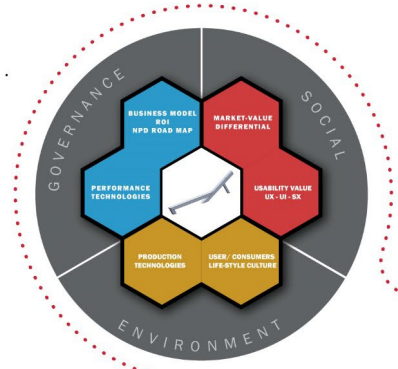


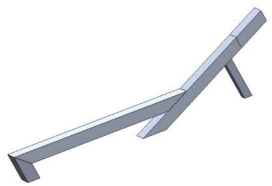








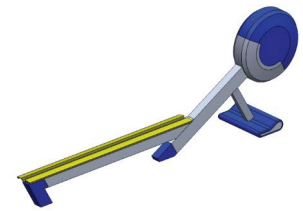




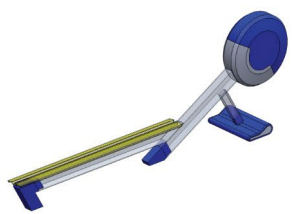
BASE FRAME

FRAME FEET

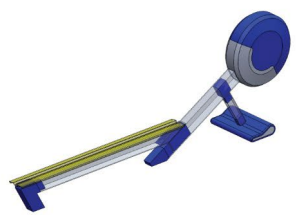
MECHANISM CASING



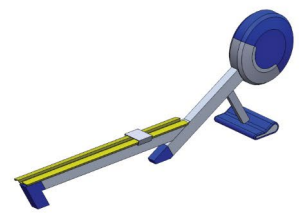
SEAT PAN TRACK



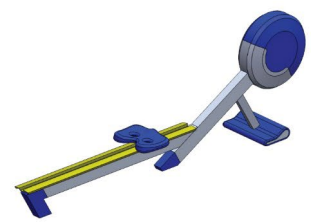
STATIC JOINT DETAILS



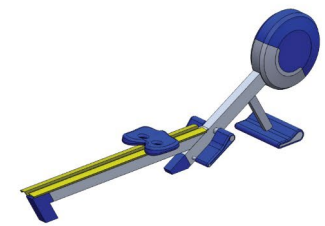
FOLDING JOIN DETAILS



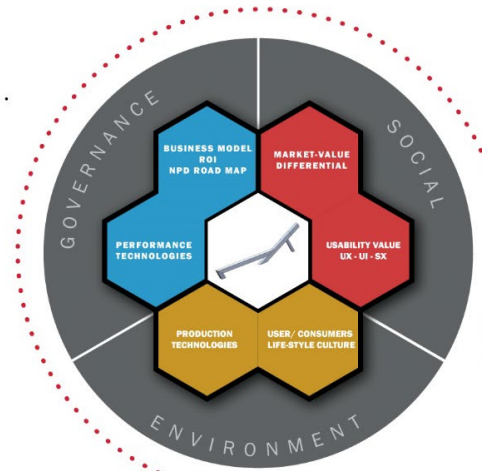
SEAT PAN CHASSIS
+ ‘RUNNERS’

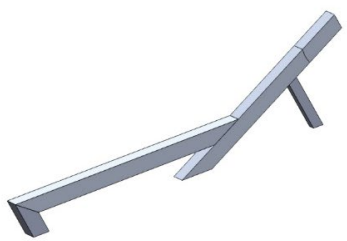


SEAT PAN



FOOT PADDLES



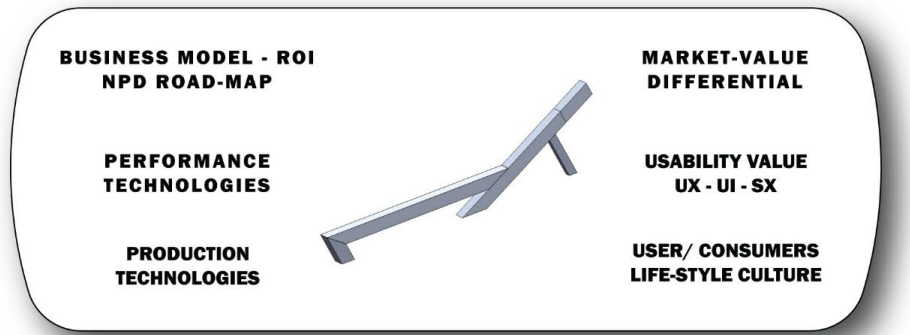


BASE FRAME

material cost

static load + mass

LCA + geometry



product form (brand culture)

motion study

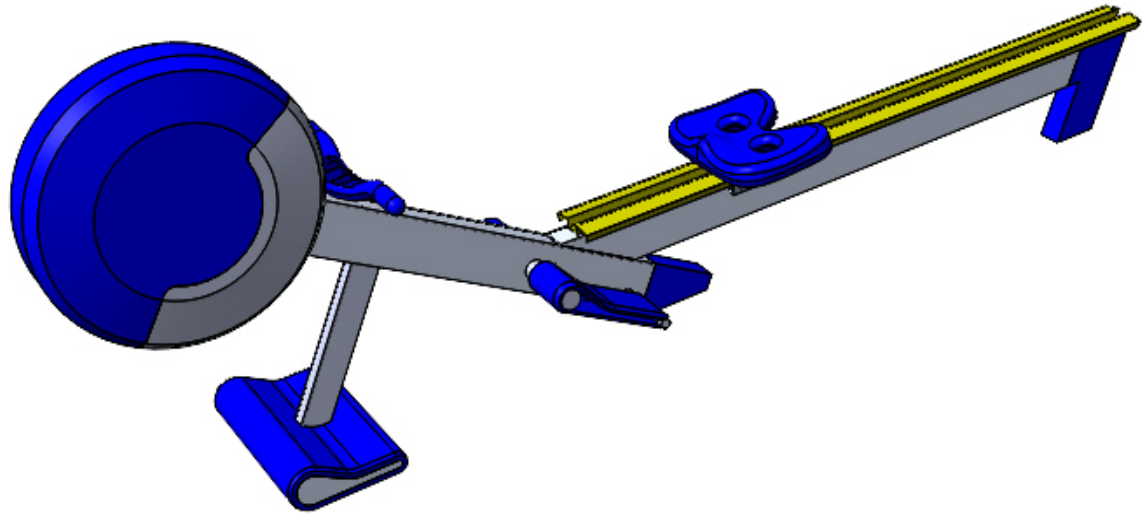
animation + muliple array

3 concepts of practice

PARAMETRIC *VIRTUAL PROTOYPING* PROCESS – *INTERATIVE - ADAPTIVE*

MULTIPLE PORTFOLIO PUBLICATIONS – *CUSTOMISED DIALOGUES*

6 FACTOR BASED - DESIGN ANALYSIS + DESIGN SYNTHESIS - *CONVERGENT*



week 4 you could have the following 2 modelling processes ready to use in personal marketing

FUNDUS CAMERA PVP PROCESS + PORTFOLIO PUBLICATIONS

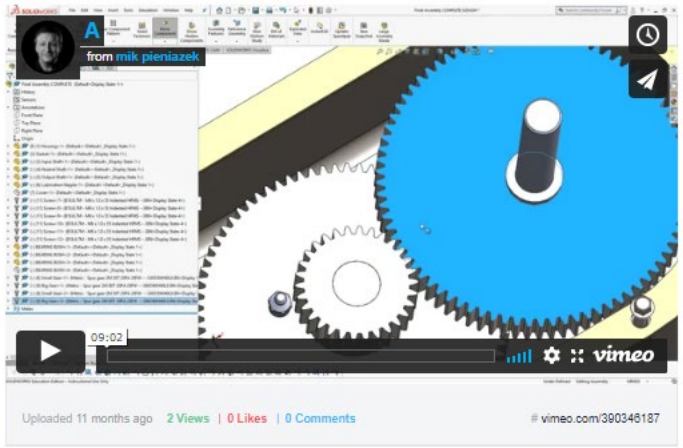
ROWING MACHINE PVP PROCESS + PORTFOLIO PUBLICATIONS

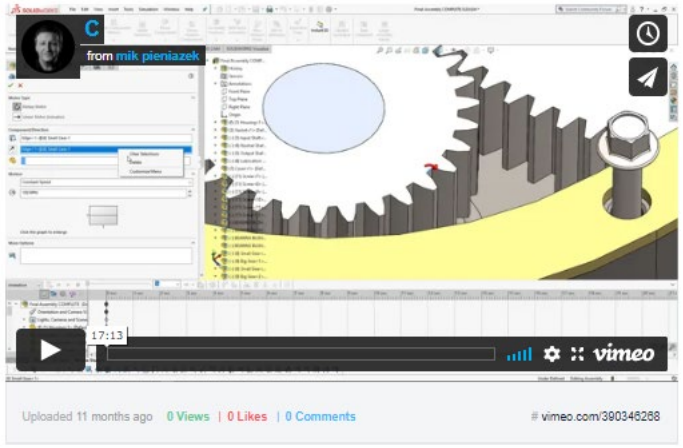
curve of development in CAD based design practice

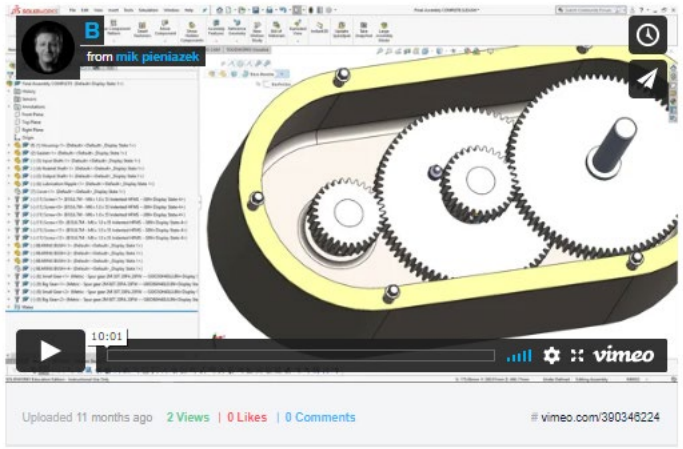
developing independent CAD practices

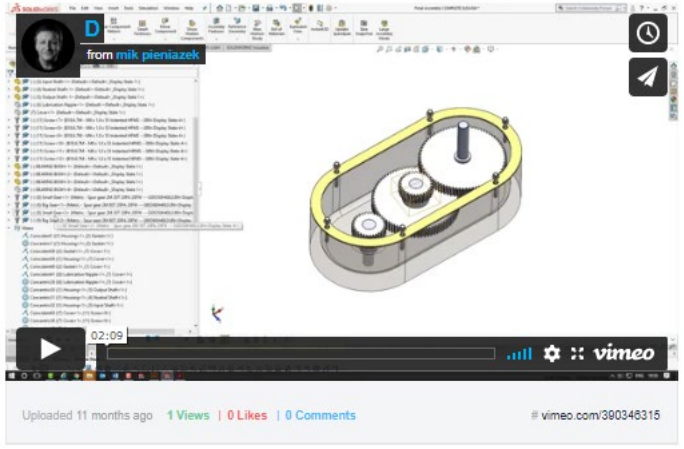
professional quality, productivity + reliability

GEAR MECHANISM VIDEO TUTORIALS - to watch - *only watch*







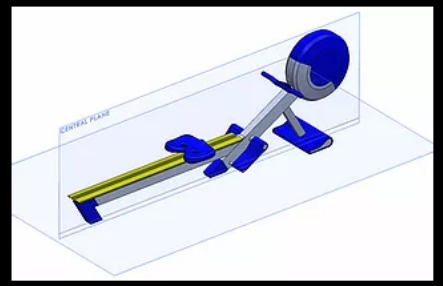


Review the gear mechanism modelling videos which are available via this link.
https://vimeo.com/channels/1613638
This is in preparation for the week 4 activity ***– the is no mechanism modelling required to be completed for Monday week 4***

CUSTOMISED TUITION

Notes
Screen-grabs
SW Models

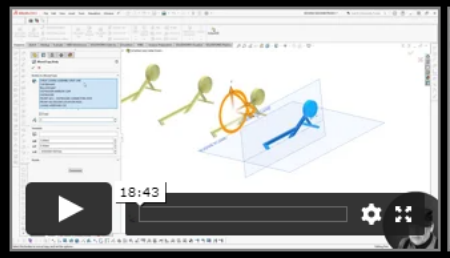
you will receive an answer



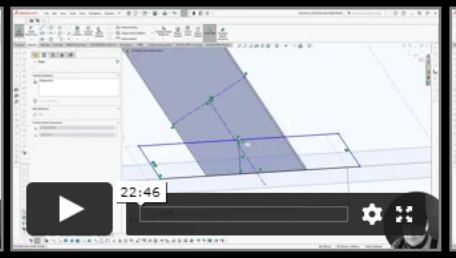
SW PHASE 3
SW MODEL

SUBSET FORM MODELLING

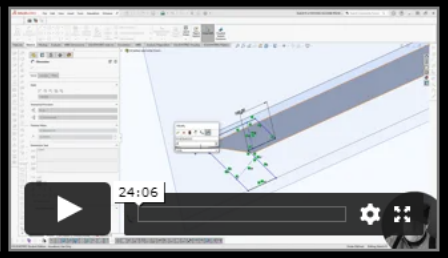
- rear leg
- front leg
- frame feet
- mechanism casing
- seat track
- seat pan chassis
- seat pan + bearing array + pad
- foot paddles
- handle



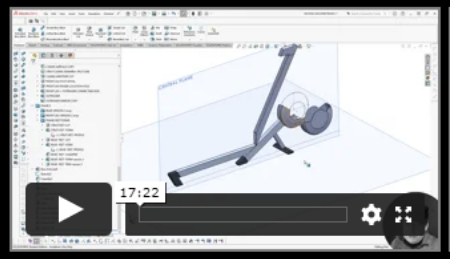
01:remodel rear leg



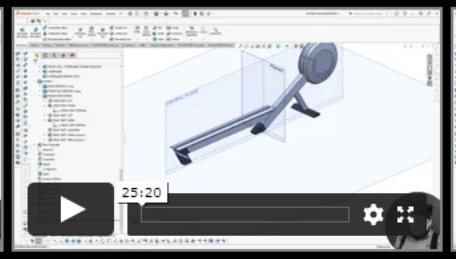
02:remodel front leg



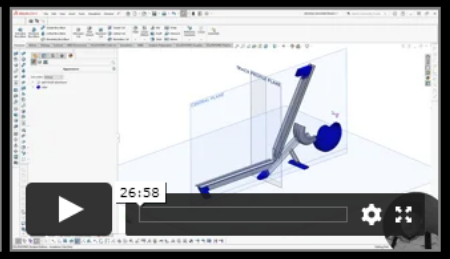
03:model frame feet feature



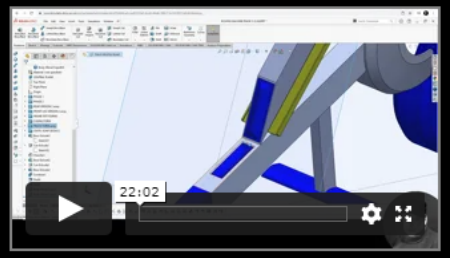
04:casingform



05:sliding-seat trackform

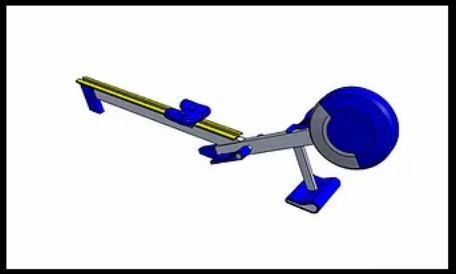


06:static joint details



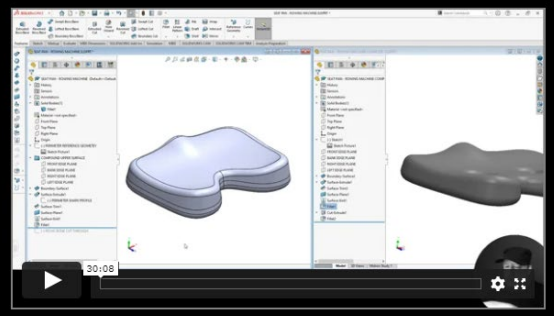
07:main-folding joint detail

DOWNLOAD
REF MASTER MODEL



ACCESS ADDITIONAL PRODUCT FEATURES CONTENT

use directly or customise the modelling process to suite your model + your chosen brand



amorphic form - seat pan

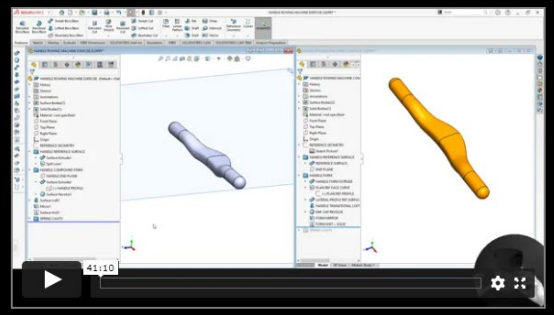
PDF

DOWNLOAD to view
SEAT PAN
3D PDF

PRODUCT LINK
EDURE - ROW

DOWNLOAD
SW SEAT PAN MODEL

DOWNLOAD
SW TUTORIAL FILE



spring cavity handle

PDF

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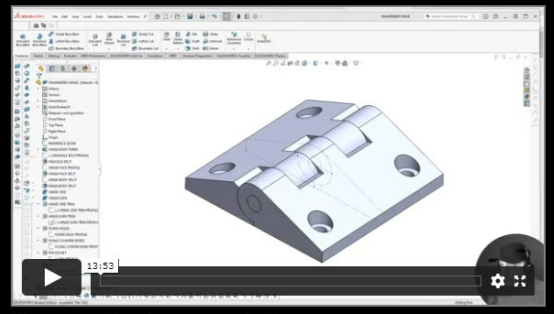
HANDLE
3D PDF

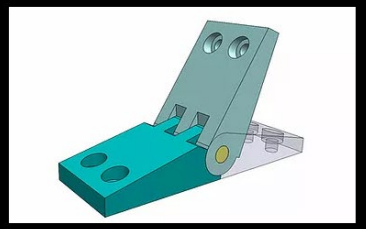
PRODUCT LINK
CONCEPT 2 - MODEL D

DOWNLOAD
SW SPRING-HANDLE MODEL

DOWNLOAD
SW TUTORIAL FILE

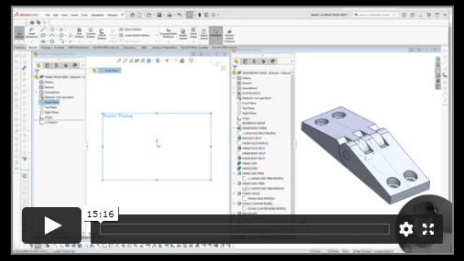


01:parametric hinge - introduction



PDF

DOWNLOAD to view
HINGE
3D PDF



02: hinge primary form

PRODUCT LINK
HAFELE

DOWNLOAD
SW ENGINEERED HINGE

DOWNLOAD
SW TUTORIAL FILE