



Environmental product declaration

according to ISO 14025 and EN 15804

wiesner hager concept

Office swivel chair, acc. to EN 1335-1, EN 1335-2 and EN 1335-3

delv Swivel chair with aluminium arms

- ✓ CRITERION 1: ISO 14025 TYPE III
- ✓ CRITERION 2: BASED ON ISO 14040
- ✓ CRITERION 3: BASED ON ISO 14044





Environmental Product Declaration
EPD

Design: Andreas Krob

| | |
|---|--|
| <p>Wiesner-Hager Möbel GmbH Linzer Straße 22 A-4950 Altheim Tel. 0043 7723 460-0 http://www.wiesner-hager.com/en/</p> | Manufacturer Declaration holder |
| TA 22012 1634 5440-103 03297740100 | EPD number |
| 5440-103 delv delv Swivel chair with aluminium arms | Declared product |
| This declaration was compiled according to ISO 14025 and EN 15804 type B. It describes the environmental rating of the listed product and gives the possibility to compare it with other similar products. | Purpose |
| The content of this declaration is based on the results of the operational life cycle assessment, according to EN ISO 14040/44 of the fiscal year 2022/23. The used generic data comes from acknowledged life cycle management databases and current EPD's of the declaration holders upstream products and are calculated using the CML method. https://www.wiesner-hager.com/en/about-us/sustainability/life-cycle-assessment/ | Data origin |
| The procedure to compile this declaration was audited on 14 th September 2023 by TÜV Austria GmbH. | Auditing |
| Dipl.-Ing. Dr. Jürgen Hain, TÜV Austria GmbH, Wien | Auditor |
| By means of the certificate TA 22012 1634 from 26 th September 2023, TÜV Austria GmbH authorizes the declaration holder to generate EPD type III. Download certificate | Certification |
| The certificate is valid until 30 th September 2026. The compliance of the requirements will be ensured by annual, internal and external evaluations. | Validity |
| Gerhard Steigthaler, Master of Science, environmental engineer | Issuer |
| 29. February 2024 | Date of issue |

| <p>This declaration includes</p> <ul style="list-style-type: none"> - Pictures, descriptions and fulfilled standards - Information about life cycle assessment - Specific characteristics of the product configuration - Indicators of the life cycle and impact assessment - Details on the material composition of the product - Information about material certificates of the used raw materials - Recycling potentials | Content | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-------------------|----------|----|------------------------------------|-----|----|--|-----|----|----------------------------------|-----|----|---------------------------------|----|----|--|-----|----|----------------------------------|-----|----|-------------------------|----|----|-------------|----|----|--------|----|----|------------|----|----|------------|----|----|---|----|----|--|----|----|------------|----|----|-----------------------------------|-----|----|-----------------|-----|----|-------------|-----|---|---------------------|-----|--------------------------|
| <p>The assessment of the declared product covers the whole lifecycle process from raw materials, manufacturing and disposal, including all transportation. The anticipated lifespan of the product is 15 years, assuming the product is used in line with the manufacturer's guidance and for the application it was designed and intended. As a result of the high product quality, no repairs are expected during the lifetime and no environmental impact is anticipated. All recycling is carried out in line with European standards. Component parts are separated and recycled accordingly and any remaining waste material is incinerated under strict controls for the generation of energy. All transport distances including those of our suppliers and subcontractors are considered; all distances are calculated using route planning software. The distance between the declaration holder and the end user is 500 km, the average distance between the end user and the waste management company is calculated at 50 km.</p> | Investigation frame | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The standard EN 15804 describes the basic rules for the preparation of environmental product declarations for building materials. Furniture are still irrelevant for sustainability certifications of buildings, however we try to assign the high transparency of this standard to our furniture as far as possible. The following lifecycles are considered in this document:</p> <table border="0" data-bbox="140 1160 1043 1776"> <thead> <tr> <th style="text-align: left;">Phase</th> <th style="text-align: left;">Name of lifecycle</th> <th style="text-align: left;">relevant</th> </tr> </thead> <tbody> <tr><td>A1</td><td>raw material supply and processing</td><td>yes</td></tr> <tr><td>A2</td><td>transportation to the manufacturer of precursor products</td><td>yes</td></tr> <tr><td>A3</td><td>production of precursor products</td><td>yes</td></tr> <tr><td>A4</td><td>transportation to building site</td><td>no</td></tr> <tr><td>A4</td><td>transportation of the product to the end user *)</td><td>yes</td></tr> <tr><td>A5</td><td>manufacturing of the product **)</td><td>yes</td></tr> <tr><td>B1</td><td>use of the product ***)</td><td>no</td></tr> <tr><td>B2</td><td>maintenance</td><td>no</td></tr> <tr><td>B3</td><td>repair</td><td>no</td></tr> <tr><td>B4</td><td>substitute</td><td>no</td></tr> <tr><td>B5</td><td>renovation</td><td>no</td></tr> <tr><td>B6</td><td>energy consumption for technical building equipment</td><td>no</td></tr> <tr><td>B7</td><td>water consumption for technical building equipment</td><td>no</td></tr> <tr><td>C1</td><td>demolition</td><td>no</td></tr> <tr><td>C2</td><td>transportation to waste treatment</td><td>yes</td></tr> <tr><td>C3</td><td>waste treatment</td><td>yes</td></tr> <tr><td>C4</td><td>landfilling</td><td>yes</td></tr> <tr><td>D</td><td>recycling potential</td><td>yes</td></tr> </tbody> </table> <p>*) Acc. to EN 15804 the modul A4 describes the transport of the building materials to building site, here it stands for the transport of furniture to the end user</p> <p>**) Acc. to EN 15804 the modul A5 describes the installation of building materials into the building, here it stands for the manufacturing of the furniture at the factory</p> <p>***) The use of our furniture has no relevant environmental effects</p> | Phase | Name of lifecycle | relevant | A1 | raw material supply and processing | yes | A2 | transportation to the manufacturer of precursor products | yes | A3 | production of precursor products | yes | A4 | transportation to building site | no | A4 | transportation of the product to the end user *) | yes | A5 | manufacturing of the product **) | yes | B1 | use of the product ***) | no | B2 | maintenance | no | B3 | repair | no | B4 | substitute | no | B5 | renovation | no | B6 | energy consumption for technical building equipment | no | B7 | water consumption for technical building equipment | no | C1 | demolition | no | C2 | transportation to waste treatment | yes | C3 | waste treatment | yes | C4 | landfilling | yes | D | recycling potential | yes | System boundaries |
| Phase | Name of lifecycle | relevant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1 | raw material supply and processing | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A2 | transportation to the manufacturer of precursor products | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A3 | production of precursor products | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4 | transportation to building site | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A4 | transportation of the product to the end user *) | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A5 | manufacturing of the product **) | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1 | use of the product ***) | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B2 | maintenance | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B3 | repair | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B4 | substitute | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B5 | renovation | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B6 | energy consumption for technical building equipment | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B7 | water consumption for technical building equipment | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C1 | demolition | no | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C2 | transportation to waste treatment | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C3 | waste treatment | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C4 | landfilling | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | recycling potential | yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|---|----------------------------------|
| The general information of the LCA refers to whole lifecycle, beginning with the raw material make, the manufacturing of the product until the disposal of <i>one</i> unit of the product with an anticipated lifespan of 15 years. But the division of impact factors with the masses of the product allows also a specific statement in mass. | Functional unit |
| Office swivel chair, acc. to EN 1335-1, EN 1335-2 and EN 1335-3 | Application |
| 5440-103 delv delv Swivel chair with aluminium arms, seat and back upholstered | Identification of product |
| The smart conference chair. The innovative, ergonomic design of the delv conference swivel chair combines a dynamic seating philosophy with trendsetting kinetics: the new twist-balance mechanism replaces conventional mechanisms and enhances ergonomic performance. It scores with 360° mobility of the seat and back. At the same time, it promotes the micro-movements of the spinal column and stimulates the supply of nutrients to the intervertebral discs. delv adapts to its users- thanks to the automatic weight detection. This is of particular advantage during conferences and desk sharing, when several people use the smart conference chair. The combination of top-quality materials, ergonomic innovation and contemporary design makes delv the ideal choice for use in prestigious offices. | Description of product |
| cover 1 fabric S3140 plain black; colour of metal arms 55 eloxal silver; colour of metal polished aluminium; leg finish universal castors; colour of plastic castors 9 glossy black | Configuration of |

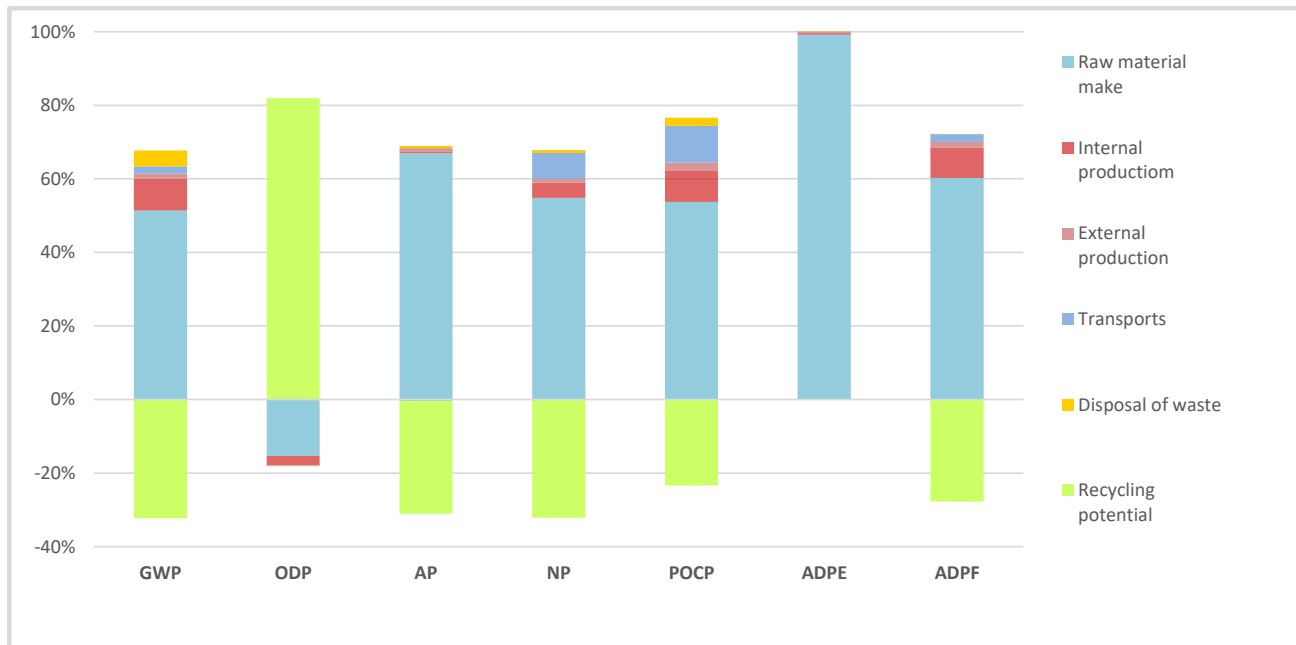
Eco-balance indicators

| LCA Indicators | | Global warming GWP | Ozone depletion ODP | Acidification AP | Nutritification NP | Ozone creation POCP | Abiotic resources ADPE |
|---------------------------|-------|--------------------|---------------------|------------------|--------------------|---------------------|------------------------|
| | | CO2 eq. | CCl3F eq. | SO2 eq. | PO4-3 eq. | C2H4 eq. | Sb eq. |
| Lifecycle | | (kg) | (mg) | (g) | (g) | (g) | (g) |
| Raw material make | A1-A3 | 90,99 | 0,14 | 25,56 | 277,54 | 25,19 | 19,30 |
| Transportation | A4 | 2,58 | 0,00 | 0,48 | 34,20 | 4,25 | 0,00 |
| Internal production | A5 | 15,35 | 0,02 | 0,15 | 21,35 | 3,96 | 0,10 |
| Sub-contracting | A5 | 0,18 | 0,00 | 0,0 | 0,29 | 0,05 | 0,03 |
| Transport to the end user | A4 | 0,74 | 0,00 | -0,56 | 1,69 | 0,40 | 0,00 |
| Waste treatment | C2-C4 | 7,70 | 0,00 | 0,17 | 4,18 | 1,08 | 0,00 |
| Recycling potential | D | -57,26 | -0,75 | -11,70 | -162,84 | -10,96 | 0,00 |
| Total | | 60,28 | -0,59 | 14,12 | 176,40 | 23,97 | 19,43 |

| Use of resources | | Abiotic fossil fuels | Primary energy renewable | | Primary energy fossil | | Use recycled fibre |
|---------------------------|-------|----------------------|--------------------------|--------------|-----------------------|--------------|--------------------|
| | | | energy carrier | material use | energy carrier | material use | |
| | | ADPF | PERE | PERM | PENRE | PENRM | SM |
| Lifecycle | | (MJ) | (MJ) | (MJ) | (MJ) | (MJ) | (kg) |
| Raw material make | A1-A3 | 1 260,72 | 460,06 | 117,50 | 1 318,26 | 116,68 | 0,96 |
| Transportation | A4 | 33,20 | 1,30 | 0,00 | 33,30 | 0,00 | 0,00 |
| Internal production | A5 | 171,02 | 91,55 | 0,32 | 168,08 | 2,21 | 0,01 |
| Sub-contracting | A5 | 2,31 | 1,30 | 0,00 | 2,57 | 0,01 | 0,03 |
| Transport to the end user | A4 | 9,91 | 0,59 | 0,00 | 9,94 | 0,00 | 0,00 |
| Waste treatment | C2-C4 | 2,86 | 0,56 | -41,00 | 85,11 | -84,76 | 0,00 |
| Recycling potential | D | -581,30 | -106,34 | 0,00 | -694,45 | 0,00 | 0,00 |
| Total | | 898,73 | 449,03 | 76,82 | 922,82 | 34,14 | 1,00 |

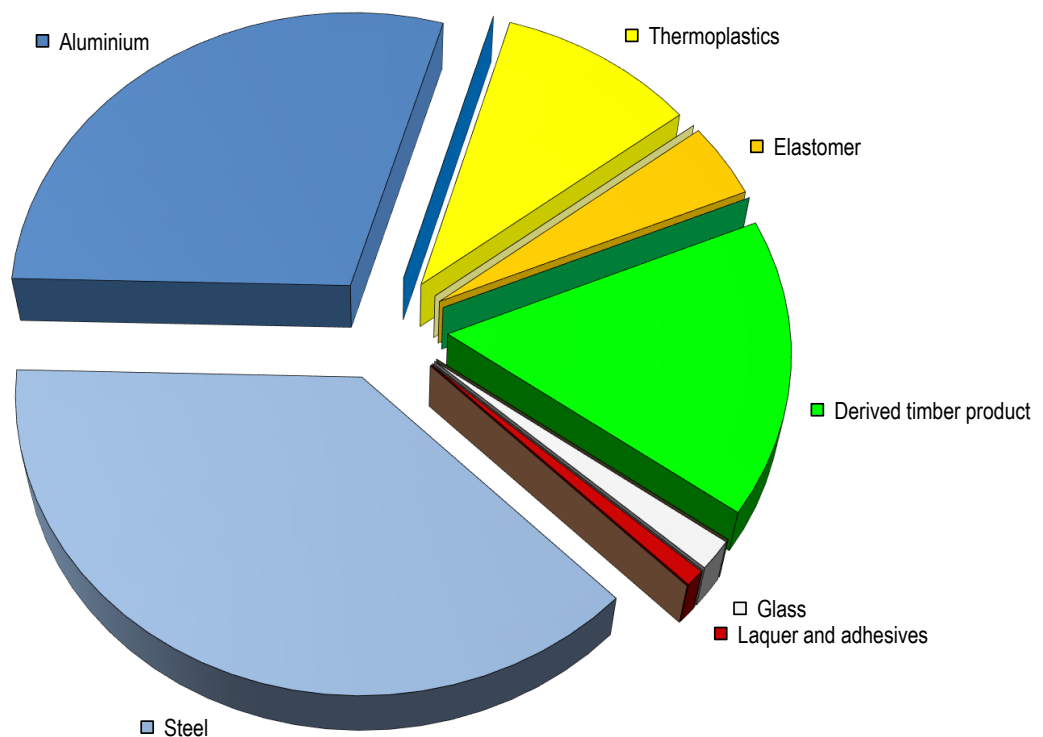
| Use of resources / waste | | Recycled fuels | | Use sweetwater resources | Waste | | |
|---------------------------|-------|----------------|-------------|--------------------------|----------------------|--------------|-------------------|
| | | renewable | fossil | | dangerous waste site | no dangerous | radioactive waste |
| | | (RSF) | (NRSF) | FW | (HWD) | (NHWD) | (RWD) |
| Lifecycle | | (MJ) | (MJ) | (m³) | (kg) | (kg) | (kg) |
| Raw material make | A1-A3 | 0,00 | 0,00 | 0,61 | 0,00 | 13,43 | 0,07 |
| Transportation | A4 | 0,00 | 0,00 | 0,00 | 0,00 | 0,01 | 0,00 |
| Internal production | A5 | 0,00 | 0,00 | 0,13 | 0,00 | 0,23 | 0,00 |
| Sub-contracting | A5 | 0,00 | 0,00 | 0,00 | 0,00 | 0,01 | 0,00 |
| Transport to the end user | A4 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Waste treatment | C2-C4 | 0,00 | 0,00 | 0,01 | 0,00 | 0,19 | 0,00 |
| Recycling potential | D | 41,15 | 0,00 | -0,36 | 0,01 | -9,59 | -0,05 |
| Total | | 41,15 | 0,00 | 0,39 | 0,02 | 4,27 | 0,02 |

Impact contribution



| Material composition | | | Recycling content | | | |
|---------------------------|---------------|---------------|-------------------|--------------|--------------|-----------|
| Materials | Weight | Share | material | energetic | disposal | [] |
| Steel | 6,626 | 37,8% | 6,493 | 0,000 | 0,133 | kg |
| Aluminium | 5,103 | 29,1% | 5,001 | 0,000 | 0,102 | kg |
| Other metals | 0,001 | 0,0% | 0,001 | 0,000 | 0,000 | kg |
| Thermoplastics | 1,751 | 10,0% | 0,117 | 1,459 | 0,175 | kg |
| Duromer | 0,019 | 0,1% | 0,000 | 0,018 | 0,001 | kg |
| Elastomer | 0,720 | 4,1% | 0,000 | 0,679 | 0,041 | kg |
| Laminated plastics | | | | | | |
| Wood-Plastic Composites | | | | | | |
| Solid wood | | | | | | |
| Derived timber product | 2,842 | 16,2% | 0,000 | 2,819 | 0,023 | kg |
| Paper, -board | 0,010 | 0,1% | 0,006 | 0,003 | 0,000 | kg |
| Leather | | | | | | |
| Other renewable materials | | | | | | |
| Glass | 0,289 | 1,6% | 0,180 | 0,000 | 0,109 | kg |
| Other mineral materials | | | | | | |
| Laquer and adhesives | 0,156 | 0,9% | 0,000 | 0,139 | 0,017 | kg |
| Chemicals | | | | | | |
| Auxiliaries | 0,012 | 0,1% | 0,000 | 0,000 | 0,000 | kg |
| Total | 17,529 | 100,0% | 11,799 | 5,118 | 0,600 | kg |

Material composition



The proportion of secondary raw material in this product is 33,7%. It includes 16,3% renewable materials.

Use of laquer and adhesives

| Application | Chemical characterisation | Weight ¹ | VOC ² | Classific. ³ |
|--------------------|--------------------------------|---------------------|------------------|-------------------------|
| Wood glues | - | - | - | - |
| Hotmelt adhesives | - | - | - | - |
| Fabric glues | Waterbased dispersion adhesive | 0,1 kg | 0,0% | no |
| Fabric glues | Waterbased dispersion adhesive | 0,01 kg | 0,0% | yes |
| Assembly adhesives | - | - | - | - |
| Stains | - | - | - | - |
| Powder coatings | Polyester powder lacquer | 0,048 kg | 0,0% | no |
| Powder coatings | Polyester powder lacquer | 0,053 kg | 0,0% | yes |

The product is free of halogenated plastics (PVC).

¹ dry matter

² uncured

³ acc. EG Reg. No 1272/2008

Material certificates

The following certificates are valid only for the mentioned raw-materials but not for the final product:

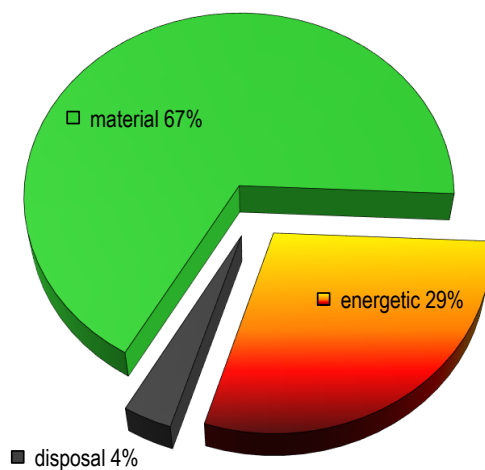
Shaped plywood: PEFC Standard - certificate 08.537.958, licence 08.537.958/1

Upholstery fabric: Oeko-Tex Standard100 - certificate 073313.O, product class II

Upholstery materials: Oeko-Tex Standard100 - certificate AMM 17680, product class I



Recycling rate (EoL)



The chart shows the presently usual recycling rate in Western Europe, based on the used material mix.

The thermal recycling will release energy to the amount of 117 MJ. This is equivalent to 3,3 litre of light fuel oil.

The remaining ash from the incineration will be disposed of in a landfill.

Publisher and picture credits

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wiesner hager concept

Certification

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