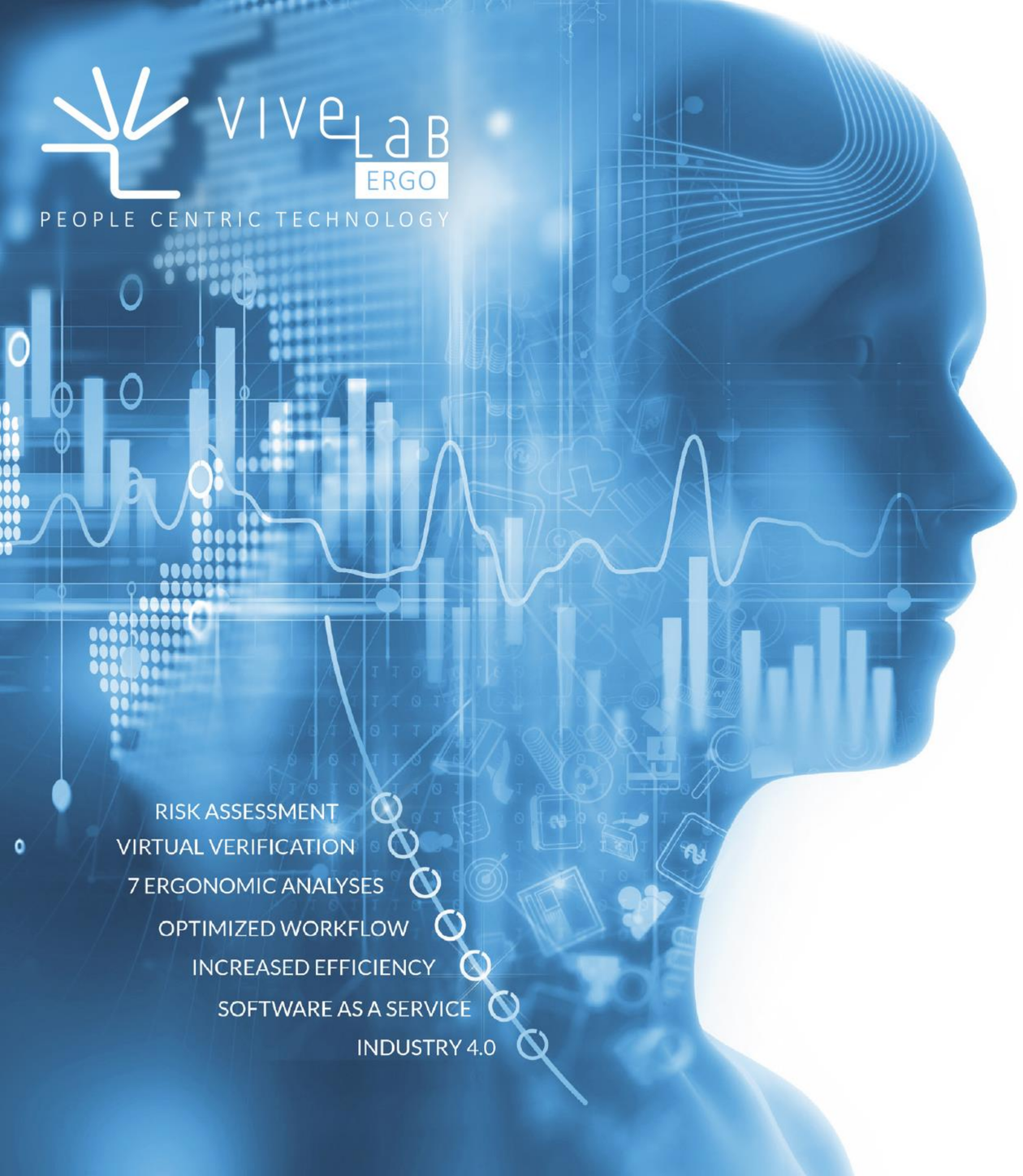


VIRTUAL ERGONOMIC VERIFICATION FOR THE MANUFACTURING SECTOR

THE FORTUNE 100 ENTERPRISE TECHNOLOGY
IS NOW AVAILABLE FOR YOU IN THE CLOUD

VISION

The efficiency and labour issue is a hot topic for manufacturing companies.

The problem is getting bigger, the solution is getting more urgent.

Our mission is to provide fast and accurate 3D virtual ergonomic simulation, analysis and planning for a wide range of companies to create optimal working environments and workflows for health, efficiency, and competitiveness.

WORK BETTER, FASTER, HEALTHIER!

EXECUTIVE SUMMARY

BUSINESS MODEL

HUNGARY

Consultancy project sales: Pre-survey of manufacturing companies; Large & middle size ergonomics analysis projects in Hungary; Software and knowledge transfer; ViveLab software license sales; Education, evangelization.

WORLDWIDE

Acquiring local service providers and reseller partners; Support of large & middle size ergonomic analysis projects; Software and knowledge transfer; ViveLab software license sales; Education, evangelization

TEAM

The founders have 20+ years of human modeling and software development experience. They worked together in ergonomic projects at major companies such as Airbus, Daimler, Kraus Maffei and Robert Bosch in Germany. After filling a major role in the development of human simulation software products like Anthropos, Ergonaut, Oscar, Ramsis and CharAT, they developed a cloud-based, user-friendly, software as a service solution, called ViveLab.

PRODUCTS & SERVICES

The facts of the continuous changes and the aging employees guarantee multiple/long-term projects within a company. Unlimited and low-cost scalability.

VIVELAB ERGO SOFTWARE

provide objective, effective and precise analysis and evaluation about the ergonomic issues of any industrial workplaces. Subscription-based revenue model provides 4 different license packages with monthly pricing (190EUR, 490EUR 4950EUR, 7500EUR).

SERVICES

Our experts provide support to their clients to identify working areas with ergonomic issues, create action plans for the improvement, make a virtual validation without prototypes and to implement the changes. The complete ergonomics optimization project costs 1500 EUR/workstation. It is possible to make 200 complete project/month with a small expert team. ***If the company has more than 15 workstations it is worth to buy a ViveLab software and Xsens hardware.***

NEXT STEP

We are in the growth phase. Our goal is to build a strong worldwide presence through local service providers and reseller partners in the next 2 years. We are searching for an investor who could be our strategic partner giving us guidance and sharing it channel to find the right customers, partners in fields of the manufacturing sector.

TARGET MARKET

MANUFACTURING COMPANIES

We support companies within the manufacturing industry, primarily in the automotive industry (tier I-III.)

Other industries: Aviation & Aerospace, Electrical/ Electronic Manufacturing, Machinery Mechanical or Industrial Engineer, Design

Goal: after the knowledge and product transfer the company is able to apply the technology and carry out the surveys and evaluations independently or with the help of our online collaborative consultancy.

SERVICES PROVIDERS AND RESELLERS:

partners who use the software to provide services to the manufacturing industries in their local market

- Management consulting companies
- Lean / Six Sigma consulting companies
- Workflow optimization consulting companies
- CAD Engineering and designer companies
- Ergonomic consulting companies
- Business development consulting companies
- EHS consulting companies

Total Addressable Market:

~ 5 000 000 potential workstations worldwide

SERVICES MARKET VALIDATION

IN HUNGARY

BY VIVELAB ERGO TEAM

PRODUCT MARKET VALIDATION

WORLDWIDE

BY THE ACADEMIC AND PUBLIC SECTORS

Our software was validated by Institutes and Universities,

and other users from Europe, US, Brazil, China, Japan

TECHNISCHE UNIVERSITÄT DRESDEN

Óbudai EGYETEM Universitas Budensis

Óbuda University

National Public Health Institute (Hungary)

MET Magyar Ergonómiai Társaság

Hungarian Ergonomics Association

MŰEGYETEM 1782

Budapest University of Technology and Economics

OUR PARTNERS

WE PROVIDE SPECIALIZED TRAINING AND GO-TO-MARKET SOLUTION

xsens

biomechSOLUTIONS
your reference partner

ENGINSOFT

BUSINESS SOLUTIONS LTD.

IFUA HORVÁTH & PARTNERS
MANAGEMENT CONSULTANTS

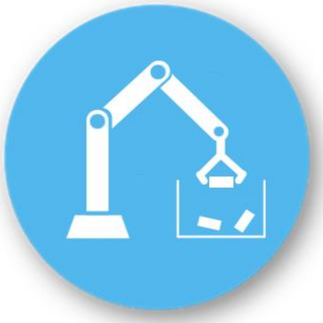
ERGONOMICS IS THE RETURNING INVESTMENT

HELPS TO COORDINATE THE HUMAN – MACHINE – ENVIRONMENT SYSTEM

SOLVE LABOR ISSUES

INCREASE EFFICIENCY

HELP LEGAL AND STANDARD COMPLIANCE



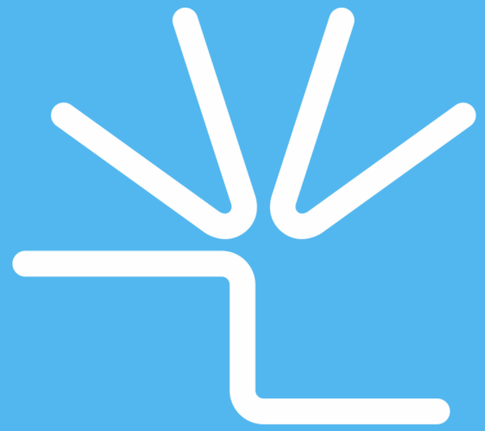
KEEP UP WITH FUTURE

VIVE LAB ERGO

BENEFITS

OPTIMIZED WORKPLACES:

- ✓ **INCREASING EFFICIENCY** by faster processes, reduced cycle times, lower scrap rates and lower costs
- ✓ **REDUCING THE RISK OF ACCIDENTS,** reducing the number of workers being on sick leave (e.g. musculoskeletal disorders)
- ✓ **REDUCING FLUCTUATION**, employee retention and lower number of unoccupied workstations
- ✓ **EXPANSION OF POTENTIAL WORKERS,** applicability of women, changed working capacity and older workers
- ✓ **NO PROTOTYPE NEEDED,** Virtual verification guarantees the ergonomic compliance of new product in the design phase
- ✓ **PREDICTIVE DECISION ELABORATION** based on simulation and virtual ergonomic verification
- ✓ **INDUSTRY 4.0**, Helps to identify the automatable workplaces, helps to coordinate the safety work in the „human – machine – environment" system



VIVE LaB

ERGO

VIVELAB ERGO TECHNOLOGY

VIRTUAL ERGONOMIC VERIFICATION

ViveLab is a cloud-based ergonomic simulation software which provides fast and accurate three-dimensional virtual ergonomic tests, analysis, and planning for a wide range of companies. Thanks to the built-in anthropometric database and seven ergonomic analyses ViveLab Ergo highlights the unnecessary, time-consuming movements, and the health-damaging effects of forced movements caused by incorrect workplace design.

With this software-as-a-service solution is easy to create optimal working environments and workflows for health, efficiency, and competitiveness.

EVEN IF IN THE DESIGN PHASE WITHOUT A PHYSICAL PROTOTYPE

ACCURATE DATA & FAST PROCESS

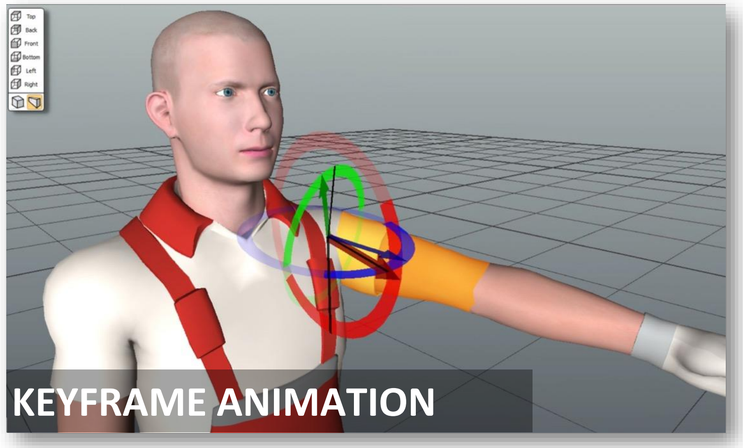
1 ANALYST – 50 WORKSTATIONS – 2 MIN LONG CYCLE TIME

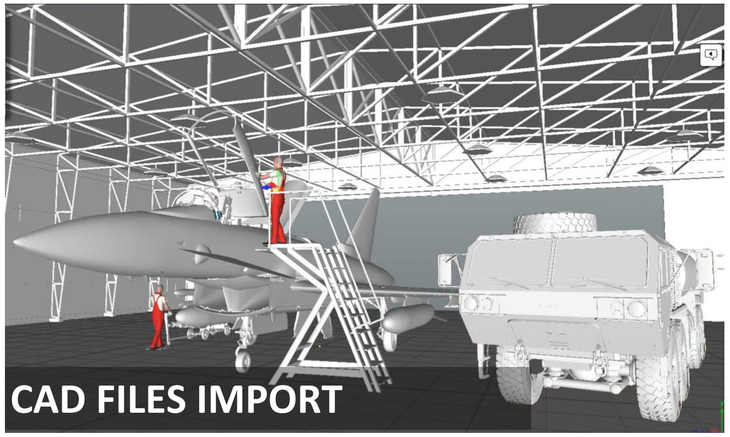
1	MEASURE THE MOTION	xsens	30 MIN / WORKSTATION	**PART TIME: 1500 MIN**
2	IMPORT MOTION FILE	vivelab ERGO	~ 2,5 MIN / WORKSTATION	**PART TIME: 125 MIN**
3	EXPORT DETAILED REPORT	vivelab ERGO	~ 2,5 MIN / WORKSTATION	**PART TIME: 125 MIN**
4	REDESIGN & VIRTUAL TEST	vivelab ERGO	~ 60 MIN / WORKSTATION	**PART TIME: 3000 MIN**
Σ	**TOTAL ASSESSMENT**		~ 95 MIN / WORKSTATION	**TOTAL TIME: ~ 80 HOURS**

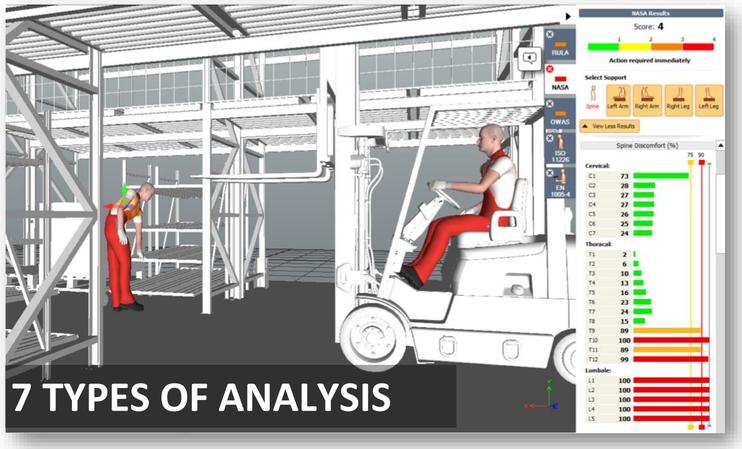
CONCLUSION:

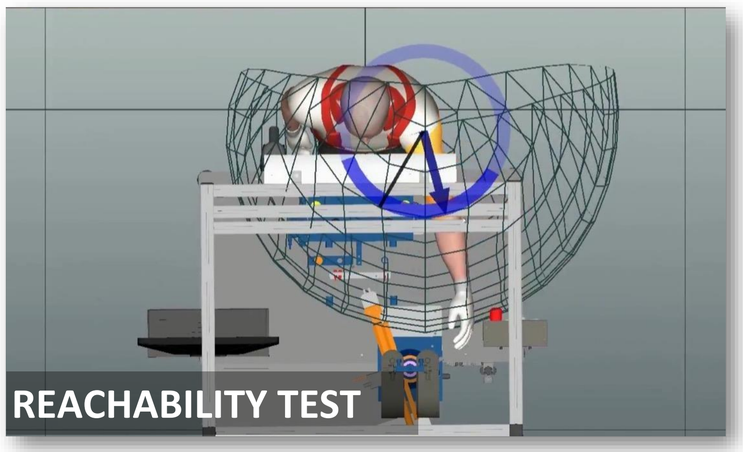
The whole assessment of the 50 workstations takes just 10 days if just one analyst works on the project. Thanks to the user-friendly interface it takes only 2 days to learn the software and hardware usage. Therefore, it is possible to multiply the analyst team and dramatically reduce the execution time. The task can be seamlessly scaled up to 50,000 workstations.

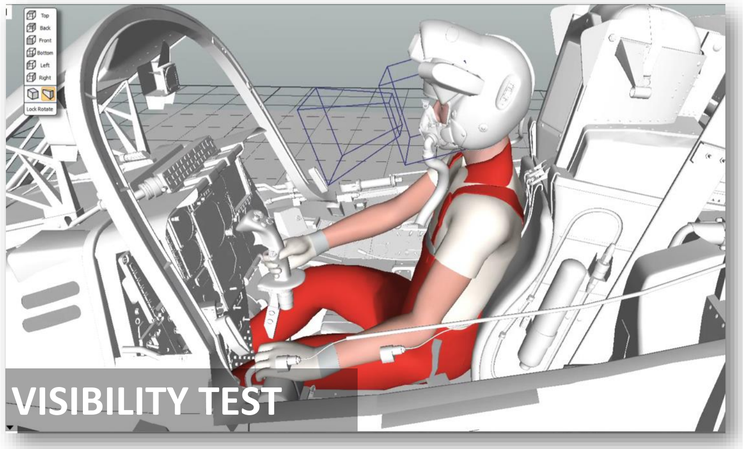

MOTION CAPTURE FILES IMPORT

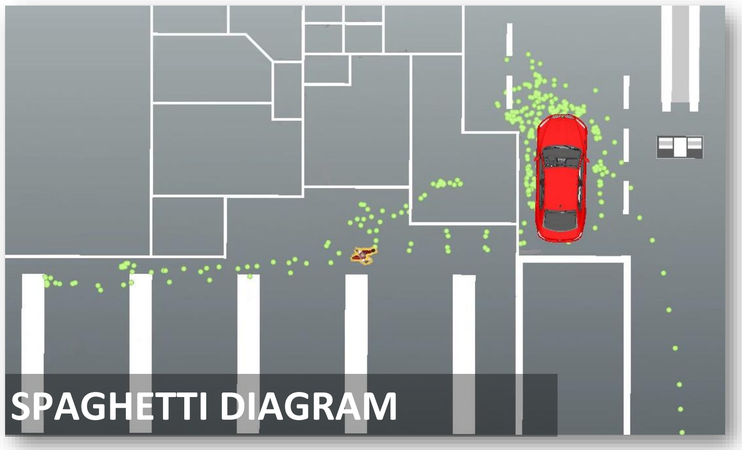

KEYFRAME ANIMATION

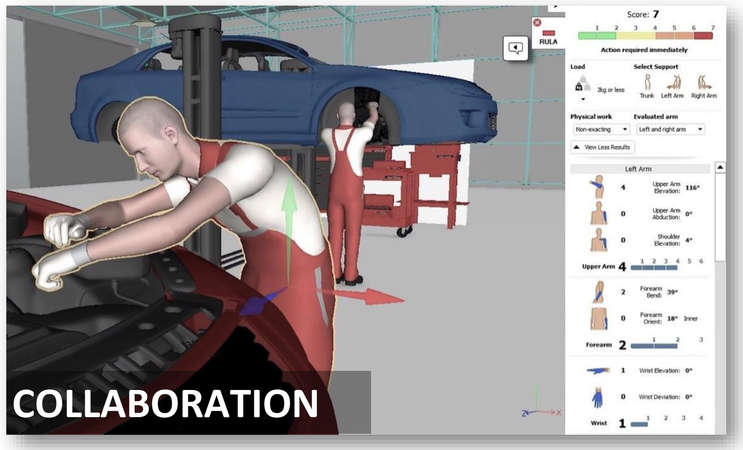

CAD FILES IMPORT

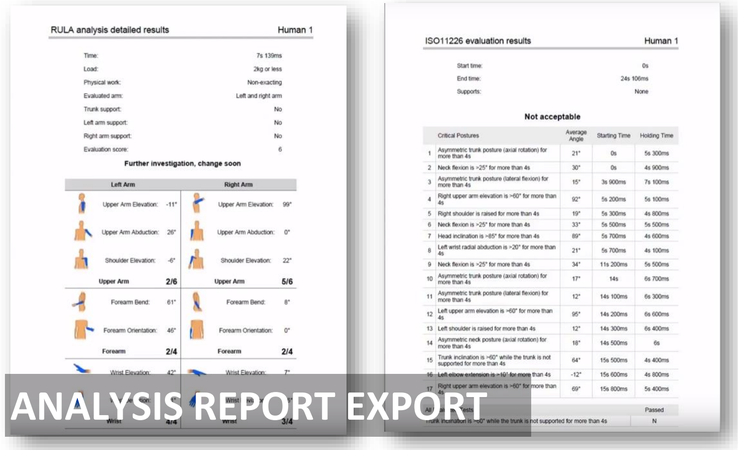

7 TYPES OF ANALYSIS


REACHABILITY TEST


VISIBILITY TEST


SPAGHETTI DIAGRAM


COLLABORATION


ANALYSIS REPORT EXPORT

UNIQUE SELLING PROPOSITION

- **Cloud-based**: easy to access and there is no need of special and expensive hardware.
- **User friendly interface:** easy to manage even by non-ergonomists
- **Easy to learn:** it takes only 2 days to learn the software and the Xsens Motion capture usage
- **7 built-in ergonomic analyzes:** RULA, OWAS, NASA-OBI, ISO 11226, EN 1005-4, reachability zone, spaghetti diagram)
- **Compatible with Xsens Motion Capture system: t**he accurate ergonomic analysis requires objectively measured motion data
- **PDF Report:** detailed, automated documentation in PDF format about the results of the analyses
- **Collaborative**: Users can invite and collaborate with other users from all around the world while working on the same project
- **Human anthropometric data bank:** The simulation can be performed for any gender, age group, race and body structure
- **Subscription-based revenue model**: 4 different license packages with monthly pricing
- **Available services:** There is an experienced team of ergonomists behind the product to provide onsite or online services

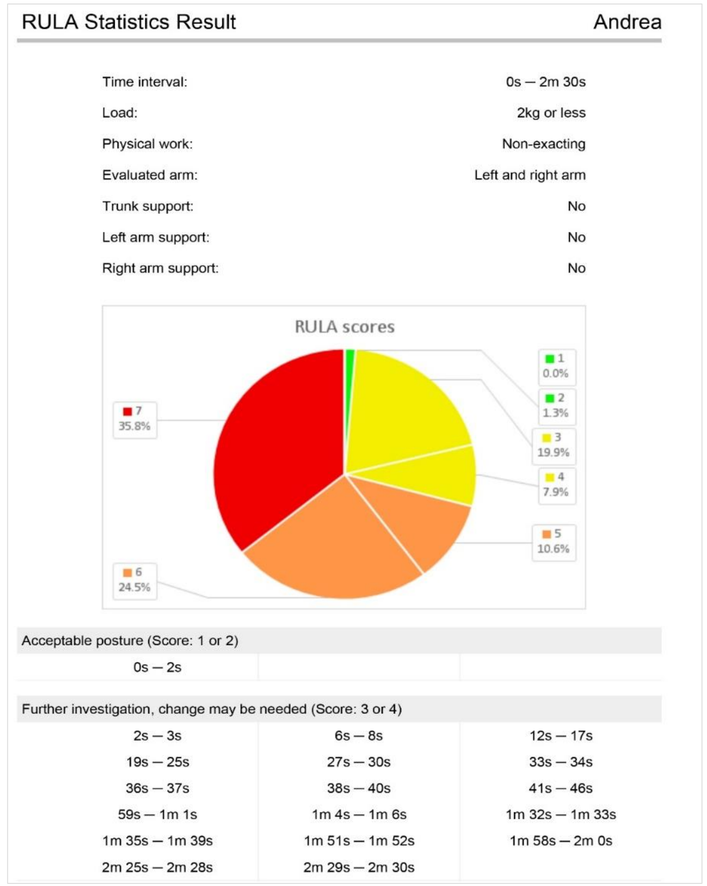
ACCREDITED ERGONOMICS MEASUREMENT LABORATORY OF VIVELAB ERGO

ABOUT THE LABORATORY

- The Ergonomics Testing Laboratory of ViveLab Ergo[1] („Laboratory”) examines and evaluates the movements of the full human body in accordance with the international standards of ISO11226, EN1005-4 as well as with the academic methods (OWAS, RULA).
- The Laboratory is certified according to the requirements of the Hungarian MSZ EN ISO/IEC 17025:2017 standard. From 2019 forward the analysis reports generated by ViveLab Ergo software will be accepted as official minutes[2] of the above mentioned accreditation process.
- These official minutes will also serve as proofs against or in favour of potential health and ergonomics related employee denunciations for the authorities. As the National Accreditation Authority of Hungary acknowledged that the Laboratory can perform such ergonomics examinations and analyses, the Laboratory’s official minutes are incontestable and fully objective.

FIELDS OF ACCREDITATION

- The Laboratory’s scope of activities includes[3]:
  - Importing the ergonomics related data provided by the motion capture devices
  - Advisory services related to analyses and evaluations
  - Generating PDF report, which is the official minutes of the accreditation



RULA Statistics Result — Andrea

Time interval:	0s — 2m 30s
Load:	2kg or less
Physical work:	Non-exacting
Evaluated arm:	Left and right arm
Trunk support:	No
Left arm support:	No
Right arm support:	No

Acceptable posture (Score: 1 or 2)		
0s — 2s		

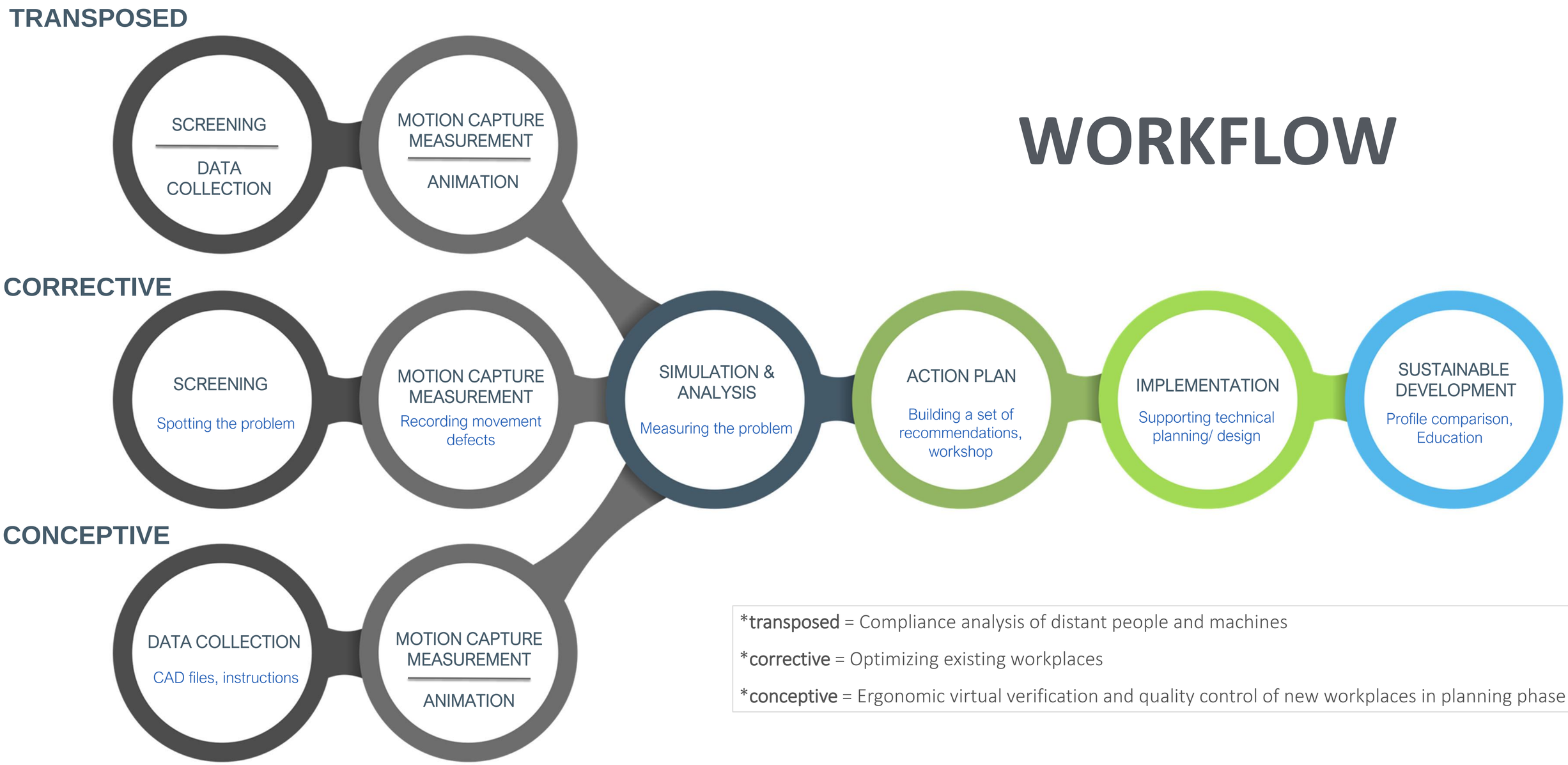
Further investigation, change may be needed (Score: 3 or 4)		
2s — 3s	6s — 8s	12s — 17s
19s — 25s	27s — 30s	33s — 34s
36s — 37s	38s — 40s	41s — 46s
59s — 1m 1s	1m 4s — 1m 6s	1m 32s — 1m 33s
1m 35s — 1m 39s	1m 51s — 1m 52s	1m 58s — 2m 0s
2m 25s — 2m 28s	2m 29s — 2m 30s	

Example of a RULA statistics report which is valid as the official minutes of accreditation.

[1]Official name: ViveLab Ergonómiai Vizsgálólabor
[2]Such an official measurement minutes can be issued by measurement laboratories accredited by the national accreditation authorities.
[3]The Laboratory is not responsible for the quality of the motion data

VIVELAB WORKFLOW

WORKFLOW



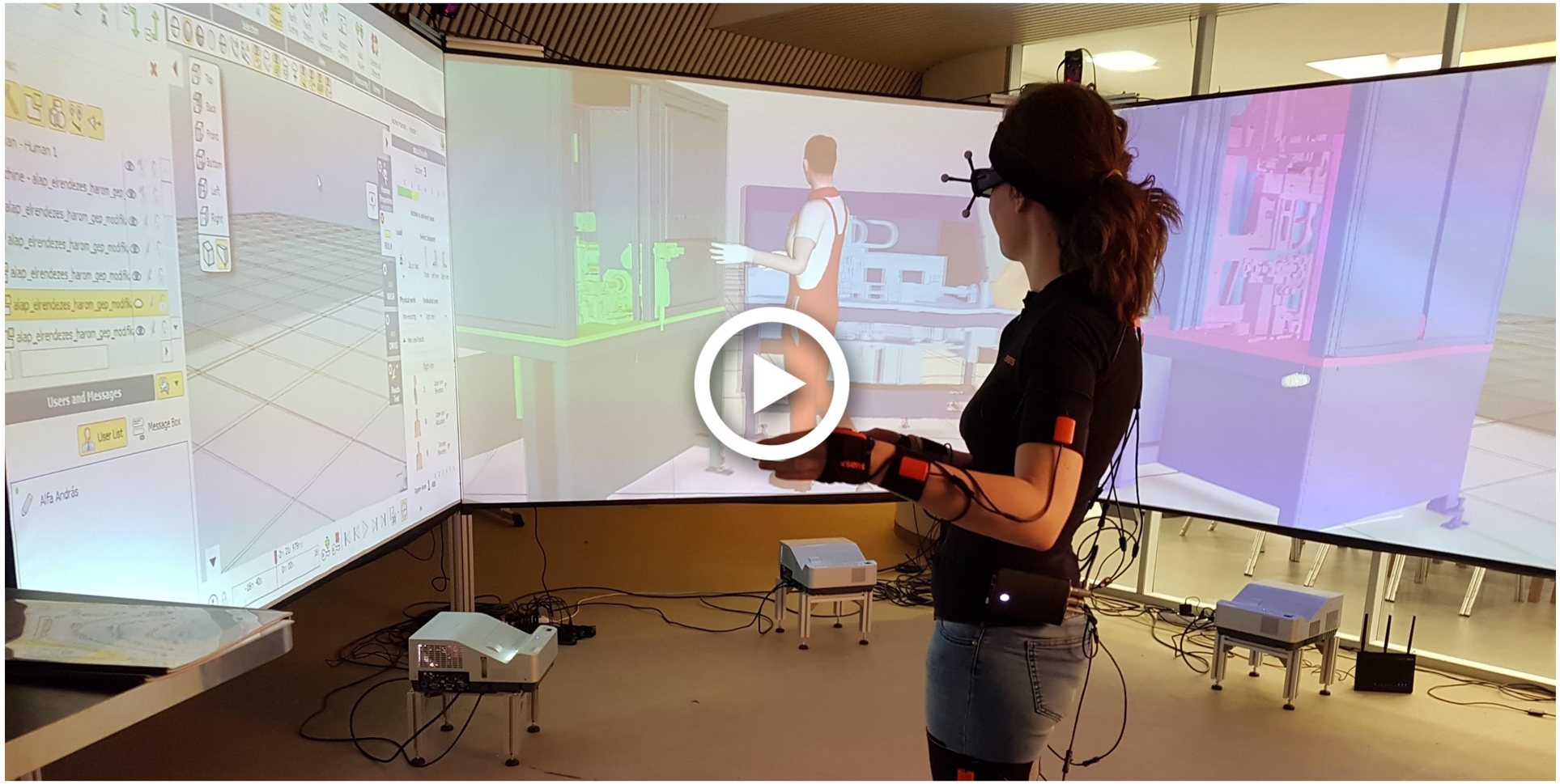
*transposed = Compliance analysis of distant people and machines

*corrective = Optimizing existing workplaces

*conceptive = Ergonomic virtual verification and quality control of new workplaces in planning phase

CONCEPTIVE OPTIMIZATION

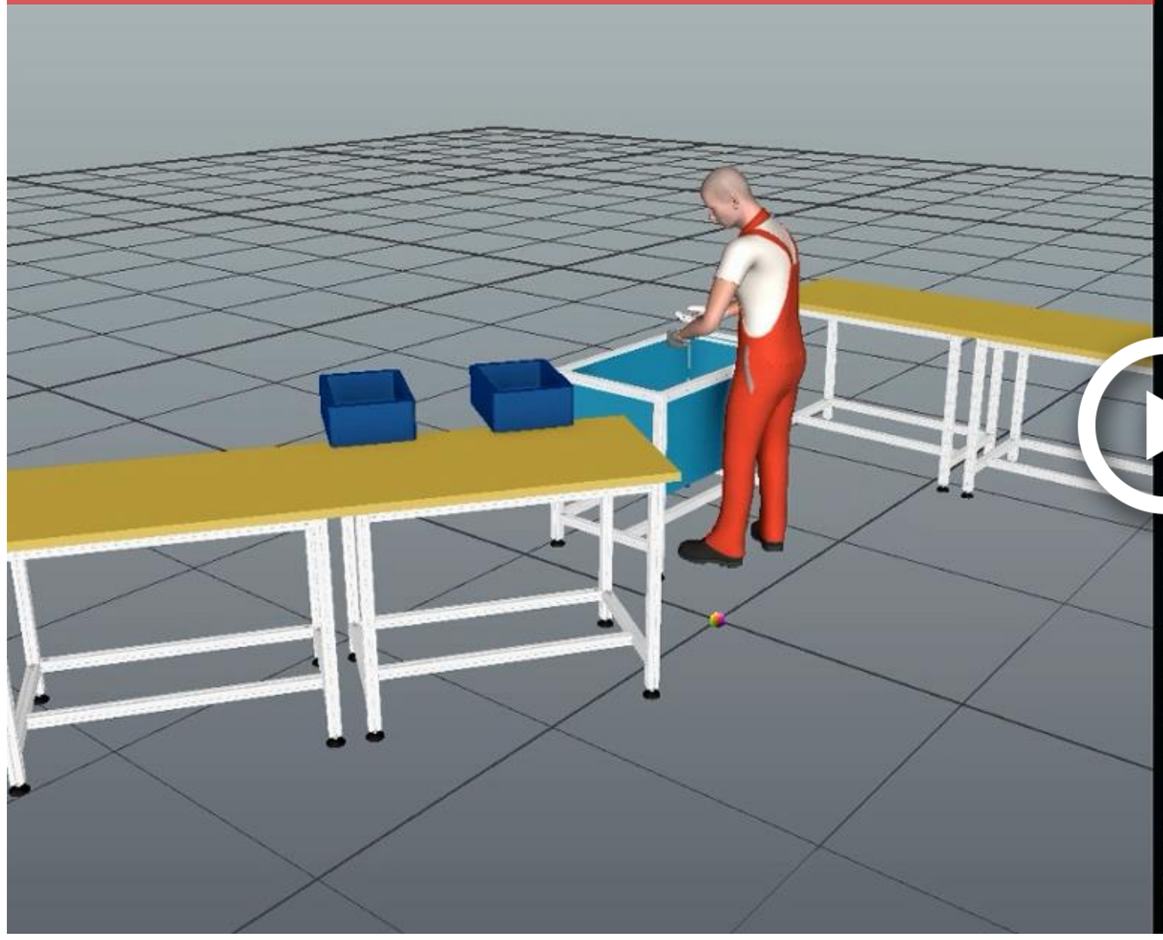
VIRTUAL VERIFICATION WITHOUT ANY PROTOTYPE



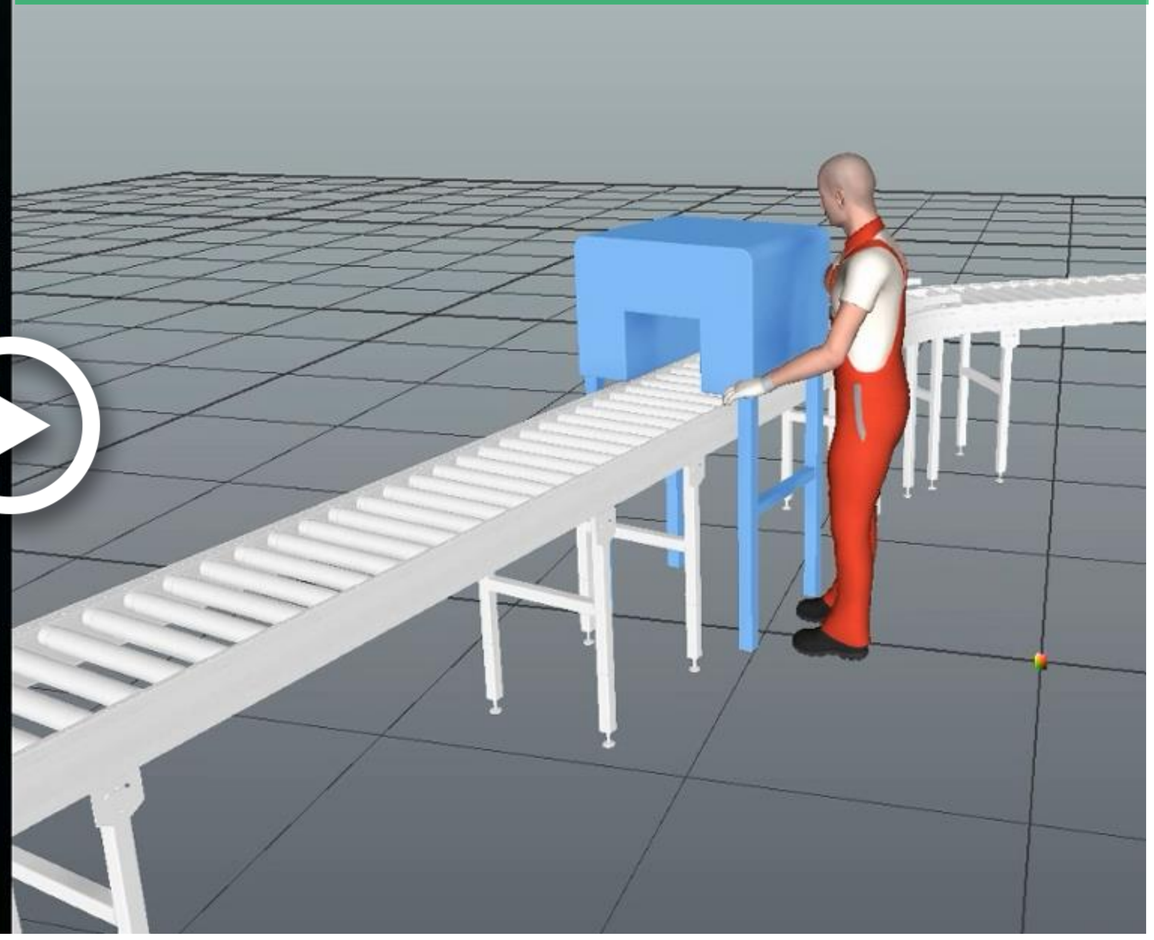
CORRECTIVE OPTIMIZATION

MEASUREMENT AND REDESIGN THE EXISTING WORKPLACES

ORIGINAL WORK PROCESS AND ENVIRONMENT



OPTIMAL WORK PROCESS AND ENVIRONMENT



XSENS MVN MOTION CAPTURE

The accurate ergonomic analysis requires objectively measured motion data. Our software is compatible with the Xsens motion capture system.

The sensors do not limit the movement of the workforce, captures every detail of movement accurately, quickly, objectively and precisely. The motion files can be imported into anatomically correct models with realistic movement.

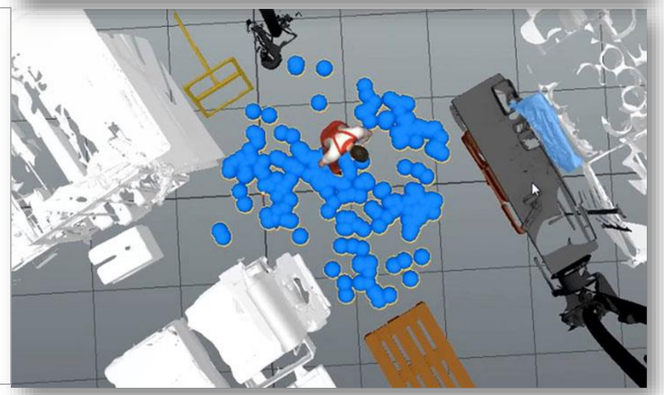
It can be used in all environments, including industrial plants with lots of magnetic interference, the motion capture data will not be affected

vivelab ERGO

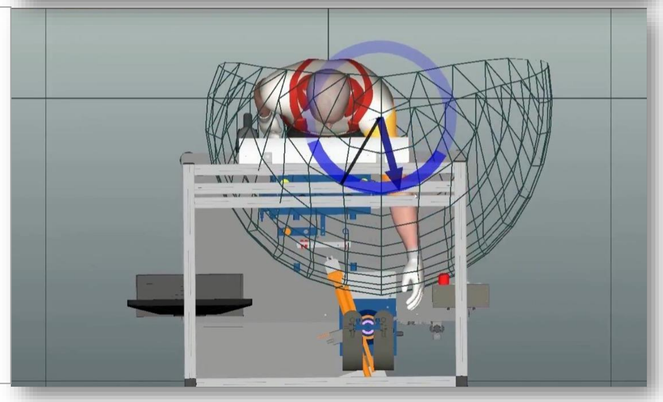
ANALYSIS IN VIVELAB

- RULA
- OWAS
- NASA-OBI
- ISO 11226
- EN 1005-4

SPAGHETTI DIAGRAM



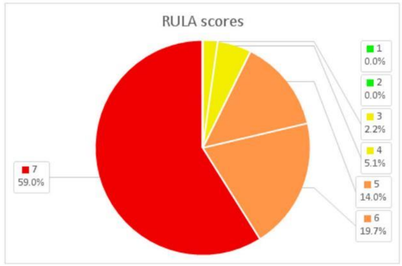
REACHABILITY TEST



AUTOMATED PDF REPORT (EXTRACT)

RULA Statistics Result — Andrea

Time interval:	0s — 5m 13s
Load:	2 — 10kg (temporary)
Physical work:	Non-exacting
Evaluated arm:	Left and right arm
Trunk support:	No
Left arm support:	No
Right arm support:	No



Further investigation, change may be needed (Score: 3 or 4)

0s — 2s	10s — 11s	15s — 16s
32s — 33s	59s — 1m 0s	1m 4s — 1m 5s
1m 7s — 1m 8s	1m 10s — 1m 11s	2m 47s — 2m 48s
3m 0s — 3m 1s	3m 8s — 3m 9s	3m 21s — 3m 22s
3m 38s — 3m 39s	3m 41s — 3m 42s	3m 51s — 3m 52s
3m 54s — 3m 55s	4m 16s — 4m 17s	5m 5s — 5m 6s
5m 7s — 5m 8s	5m 9s — 5m 11s	5m 13s — 5m 13s

EN1005-4 evaluation results — Andrea

Start time:	0s
End time:	5m 13s
Supports:	None

Not acceptable

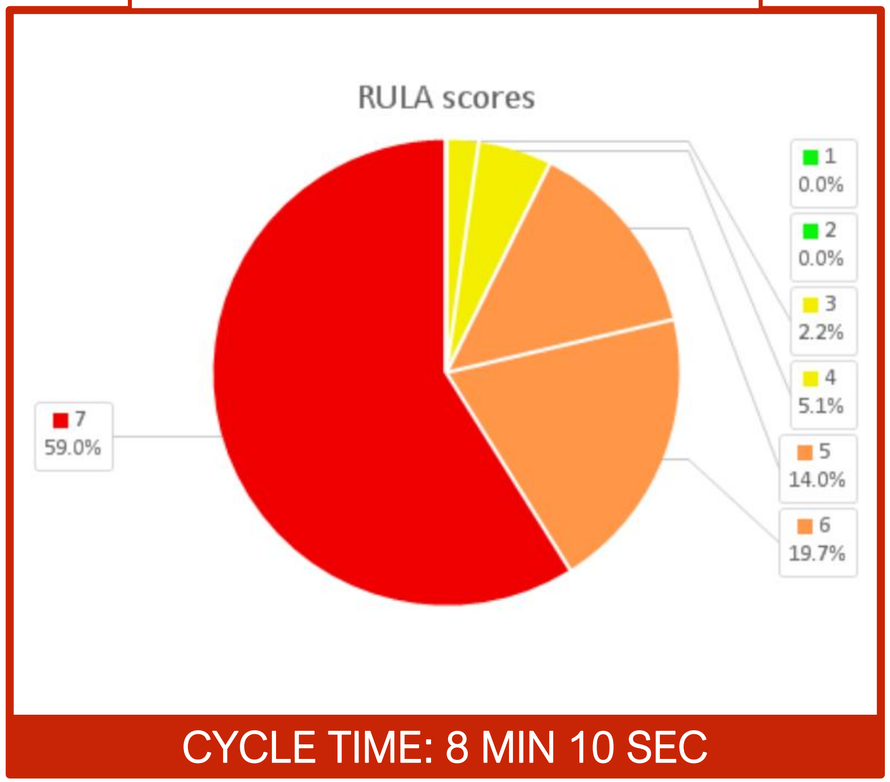
	Critical Postures	Maximum Frequency	Starting Time	Holding Time
1	Asymmetric trunk posture (axial rotation) occurs with a frequency >=2/min	27/min	0s	5m 13s
2	Left elbow extension is >10° occurs with a frequency >=2/min	10/min	0s	1m 10s 500ms
3	Right elbow extension is >10° occurs with a frequency >=2/min	13/min	0s	5m 13s
4	Left knee flexion is >0° while standing (bottom not rested) occurs with a frequency >=2/min	34/min	1s 200ms	5m 11s 800ms
5	Left shoulder raising occurs with a frequency >=2/min	26/min	1s 400ms	5m 9s 300ms
6	Asymmetric trunk posture (lateral flexion) occurs with a frequency >=2/min	23/min	1s 600ms	5m 10s 900ms
7	Right knee flexion is >0° while standing (bottom not rested) occurs with a frequency >=2/min	25/min	1s 900ms	5m 11s
8	Right upper arm adduction occurs with a frequency >=2/min	4/min	2s 100ms	20s 400ms
9	Right upper arm elevation is 20°— 60° occurs with a frequency >=10/min	23/min	2s 500ms	5m 9s 800ms
10	Right wrist ulnar abduction >30° occurs with a frequency >=2/min	12/min	3s	2m 1s 700ms
11	Left upper arm retroflexion occurs with a frequency >=2/min	18/min	3s 200ms	5m 9s 800ms
12	Left upper arm elevation is 20°— 60° occurs with a frequency >=10/min	25/min	3s 600ms	5m 9s 300ms
13	Left wrist radial abduction >20° occurs with a frequency >=2/min	24/min	5s	5m 6s 900ms
14	Trunk inclination is 20°— 60° while the trunk is not supported occurs with a frequency >=2/min	15/min	5s 800ms	4m 54s
15	Left upper arm elevation is >60° occurs with a frequency >=2/min	15/min	6s 600ms	4m 47s 500ms
16	Neck flexion is <0° occurs with a frequency >=2/min	12/min	6s 700ms	5m 2s 700ms

vivelab ERGO

VIRTUAL VERIFICATION OF THE TECHNICAL ACTIONS

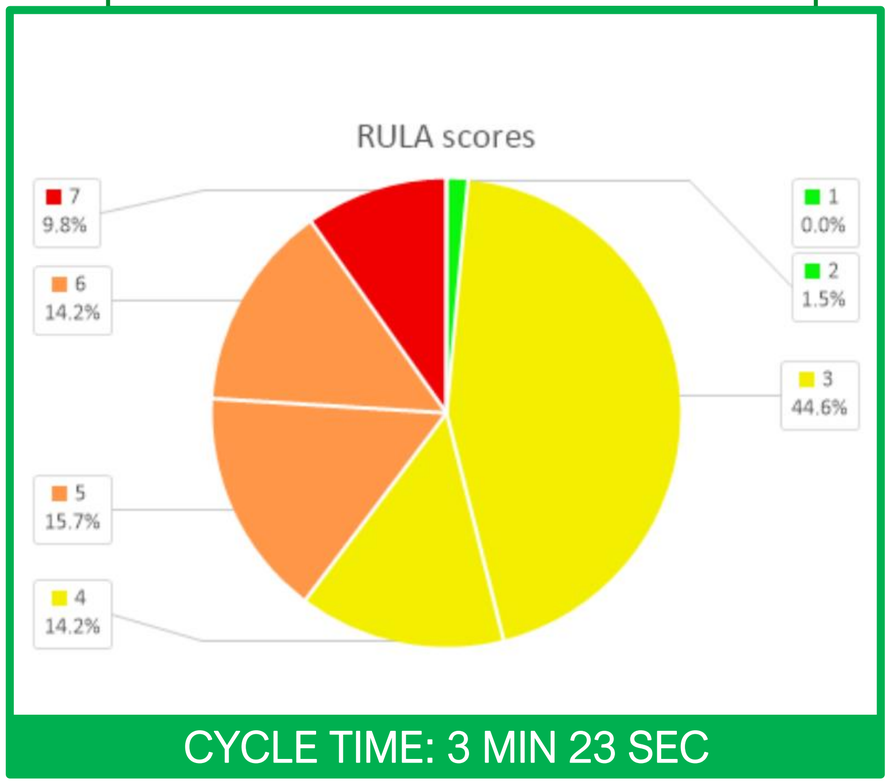
RULA STATISTICS RESULT (EXTRACT)

ORIGINAL WORKPLACE



CYCLE TIME: 8 MIN 10 SEC

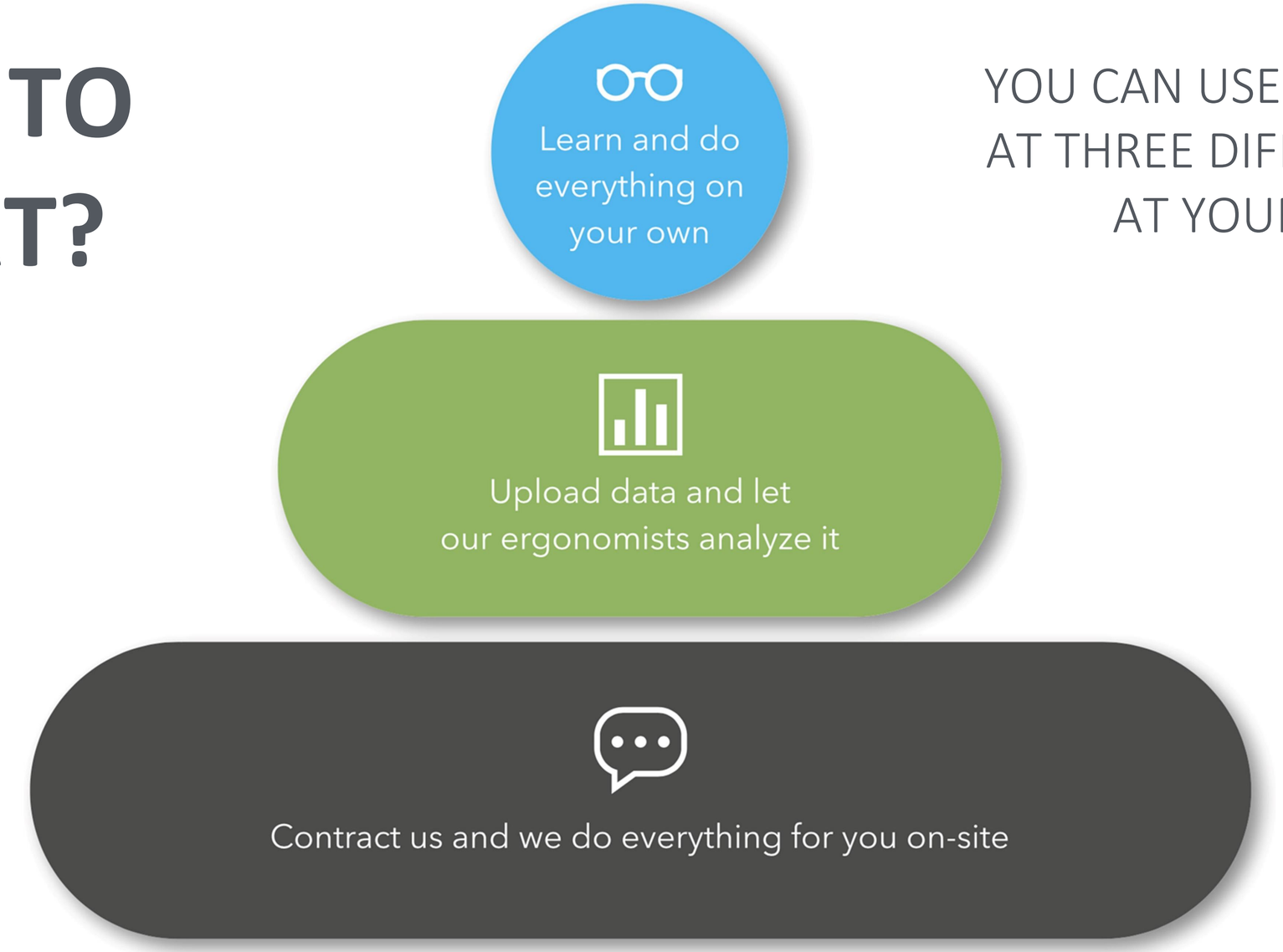
OPTIMIZED WORKPLACE



CYCLE TIME: 3 MIN 23 SEC

THE NEW CYCLE TIME IS 3:23 MINUTES, THAT MEANS THAT WAS REDUCED BY NEARLY 5 MINUTES PER PRODUCT, SO WE WERE ABLE TO INCREASE PRODUCTIVITY BY 2.5 TIMES.

HOW TO START?



YOU CAN USE VIVELAB ERGO AT THREE DIFFERENT LEVELS AT YOUR CHOICE

VIVELAB ERGO

COMPANY OVERVIEW

OWNERSHIP STRUCTURE

- ViveLab Ergo is the subsidiary of ViVeTech Kft. („ViVeTech") which is engaged in providing IT security solutions and advisory services within Hungary.
- With about 30 years of experience in ergonomics and IT management, the founders of ViVeTech („Founders") developed a new software handling 3D environments with digital human ergonomics analysis and created their cutting edge methodology for virtual verification.
- ViveLab Ergo was founded in 2017 as the subsidiary of ViVeTech to exclusively market its core ergonomics platform which is capable of modelling, analysing and simulating human interactions with industrial environments.
- The Founders received a total funding of ~ EUR 1 million (HUF 303.7m) from Hiventures[1], a venture capital firm owned by the state of Hungary and member of the MFB Group, for which Hiventures received a 33% stake in the Company in September 2017. ViVeTech's contribution of ~ EUR 653,135 (HUF 200m) was the value of the ergonomic software.
- ViVeTech is the ultimate owner of the underlying IP of the virtual verification platform which can be further used in sports, rehabilitation, forensics, armed forces etc.

Mr. Csaba Szeredy
Founder, CEO of ViVeTech and ViveLab Ergo

Mr. László Ördögh
Founder, CTO of ViVeTech and ViveLab Ergo

Mr. Miklós Márton
Partner & Sales Director in ViVeTech and Founder & Sales Director of ViveLab Ergo

41% 18% 41%

67% 33%

Figures in EUR	ViVeTech	Founder 1	Founder 2	Founder 3	Hiventures
Owners contribution	653,135	890	890	890	983,290
Subscribed Capital	7,974	890	890	890	5,484
Capital reserve	645,161	-	-	-	988,774
Ownership (%)	43.00%	8.00%	8.00%	8.00%	33.00%

[1]*Hiventures Capital Management Fund Plc.*

MANAGEMENT

MR. CSABA SZEREDY
FOUNDER, CEO

Mr. Szeredy is the Co-founder and CEO of ViVeTech and ViveLab Ergo.

Previously he fulfilled major role in the development of human simulation software products, such as Anthropos (1991-2001), Ergonaut (1996-2001) or CharAT Ergonomics (2002-2010). In the past ten years he worked as the lead developer of the ergonomics software, while also acted as CTO at various successful start-up companies.

Mr. Szeredy graduated as electrical engineer at Budapest University of Technology.

He speaks fluent English.

MR. LÁSZLÓ ÖRDÖGH
FOUNDER, CTO

Mr. Ördögh is the co-founder and CTO of ViVeTech and ViveLab Ergo.

His previous works consist the design and development of many human modelling products, including Oscar (1981-1986) and Ramsis (1999-2001).

Mr. Ördögh graduated summa cum laude as industrial designer from Moholy-Nagy University of Arts and Design Budapest. He also gained extensive knowledge in system design and information technology during his postgraduate studies in System Engineering.

He is fluent in German.

MR. MIKLÓS MÁRTON
FOUNDER, CSO

Mr. Márton acts as the sales director and shareholder of ViVeTech and ViveLab Ergo. He is also a co-founder of ViveLab Ergo.

Prior to joining to ViVeTech he gained expertise in IT strategy and management as lead team member at leading IT companies such as Novell and Kürt.

Mr. Márton graduated as business professional at Corvinus University of Budapest in 1999.

He is fluent in English.

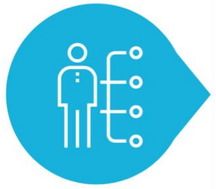
VIVELAB ERGO

WHY IS IT WORTH INVESTING IN VIVELAB?

FOUNDERS

Founders are 3D modelling veterans, obsessed developers of the human modelling more than 20 years ago. They saw the beginning and the rise of this field and created many human modelling versions before founding ViveLab Ergo.

Participated in numerous academic and scientific projects in prestigious universities and organizations enabling them to refine the technology and the methodology.



MANAGEMENT

Besides this the management has experience in various IT management positions from start up to IT giants and knows how to capitalize the companies theoretical knowledge.

UNIQUE ATTITUDE IN THE MARKET

The innovation the company created is absolutely unique in the market. The software and the methodology is affordable and easily accessible for a wide range of customers. It is easy to use and to understand and the solution is no more a secret privilege of some highly educated trained experts hidden in huge manufacturing companies but ready for the mass market of this special field.

VIVELAB ERGO

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