Critical appliance - Extending product lifespan through critical design

YOUNG, Gordon

Gordon Young
g.j.young@shu.ac.uk

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Sheffield Hallam University | Art and Design Research Centre

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g.j.young@shu.ac.uk

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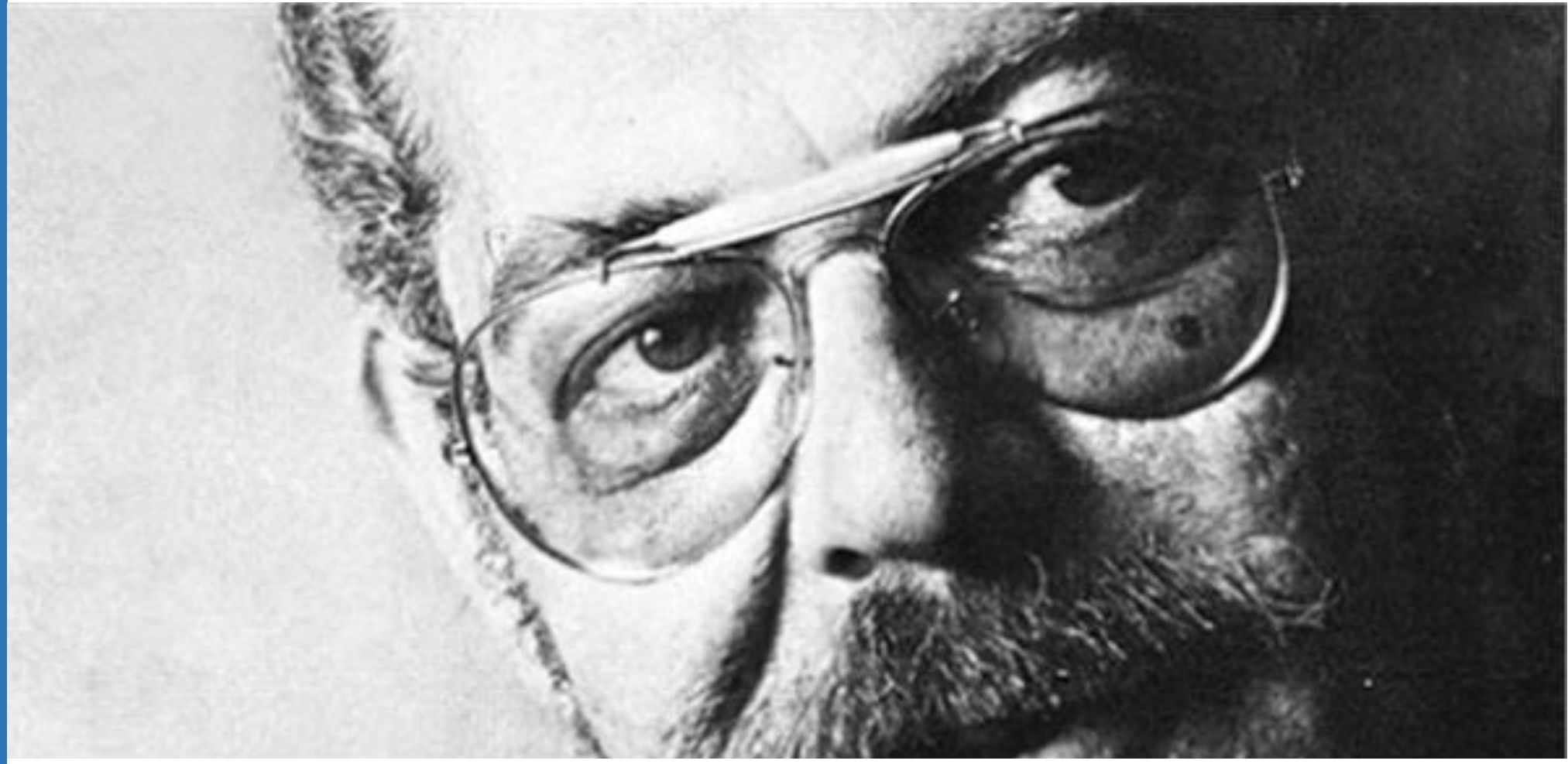

There are professions more harmful than industrial design, but only a few of them.'

(Papanek, 1971)

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g.j.young@shu.ac.uk

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1.4 million tonnes = 160 million tonnes CO^2 *(wrap 2014)*


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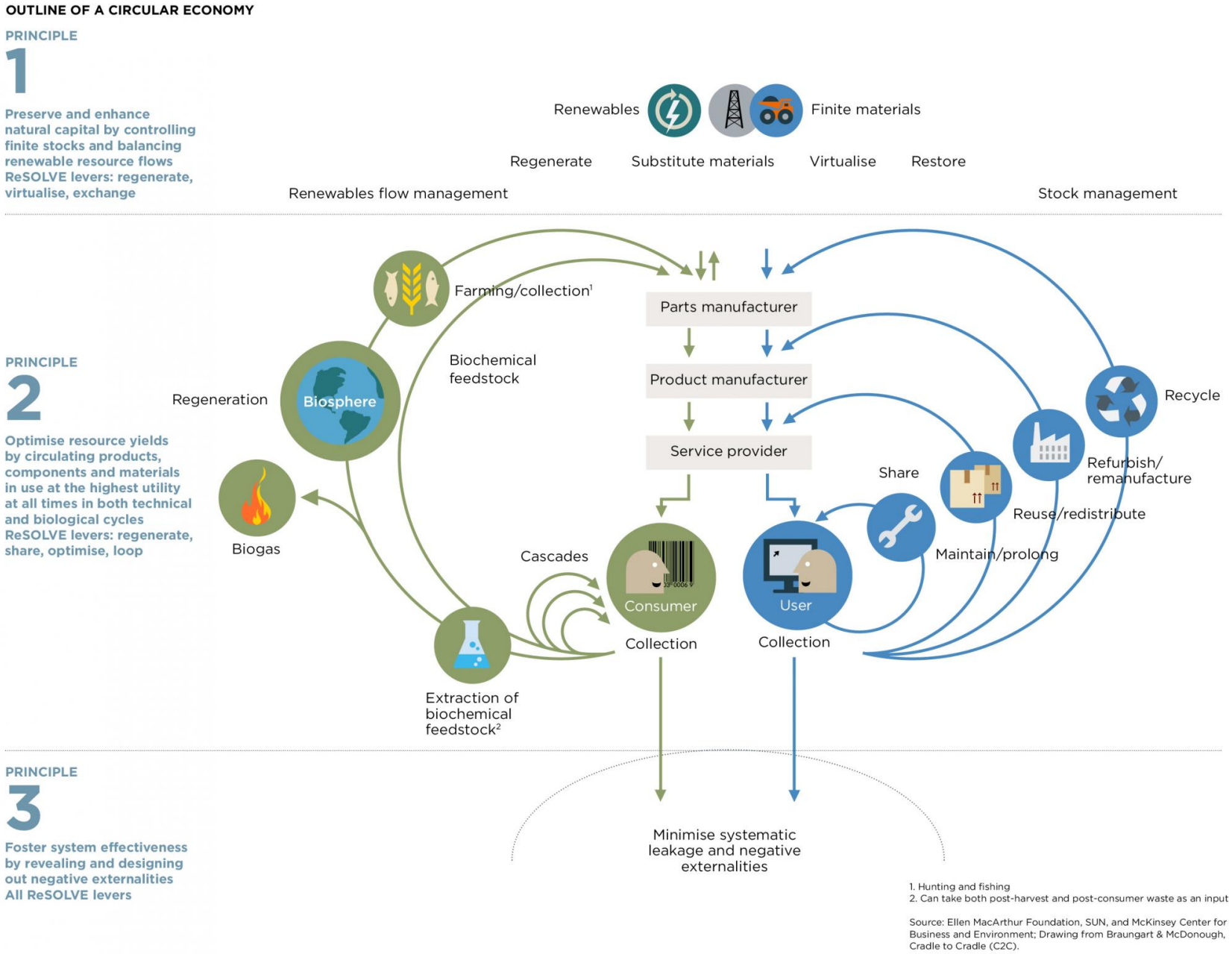

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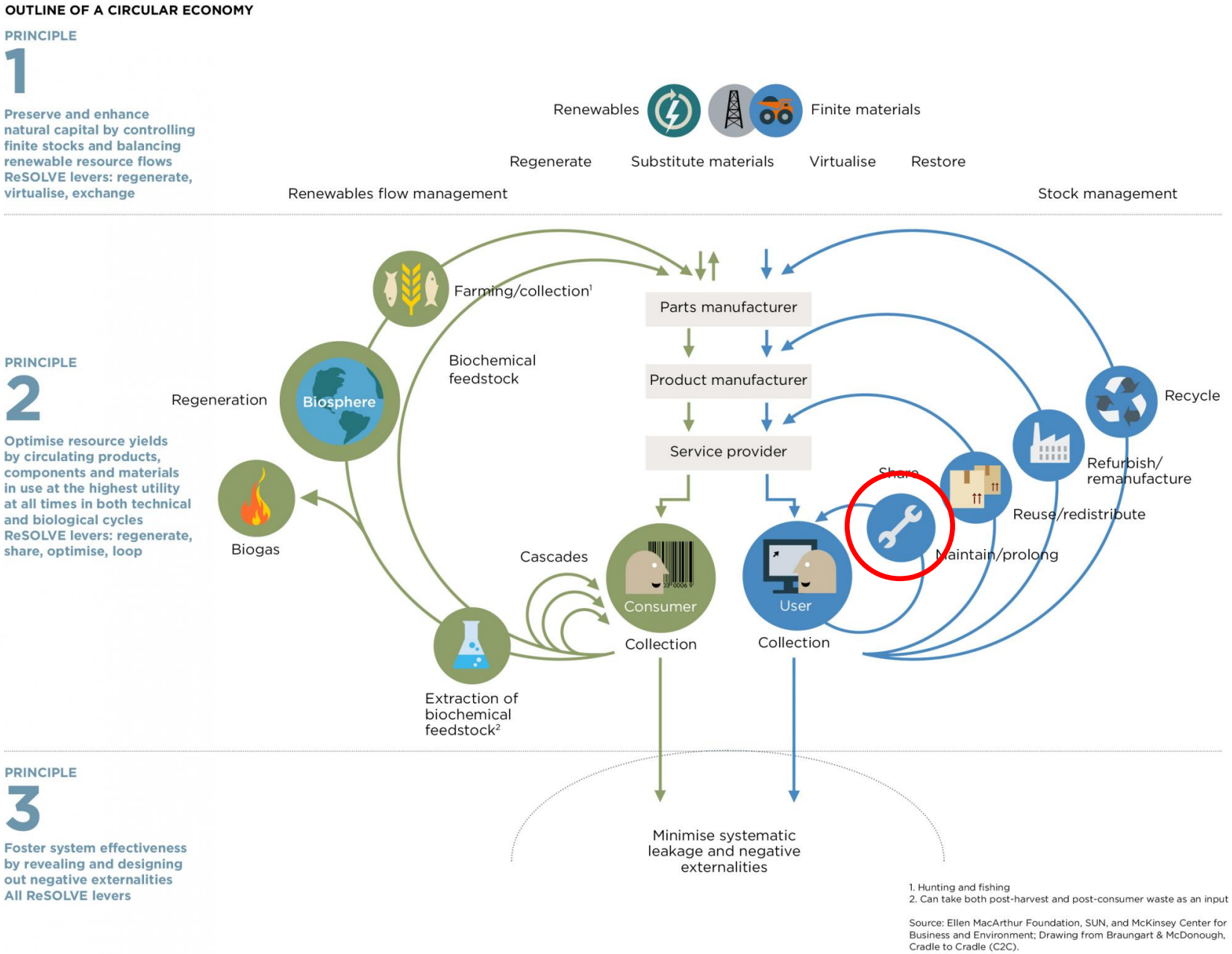

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‘Increasing the lifetime of lower-end products to match the current market average would save 150,000 tonnes of resources and almost 750,000 tonnes of CO2 per year.’ (WRAP, 2012)

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Design for Product Attachment and Trust
Creating products that will be loved, liked or trusted longer

Design for Product Durability
Developing products that can take wear and tear without breaking down

Design for Standardization & Compatibility
Creating products with parts or interfaces that fit other products as well

Design for Ease of Maintenance and Repair
Enabling products to be maintained in tip-top condition

Design for Upgradability & Adaptability
Allowing for future expansion and modification

Design for Dis- and Re-assembly
Ensuring products and parts can be separated and reassembled easily

(Bakker, C. de Hollander, M. Hinte, Ed van, Zijlstra, Y. 2014)

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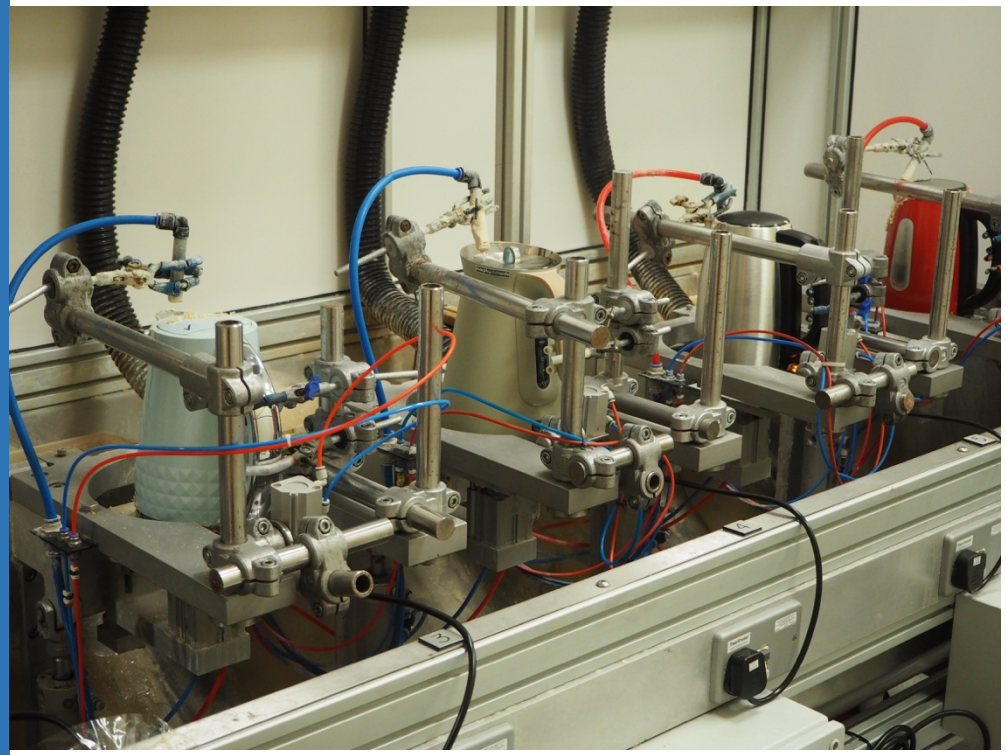

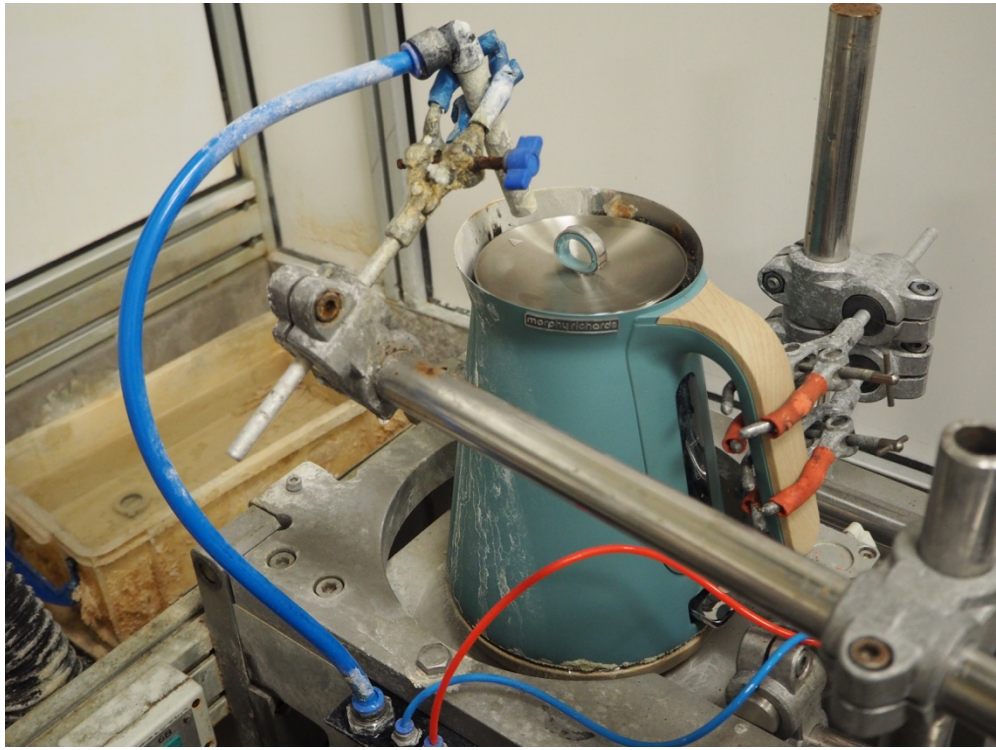

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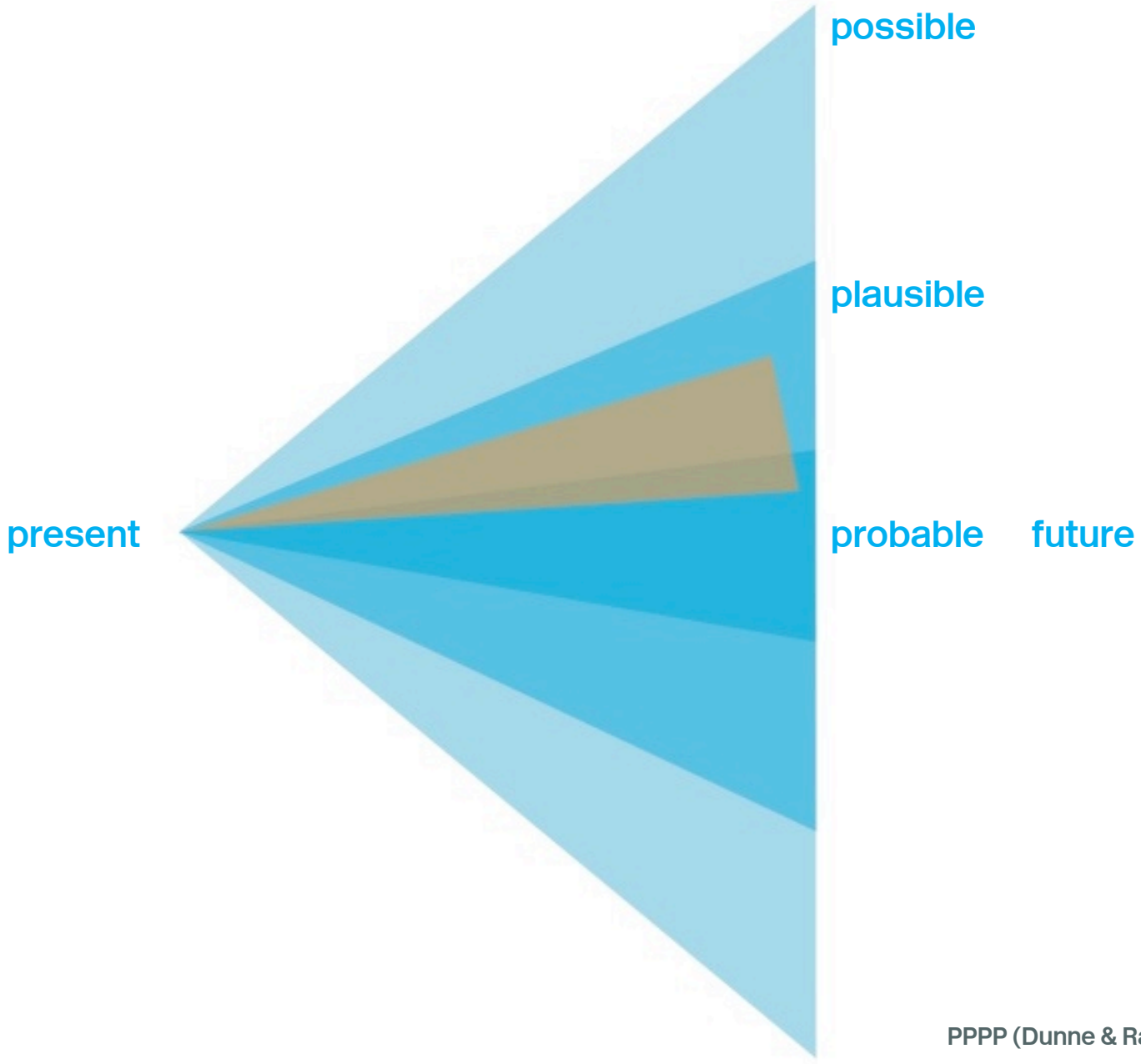

PPPP (Dunne & Raby, 2013)

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g.j.young@shu.ac.uk

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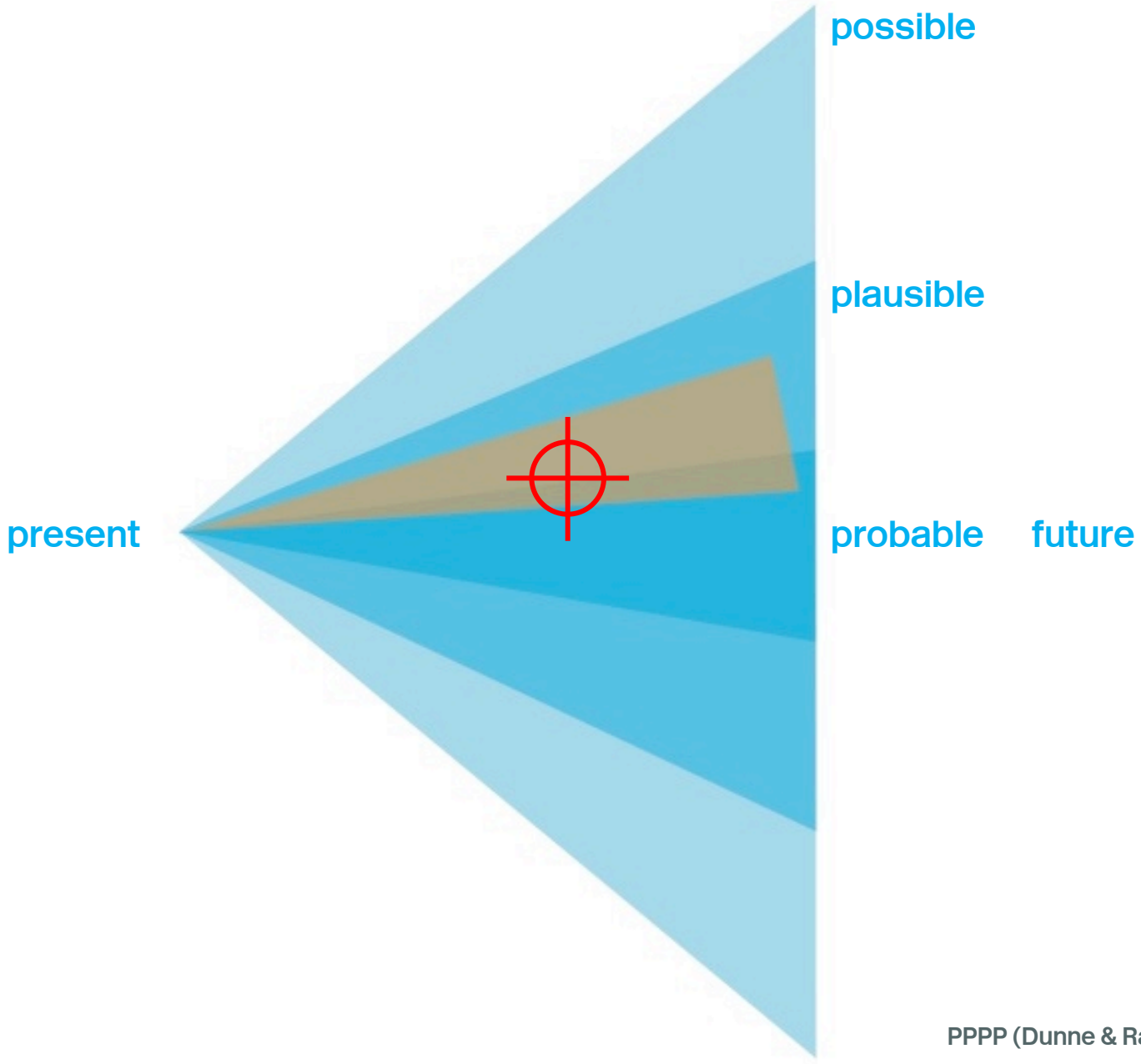

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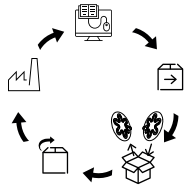
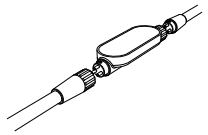
KETTLE | supporting a circular economy



Replacement parts can be ordered online and will be delivered with return packaging to allow faulty parts to be refurbished and reused, or processed and the materials/components reclaimed.

This product and service model represents a shift in the relationship between the consumer and manufacturer.

CON001 | safe to access

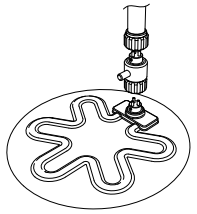


Cable connectors are waterproof power couplings allowing safe, simple and fast disconnection of key components for maintenance, repair or upgrade.

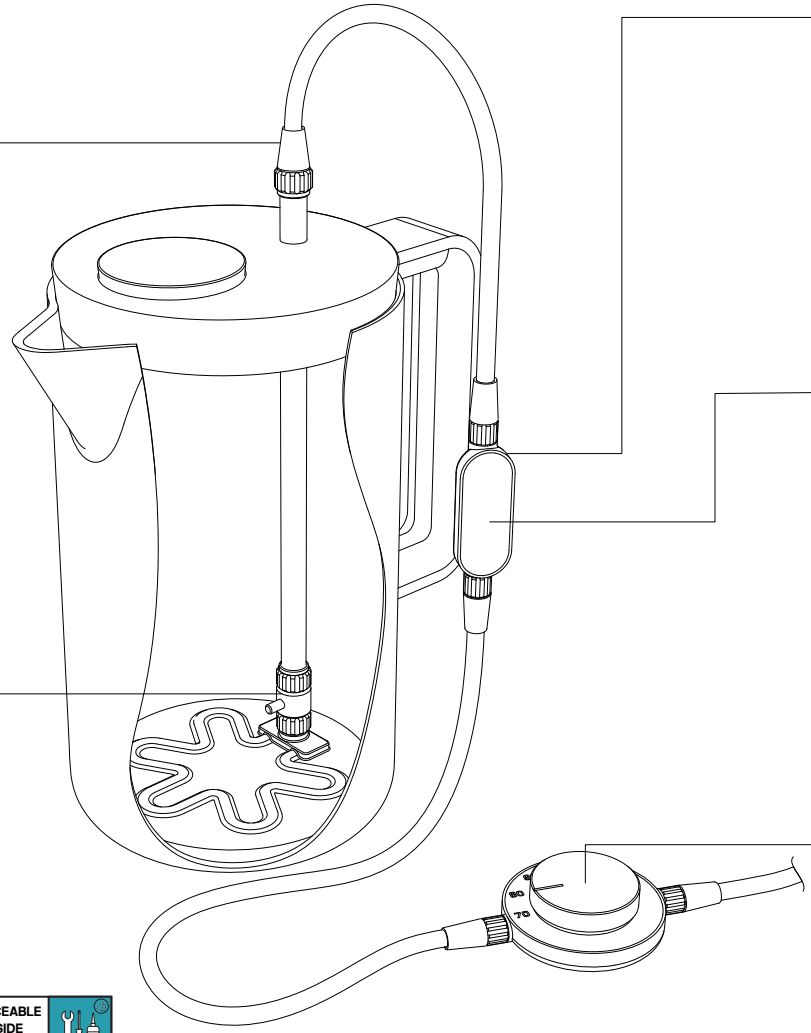
Designed to never allow contact with live power cables, the 'live' end always terminates in a female connector ensuring user safety when disconnecting components.

SEN004 ELE003 | maintenance encouraged

SEN004 - thermistor represents a significant upgrade on steam sensors facilitating variable temperature heating and rapid switch-off helps save energy.

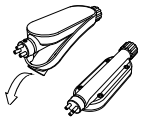


ELE003 - flat plate element featuring a large surface area for rapid and efficient transfer of heat, easily removed for de-scaling solution when prompted by the service indicator.



USER SERVICEABLE PARTS INSIDE
safe to open, no risk of shock

SERV002 | easy access repairable parts

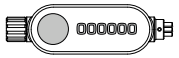


Access to the internal components for the purposes of repair and upgrade quick and easy

Outer casings peal away to give access to the electronic components.

Screen, switch and circuit components can be replaced or upgraded.

SERV002 | Maintenance prompts



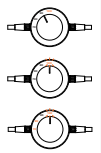
Icons are displayed to prompt maintenance or repair when necessary triggered by sensors or the use counter at set service intervals.

- thermistor
- element
- control
- power supply

SW003 | energy saving upgrades

The part number, SW003, signifies that this is the third generation switch incorporating new features and technology to enhance the durability and efficiency of the component.

Variable temperature setting, allows desired water temperature selection, saving energy during use and extending the life span of the element.



The display remains illuminated to indicate water temperature as it cools, this may prevent unnecessary re-heating

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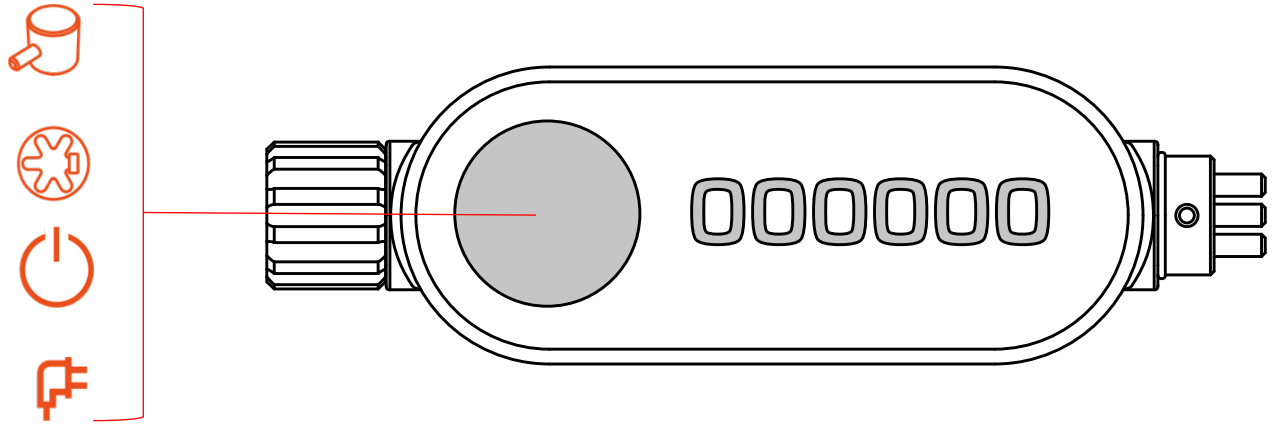

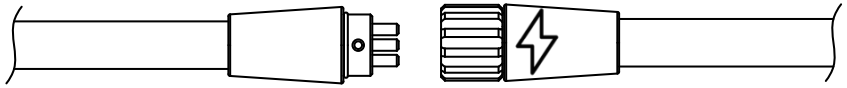

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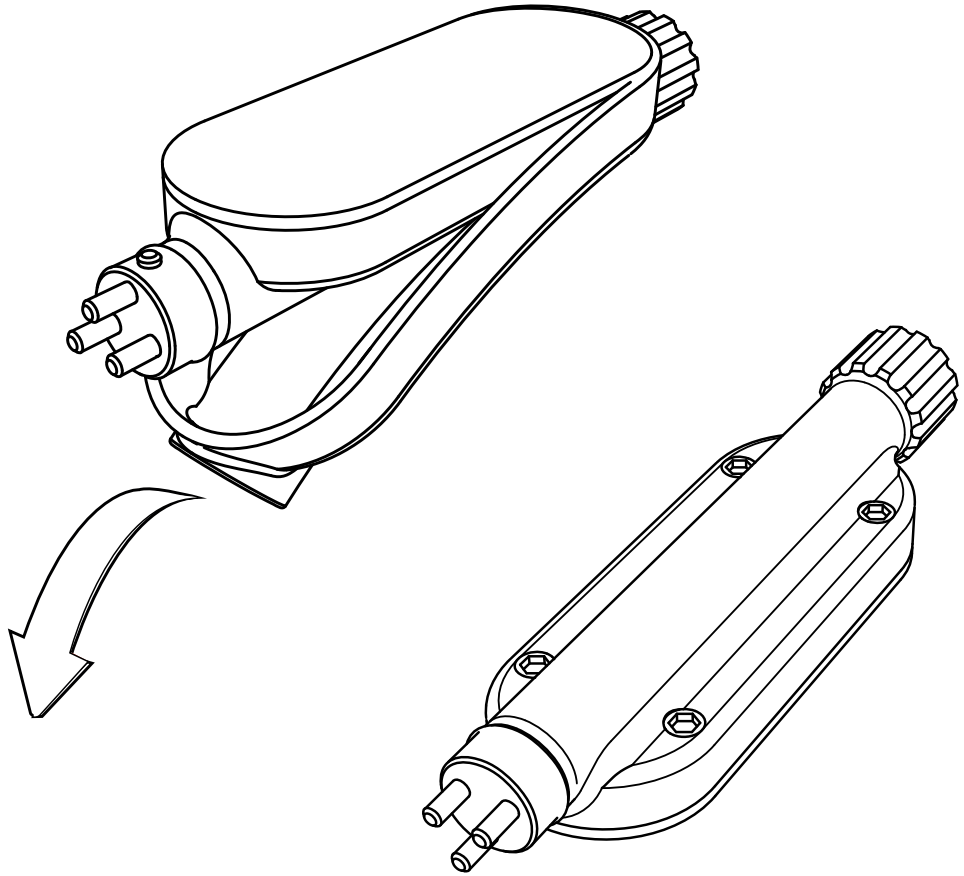

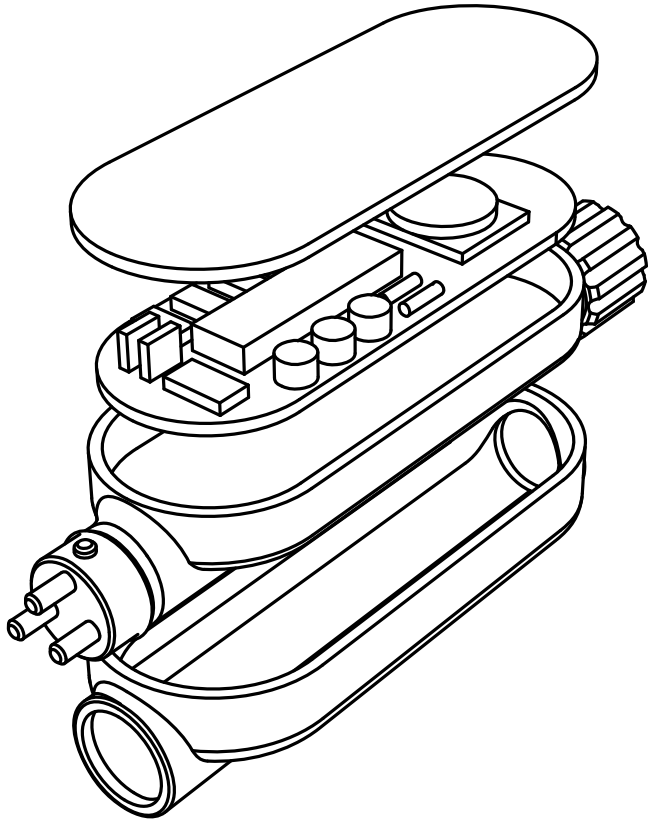

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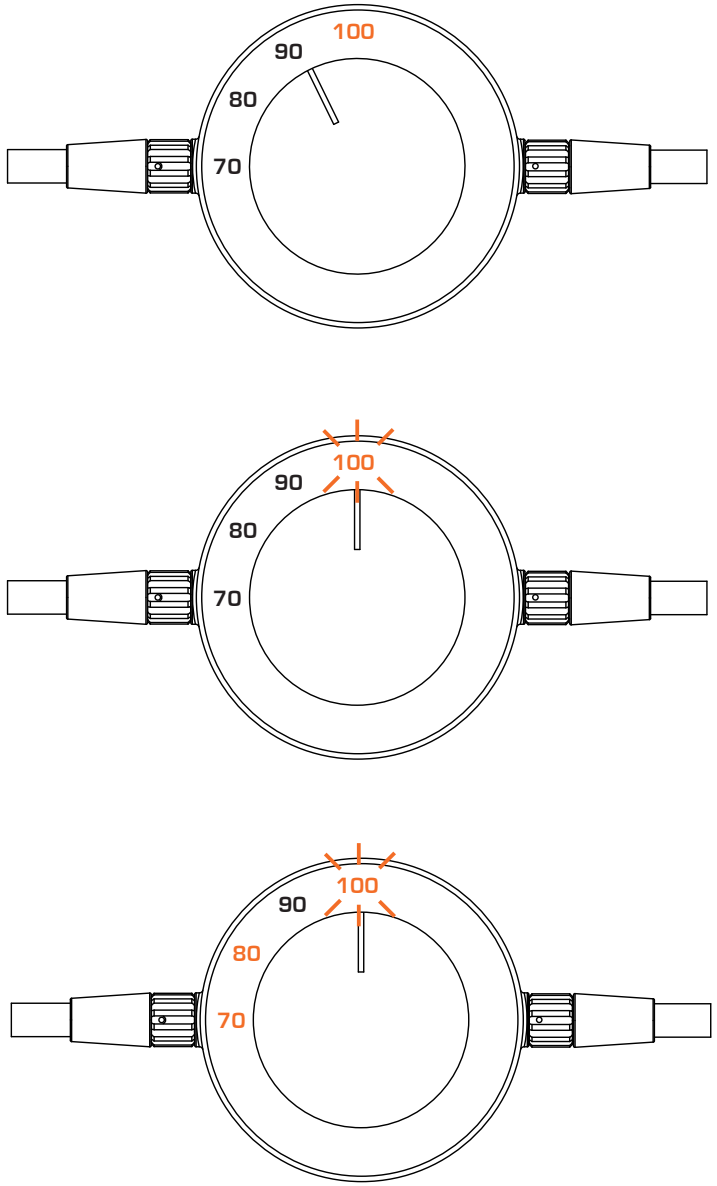

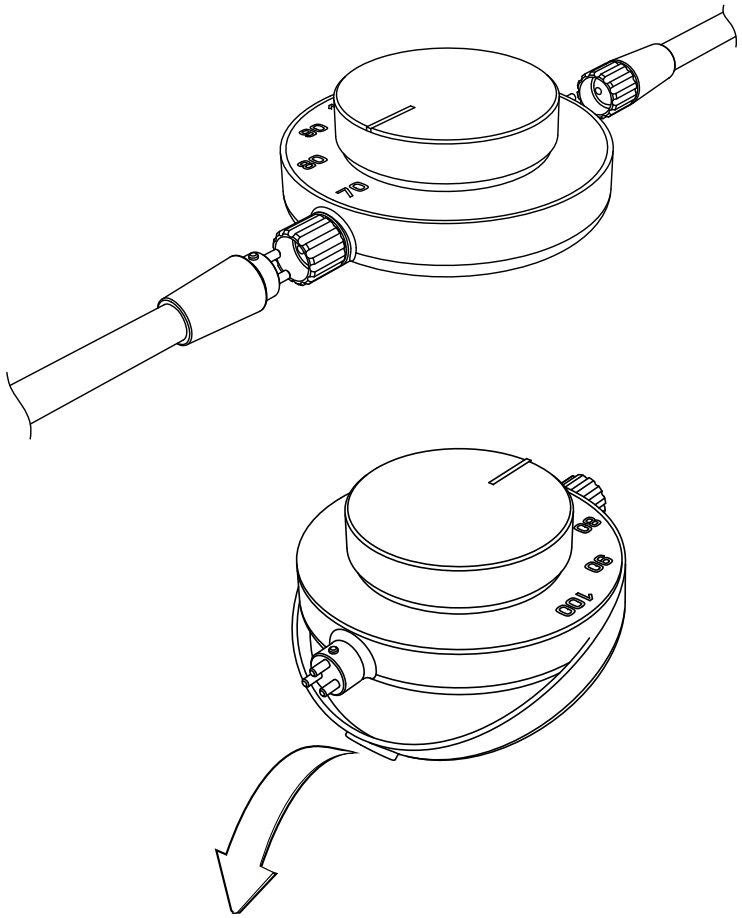

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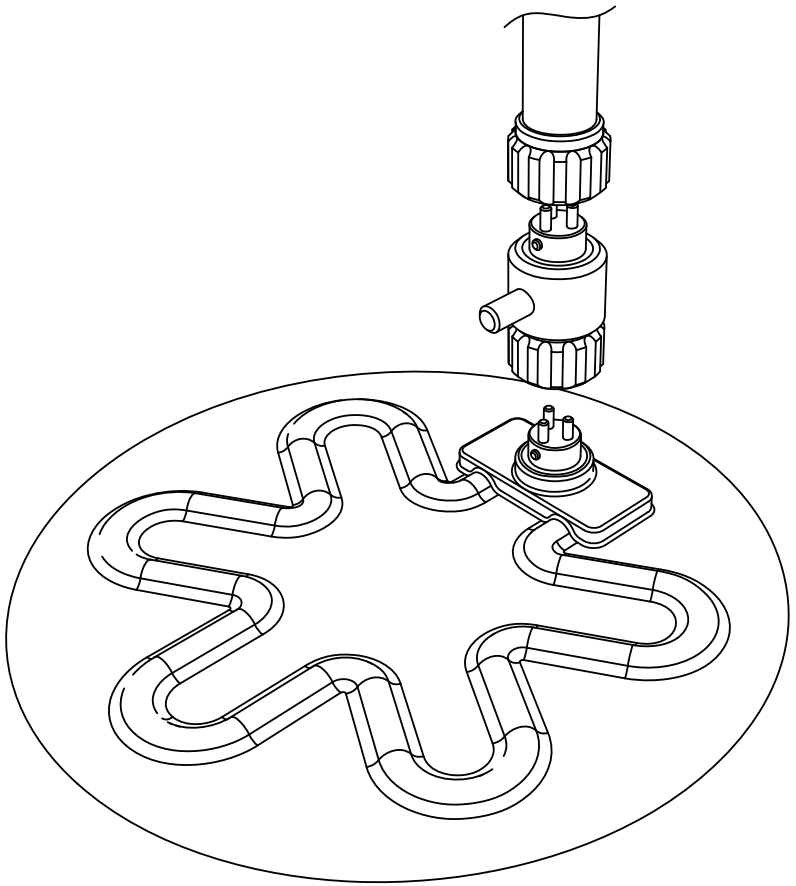

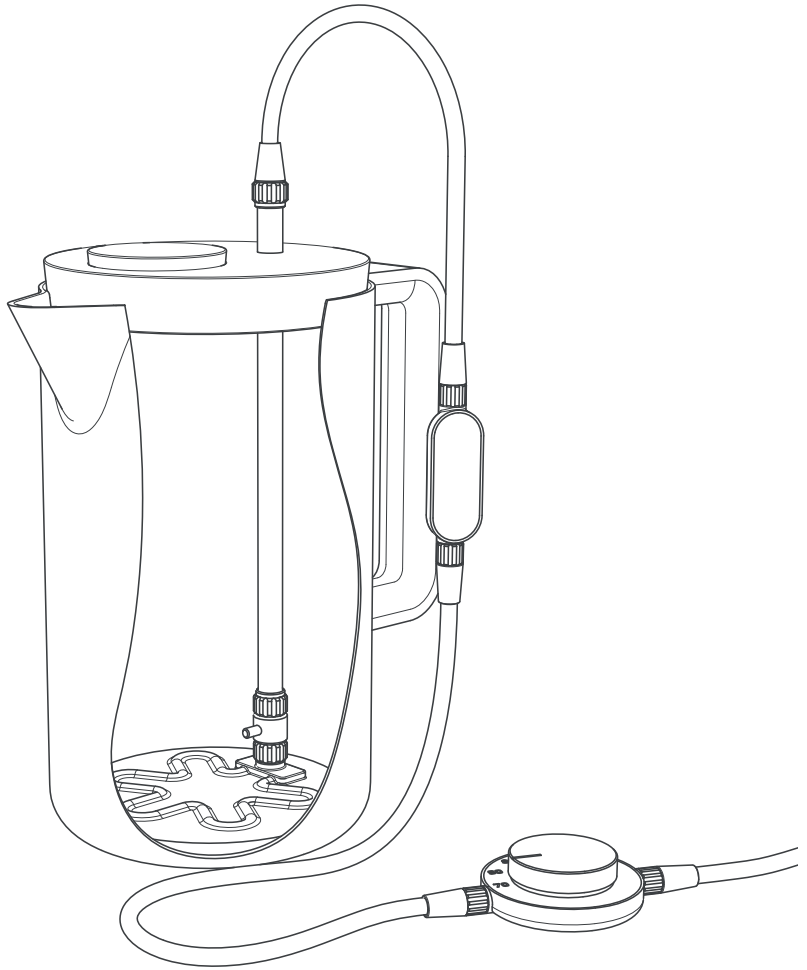

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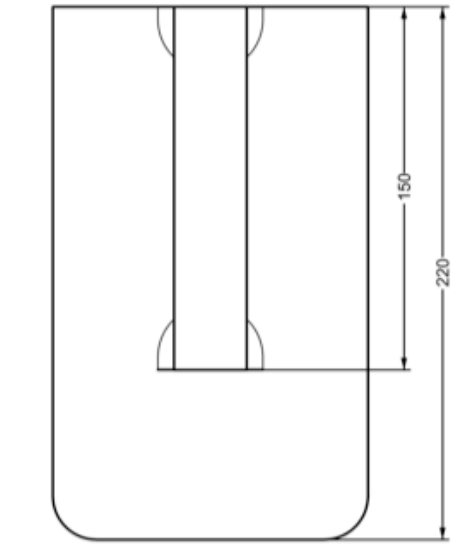

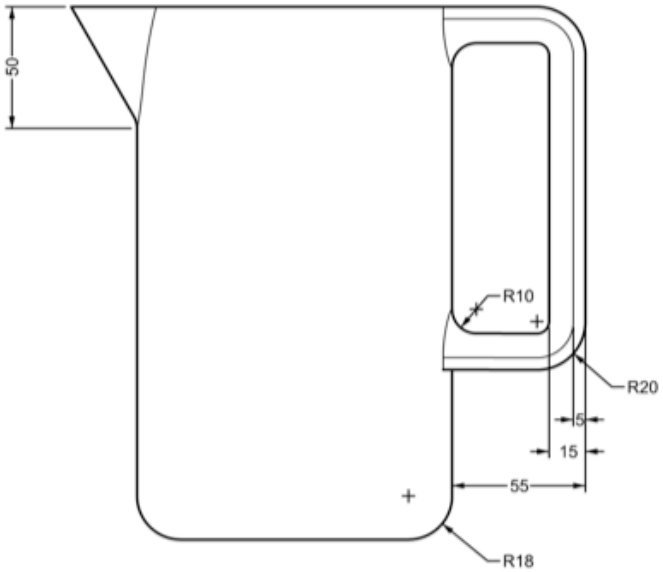

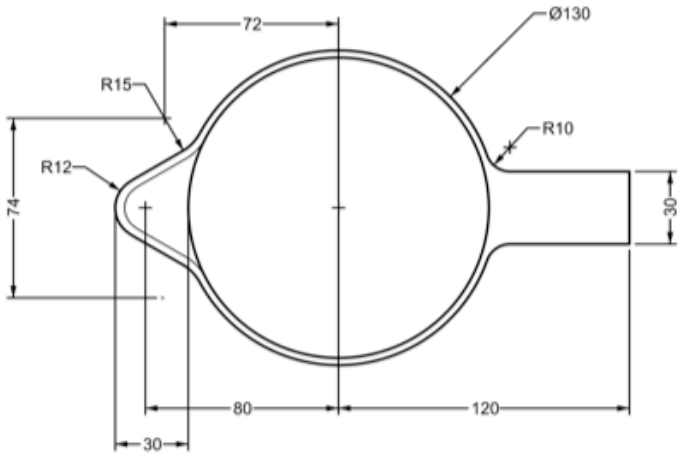

Standard Kettle Jug
Version 2_1 (non-tapered)
Scale 2:1 All dimensions in mm
Gordon Young g.j.young@shu.ac.uk 07903 171 510

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extend product lifespan
facilitating maintenance & repair

democratise repair
safety for the consumer

modularised system
facilitates upgrade

clear semantics
helps to understand

integrated prompts
ensures timely care & diagnosis

materials and forms
promoting long life

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