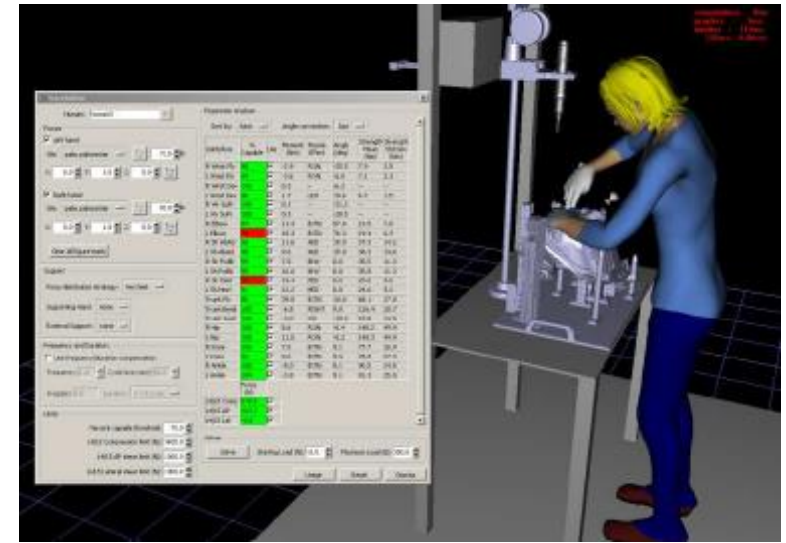
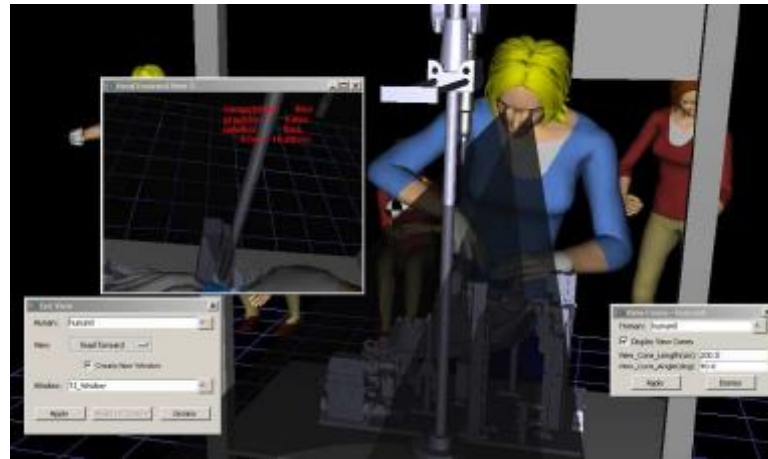
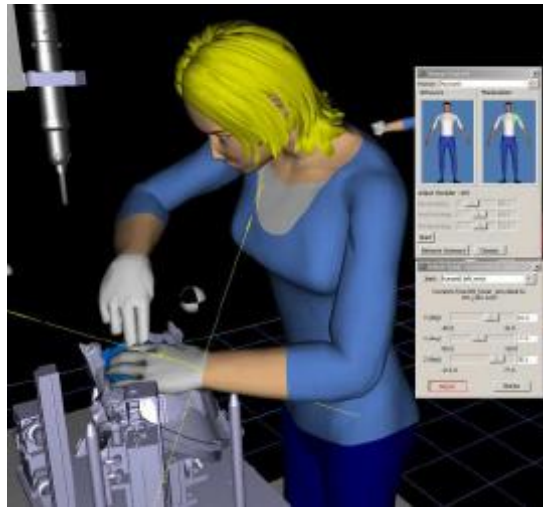
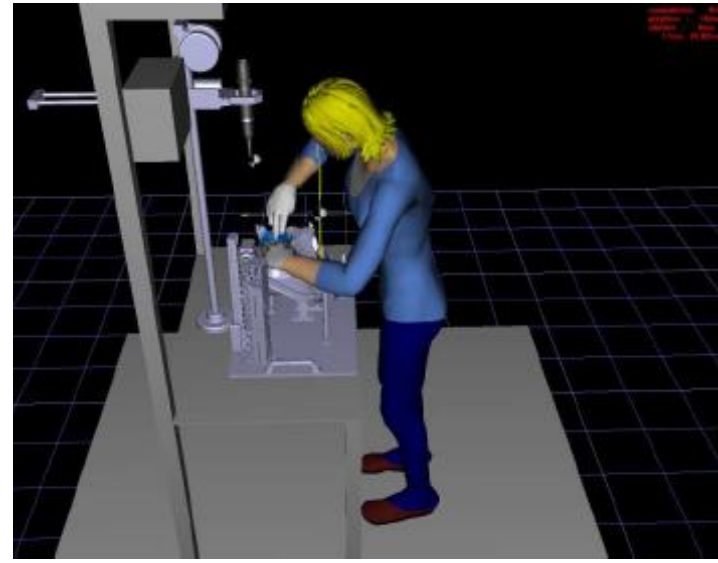
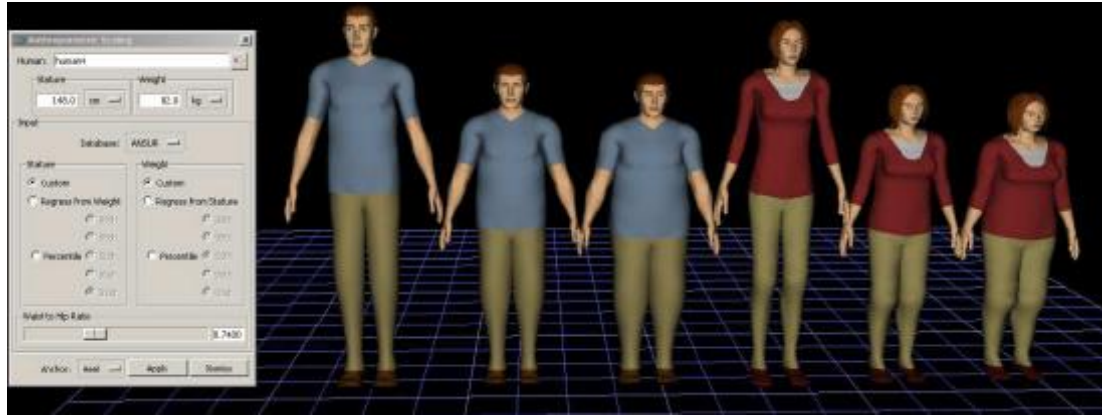


Work-flow optimization

Ergonomics and applied anthropology

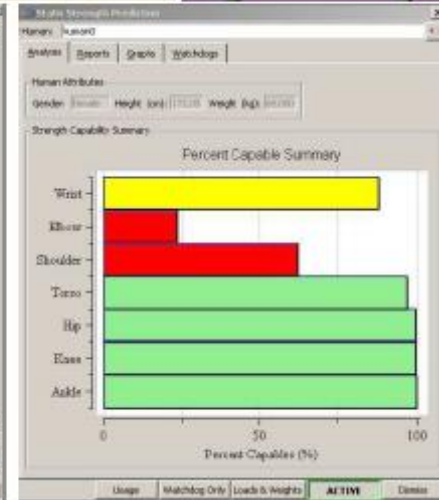






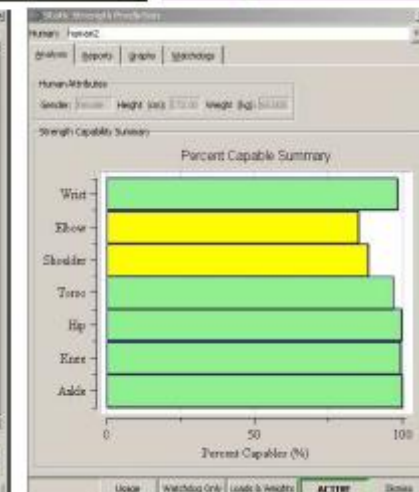
Human: Female

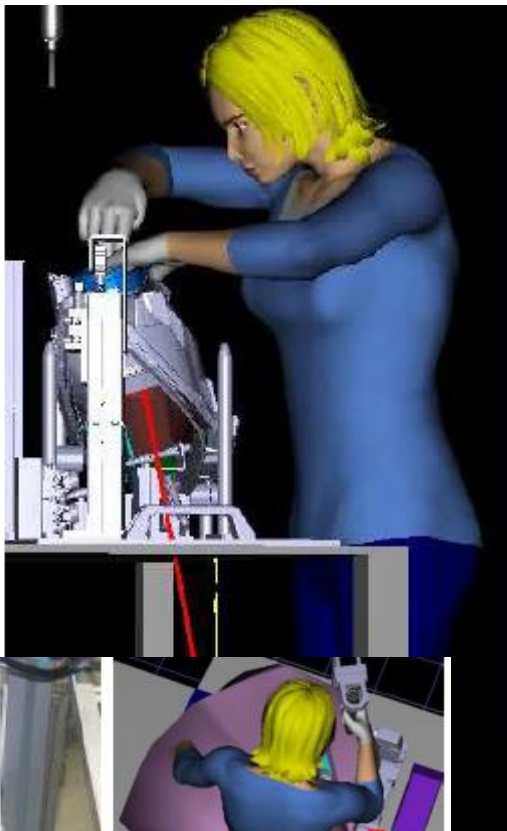
Joint	Direction	Capable (%)	Percent	Force (N)	Moment (Nm)	Speed (mm/s)	Strength (N)	Strength (Nm)
R Neck Flex	Flex	87	100	11.9	4.3	1.4	100	100
R Neck Ext	Ext	100	100	11.9	4.3	1.4	100	100
R Neck Rot	Rot	100	100	11.9	4.3	1.4	100	100
R Shoulder Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Shoulder Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Shoulder Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Elbow Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Elbow Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Elbow Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Wrist Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Wrist Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Wrist Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Hip Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Hip Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Hip Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Knee Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Knee Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Knee Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Ankle Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Ankle Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Ankle Rot	Rot	100	100	30.2	11.2	1.2	100	100



Human: Female

Joint	Direction	Capable (%)	Percent	Force (N)	Moment (Nm)	Speed (mm/s)	Strength (N)	Strength (Nm)
R Neck Flex	Flex	87	100	11.9	4.3	1.4	100	100
R Neck Ext	Ext	100	100	11.9	4.3	1.4	100	100
R Neck Rot	Rot	100	100	11.9	4.3	1.4	100	100
R Shoulder Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Shoulder Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Shoulder Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Elbow Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Elbow Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Elbow Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Wrist Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Wrist Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Wrist Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Hip Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Hip Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Hip Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Knee Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Knee Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Knee Rot	Rot	100	100	30.2	11.2	1.2	100	100
R Ankle Flex	Flex	100	100	30.2	11.2	1.2	100	100
R Ankle Ext	Ext	100	100	30.2	11.2	1.2	100	100
R Ankle Rot	Rot	100	100	30.2	11.2	1.2	100	100





ForceSolver

Human: human

Dynamic Analysis

Sort by: Joint Angle conversion: Jack

Joint/Axis	% Capable	Use	Moment (Nm)	Muscle (N)	Angle (deg)	Strength Mean (Nm)	Strength Std Dev (Nm)
R Wrist Flex	100	✓	-3.0	PLUV	-25.5	3.9	3.2
L Wrist Flex	100	✓	-5.0	PLUV	-7.6	3.5	3.1
R Wrist Dev	100	✓	4.0	---	-4.0	---	---
L Wrist Dev	100	✓	0.3	---	8.8	---	---
R Wrist Supr	100	✓	0.6	SUP	8.9	3.6	3.2
L Wrist Supr	100	✓	0.9	SUP	-7.9	3.4	3.2
R Elbow	100	✓	-3.1	PLUV	103.5	17.1	4.6
L Elbow	100	✓	2.0	DOTN	85.9	9.3	3.0
R Shoulder Abd	100	✓	2.0	ADD	15.0	17.7	6.7
L Shoulder Abd	100	✓	-3.5	ADD	15.0	19.2	7.3
R Shoulder Flex	100	✓	-2.0	PWD	0.0	19.1	6.5
L Shoulder Flex	100	✓	3.9	BNW	0.0	16.3	6.2
R Shoulder Int	100	✓	0.7	MED	0.0	12.6	4.7
L Shoulder Int	100	✓	12.0	MED	0.0	12.1	4.5
Trunk Flex	100	✓	7.0	DOTN	0.0	31.4	10.4
Trunk Bend	100	✓	-7.0	RIGHT	9.0	53.4	18.1
Trunk Twist	100	✓	-3.0	OW	-18.0	23.8	7.0
R Hip	100	✓	3.0	PLUV	-0.4	72.3	24.3
L Hip	100	✓	3.2	PLUV	-0.2	72.2	24.3

Support:

Force distribution strategy: Two feet

Supporting hand: none

Extend Support: none

Frequency and Duration

Use frequency/duration compensation:

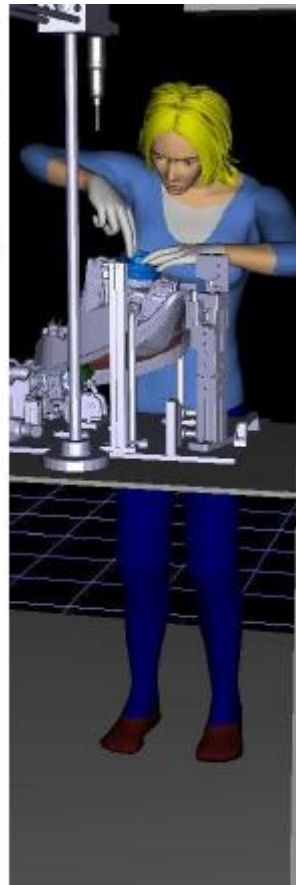
Frequency: 14.0 Cycle time (sec)

Frequency: 0.0 Duration: 1 < 0

LIMITS

Percent capable threshold

- L4/L5 Compression: 100%
- L4/L5 AP shear: 100%
- L4/L5 Lateral shear: 100%



Human Control

Human: human

Behaviors: Manipulation

Adjust Shoulder - right

Flexion(deg): 101.3

Anti(Post)(deg): 42.3

Rotation(deg): 0.0

Start

Behavior Summary Done

Anthropometric Scaling

Human: human

Stature: 155.0 cm Weight: 63.0 kg

Input

Database: ANSUR

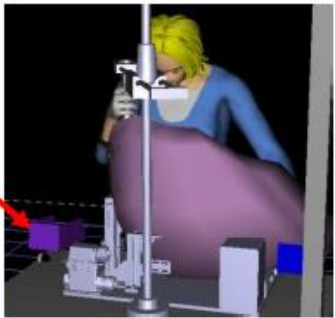
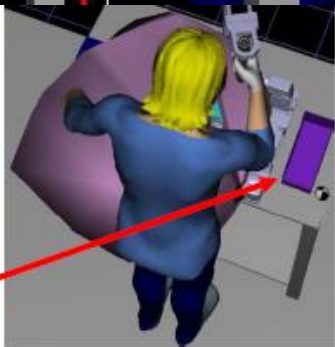
Stature: Custom Regress from Weight

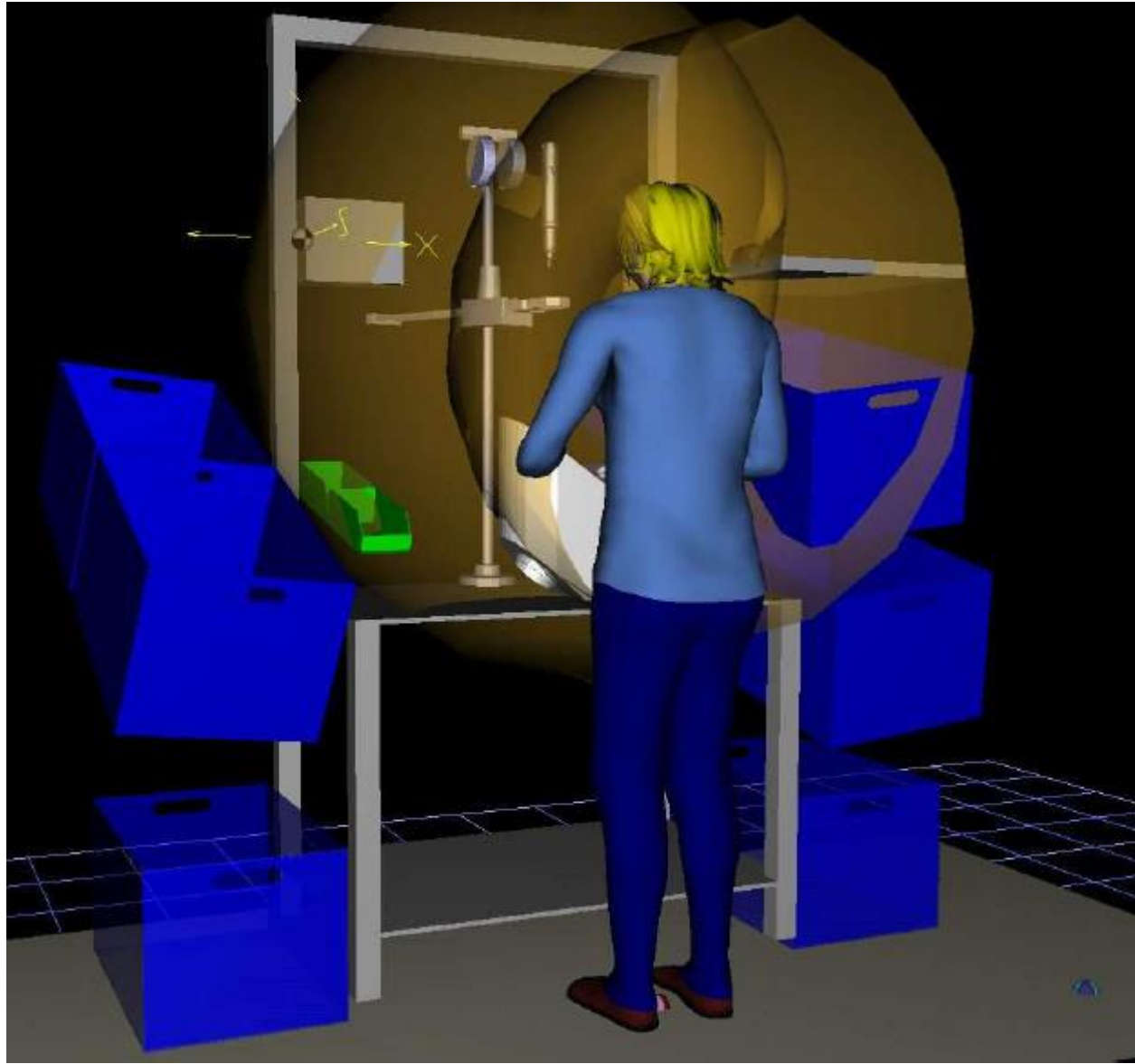
Weight: Custom Regress from Stature

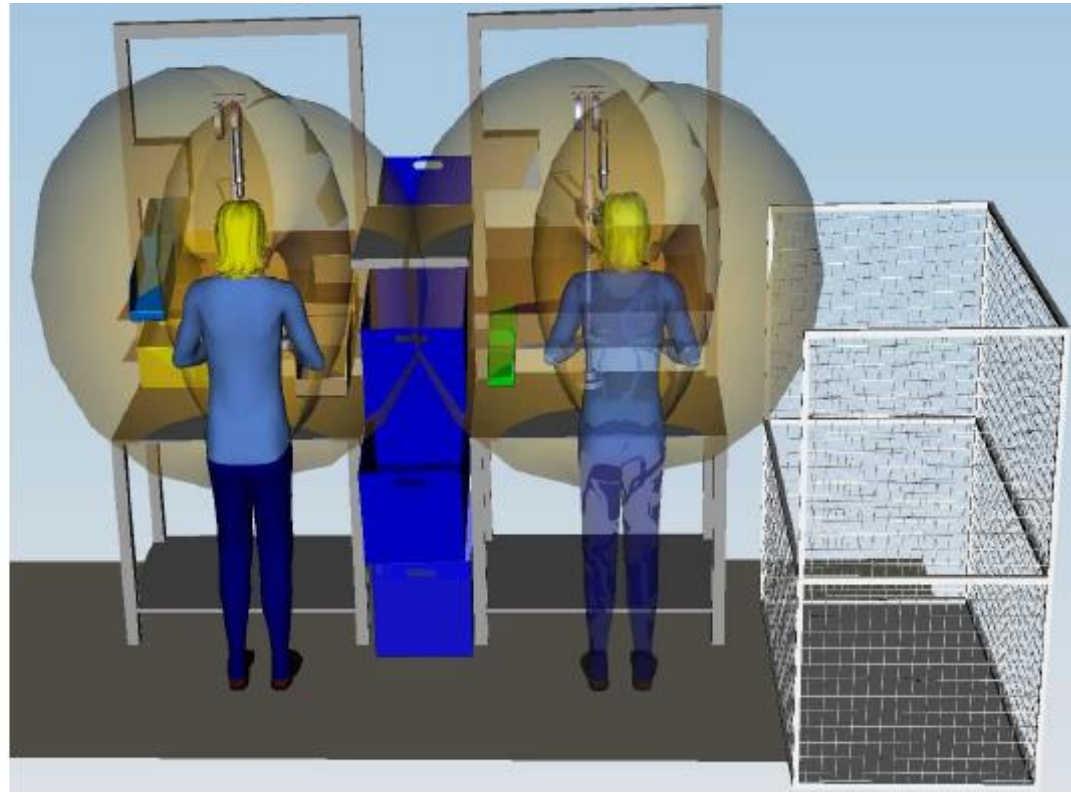
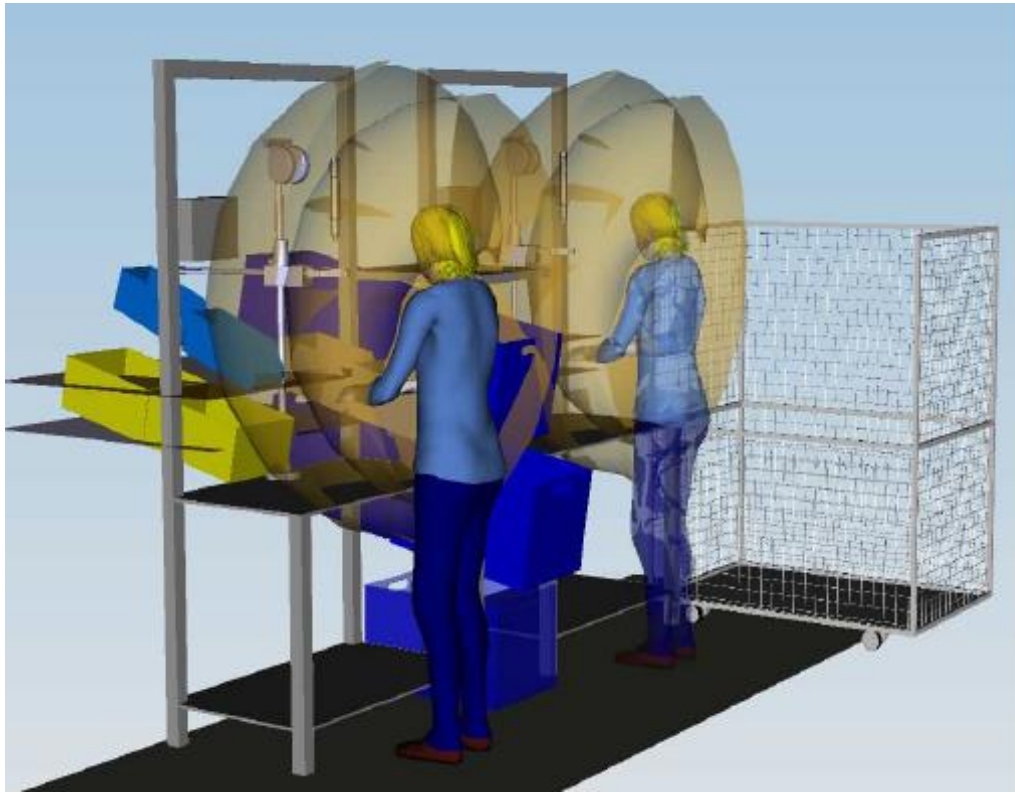
Percentile: 50th 50th 50th 50th

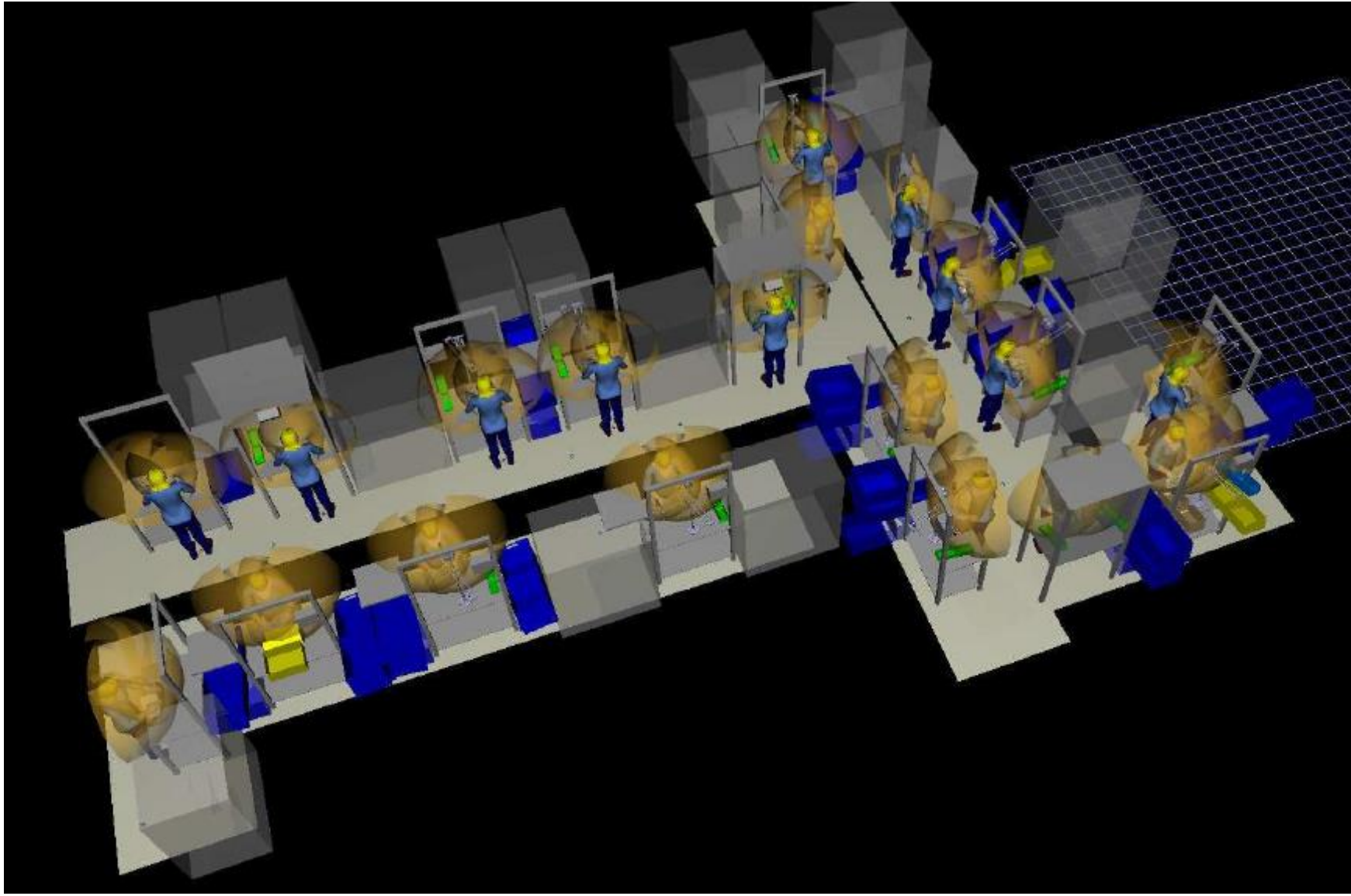
Wrist to Hip Ratio: 0.7400

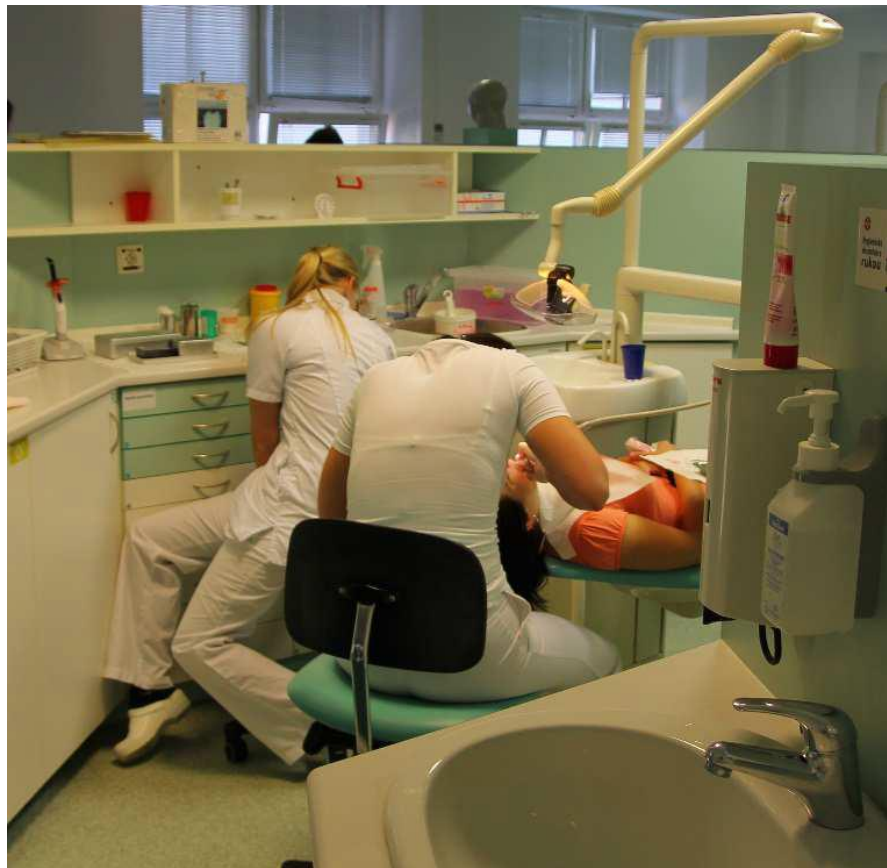
Anchor Heel Apply Done











Rapid Upper Limb Assessment (RULA)

Task Entry | Reports | Analysis Summary

Job Title: Job Number:
 Location: Analyst:
 Comments: Date:

Body Group A Posture Rating

Upper arm: 3
 Lower arm: 3
 Wrist: 2
 Wrist Twist: 1
 Total: 4

Body Group B Posture Rating

Neck: 5
 Trunk: 5
 Total: 8

Muscle Use: Normal, no extreme use
 Force/Load: < 2 kg intermittent load
 Arms: Not supported

Legs and Feet Rating

Seated, Legs and feet well supported. Weight even.

Grand Score: 6
 Action: Investigation and changes are required soon.

Update Analysis

Usage Dismiss

Ovako Working Posture Analysis

Human: human

Analysis | Reports

OWAS Posture Evaluation

0 1 2 3 4

(Owas Code: 4211)
 Warning! This work posture will cause harmful levels of stress on the musculoskeletal system!
 Corrective measures must be taken as soon as possible.
 Note that only downward force components are considered in the analysis.

Watchdog

Usage Watchdog Only Loads & Weights **Activate** Dismiss



