

eCare Tech



HELLO, PHOTOTHERAPY



Wearable Medical Device + Humanised Design + AI & Big Data



E-CARE TECH

WWW.E-CARE-TECH.COM
design.365dn@gmail.com

1 HOLFORD WAY
LONDON, SW15 5DH, UK
+44 745 657 2412

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Economical · Efficient · Ergonomic

**A Revolutionary Phototherapy
for Newborn Jaundice Care**

TEAM

Nan Jiang
CEO, Industrial Design



Double masters degrees in Industrial Design & Industrial Design Engineering.

Top Graduate of Lund University, Sweden, with IKEA Scholarship and Innovation funds

10 years' experience in design with 6 projects in medical care instrument. Besides daily management tasks, Nan focuses on user-centric medical care product design and ergonomics.



Prof. Zan Wu
Technical Engineer



Assistant Professor, Lund University, Sweden

12 years' experience in heat transfer enhancement, surface modification, and electronics cooling

Prof. Wu is in charge of production and materials, structure, heat dissipation, testing and quality control. Especially, he makes sure that the device temperature is comfortable for the babies.



Prof. Zhiqiang Zhang
Product Development



Assistant Professor, Leeds University, and Research Associate, Imperial College

10 years' experience in body sensor network and wearable sensing

Prof. Zhang is in charge of the device sensors and make sure that temperature, humidity and other parameters are properly monitored.



Prof. Xuxin Mao
Finance & Risk Control



Assistant Professor, UCL; Big Data Advisor, ONS & Chartered Financial Risk Manager

2 years' Investment banking experience and 10 years' data analytics experience

With his Big Data framework, Prof. Mao is in charge of product demand management, and efficient digital marketing.

He also manages business and finance related activities and controls financial risk.



Dr. Hongsen Peng
Market Management



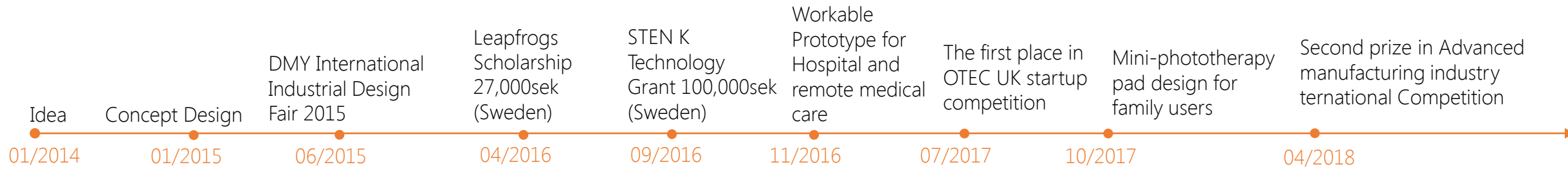
Dr Peng had previously worked as a Postdoctoral Research Fellow in Oxford University (2015-2016) after being

awarded a DPhil Degree in Biomedical Sciences from University of Leeds in 2014.

He possesses rich work experience in technology transfer/incubators/Angel investment and venture capitals investments in both UK and China.



INTRODUCTION



ECARE LAB is a technical company with solid capabilities on developing universal health care products.

We aim to provide wearable products with user-centric ergonomics design and high medical efficiency at affordable costs.



Originated from own personal experiences, we started from the redesign of neonatal jaundice phototherapy care.

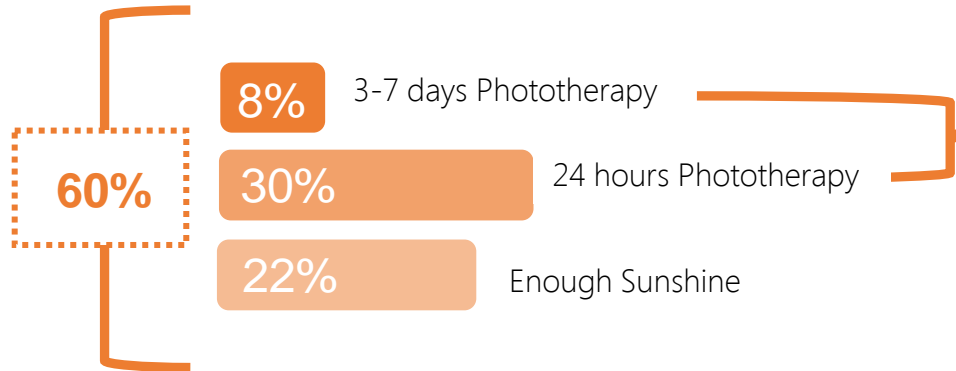
After 2 years' research and trials, we successfully set up a prototype that fully facilitates caring babies at home with high affordability, efficiency and usability.

Better Design , Better Medical Care

BACKGROUND



Jaundice is the most common condition that requires medical care in newborns. **60%** newborn babies have jaundice, and around **8%** of them need **PHOTOTHERAPY** to avoid kernicterus.



Conventional Phototherapy



Ergonomics Economical Efficiency

It is efficient to cure jaundice, but it's inconvenient and discomfort. It also requires expensive stays at hospital.

10-15% of Body Weight Loss



Optical fiber Phototherapy



Ergonomics Economical Efficiency

It can be used at home, but it has a lower efficiency and takes more treatment time.

PROBLEMS OF CURRENT DEVICES



Lacking Humanised Design

Efficiency, Ergonomics and Costs are the most essential requirements for a user-satisfied phototherapy. However,



Expensive to get phototherapy care in hospital

current devices hardly meet the three points together. The phototherapy products are in great need to cut down



Low Efficiency

manufacture costs, to improve humanised design and to enhance medical efficiency.



Prevalence
66.67% (55.2%
do not need
intensive care)

TAM
10,000,000
cases / year



Hospitalisation Cost
¥1000+ / day (China)

Dissatisfaction
Rate 65%

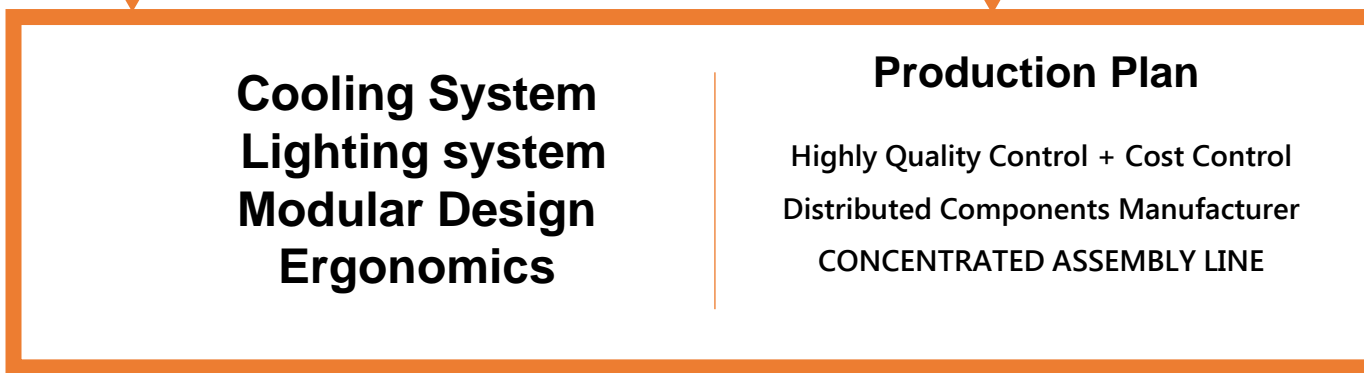
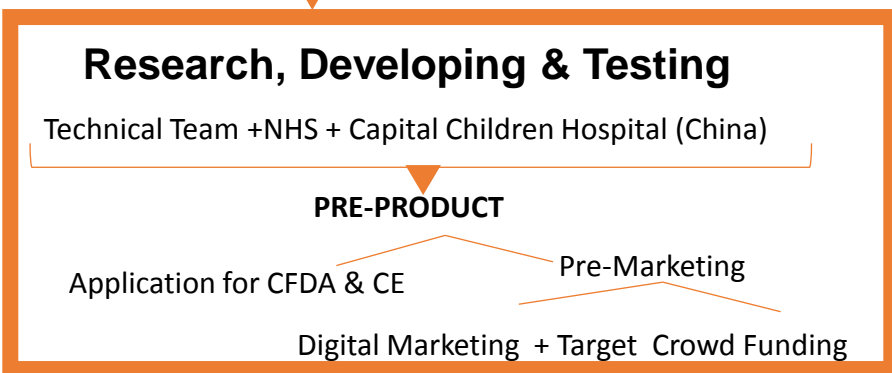
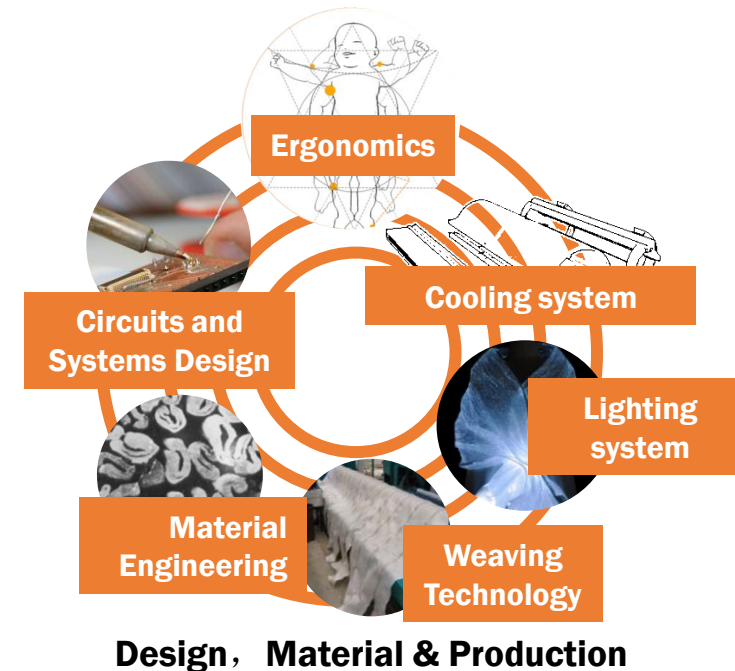


Insufficient
Incubators
45%

Stress Rate 55%

Chance of Conflict 70%

PROPOSED SOLUTIONS



OUR PRODUCTS

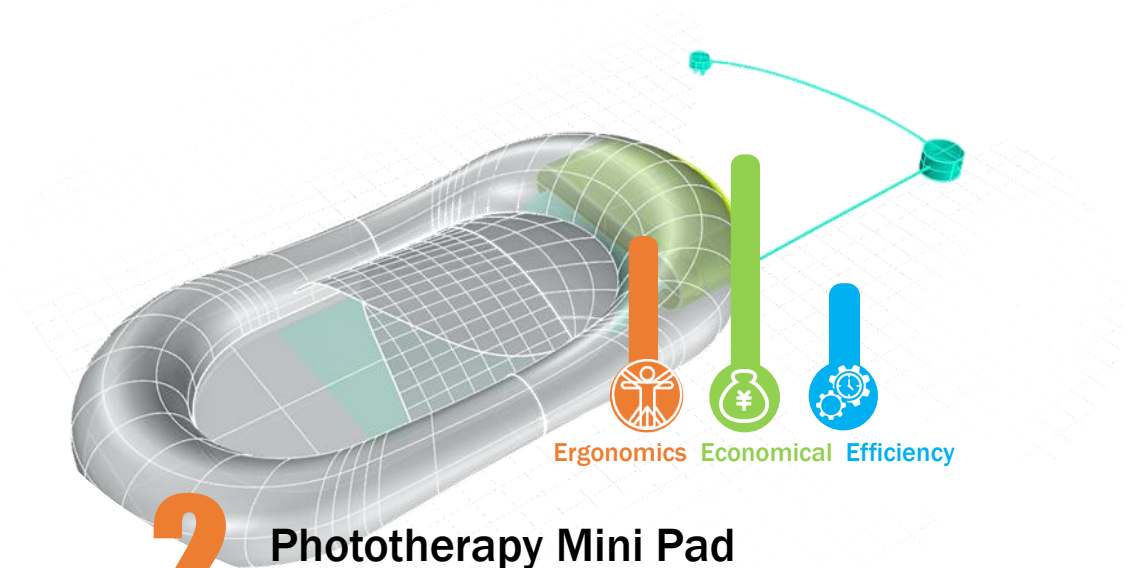


1 Phototherapy Medical-care Set

Customer: HOSPITALS

It contains a phototherapy sleeping bag, a temperature and humidity monitor, and a transcutaneous bilirubinometer. It's suitable for tele-medical care with Internet of Things.

The advanced cooling system, high-effective lighting guide system, cost-reduced modular design and humanization contribute to its superior functionality.



2 Phototherapy Mini Pad

Customer: Parents

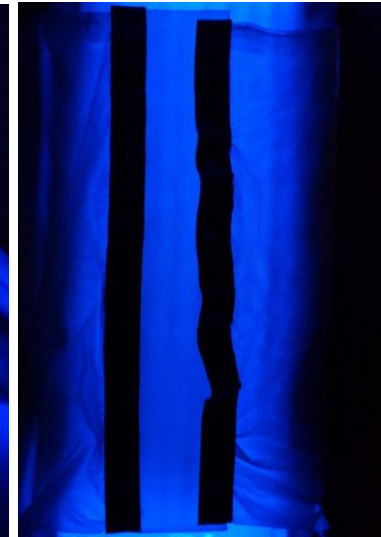
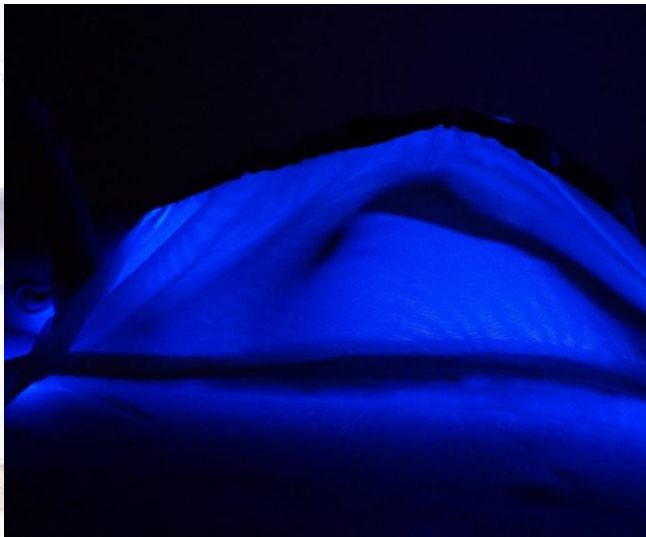
It is smart, safe, easy-to-use and very portable for usage at home. Like a sleeping nest, it can let babies sleep in comfort and gradually get down bilirubin level. Its smart control unit can record essential information and support tele-medical care.

It's mainly designed for people who don't have access to Social Medical Welfare Benefit (most Chinese citizens do not) to stop the jaundice level increasing and avoid future medical care cost in hospital..

ADVANTAGES OF OUR PRODUCTS

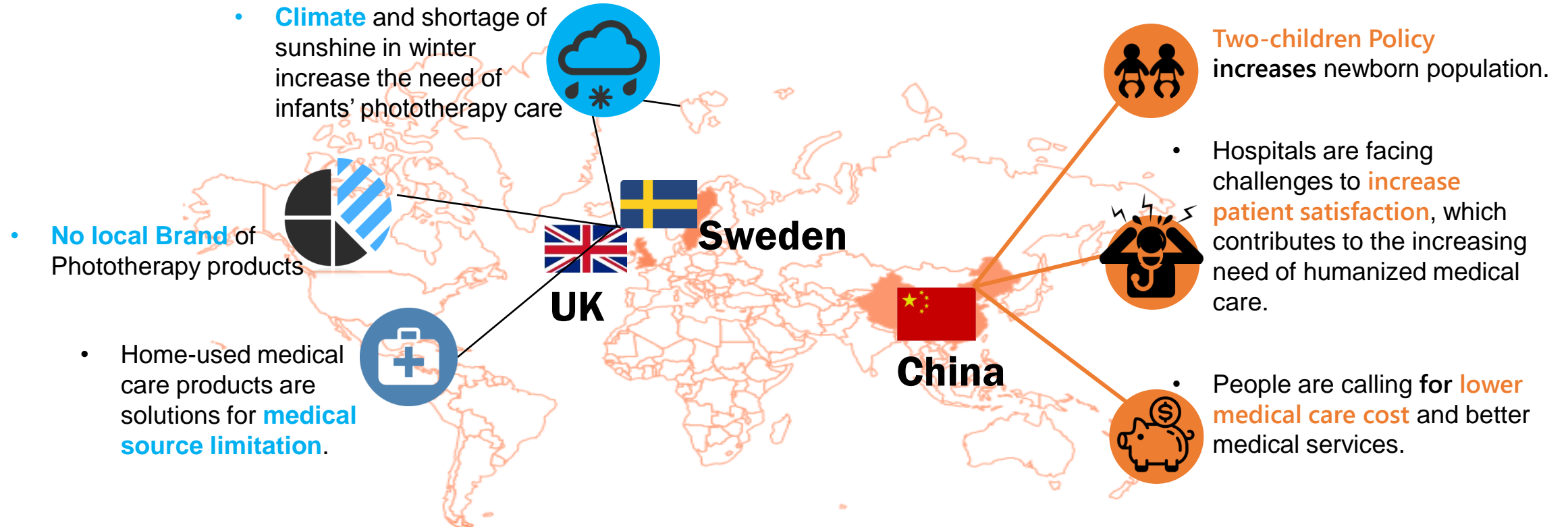


Humanised Design + 360° Phototherapy + High Medical Efficiency + Reusable & Universal Usage + Low Cost



MARKETS

STAGE 1



STAGE 2

GLOBAL MARKET

There is a **global market** of Neonatal Jaundice Phototherapy products, Jaundice is such a common and **unavoidable** disease around the globe.

MARKETS

Market & User Research — Interest in wearable phototherapy products

■ UK & Sweden

■ China

Result from conducted surveys and Big Data analytics: Analyses of the demand of phototherapy products



85% UK & Sweden Market

Hospitals have interest in wearable phototherapy products.

70% Chinese Market



90% UK & Sweden Market

Doctors and nurses show positive attitudes in wearable phototherapy products.

80% Chinese Market



65%
Chinese Potential Users

Due to environment pollution and high medical care cost in China, 65% of Chinese parents have strong interests in mini phototherapy pads for newborn babies with a light jaundice.

COMPETITION



International Market

Conventional Phototherapy + Biliblanket

Globally, traditional phototherapy products have the biggest market share; blankets only have some market share in the USA, Europe and Australia.

Local Market

Conventional Phototherapy

The lower cost with a creative humanized design can keep eCARE Lab competitive.
For the Countries without free social medical welfare, e.g. China, our low-price Mini-Pad Phototherapy is the best and the first solution for family phototherapy care!

ANALYSIS OF OUR COMPETITORS

Overhead Phototherapy



It requires 3-7 days of hospital stay and expensive cost. It requires babies to wear eyeshades in an unfamiliar situation which causes unnecessary discomfort. Hard to ensure a comfortable temperature and humidity for babies.



Efficiency



Cost



User-satisfaction

Bed-type Phototherapy



It requires 3-7 days of hospital stay and expensive cost. The upper reflective textile is unbreathable, which often causes skin rashes. The middle textile will get distorted after a long time use. High power can cause overheat and make babies refuse to stay in the cot.



Efficiency



Cost



User-satisfaction

Blanket Phototherapy



Low medical efficiency. The specialty of side-glowing optical fabrics causes lights waste through the tube. Its irradiation area is only the upper half-body. Its covered area is un-breathable and often causes skin rashes.



Efficiency



Cost

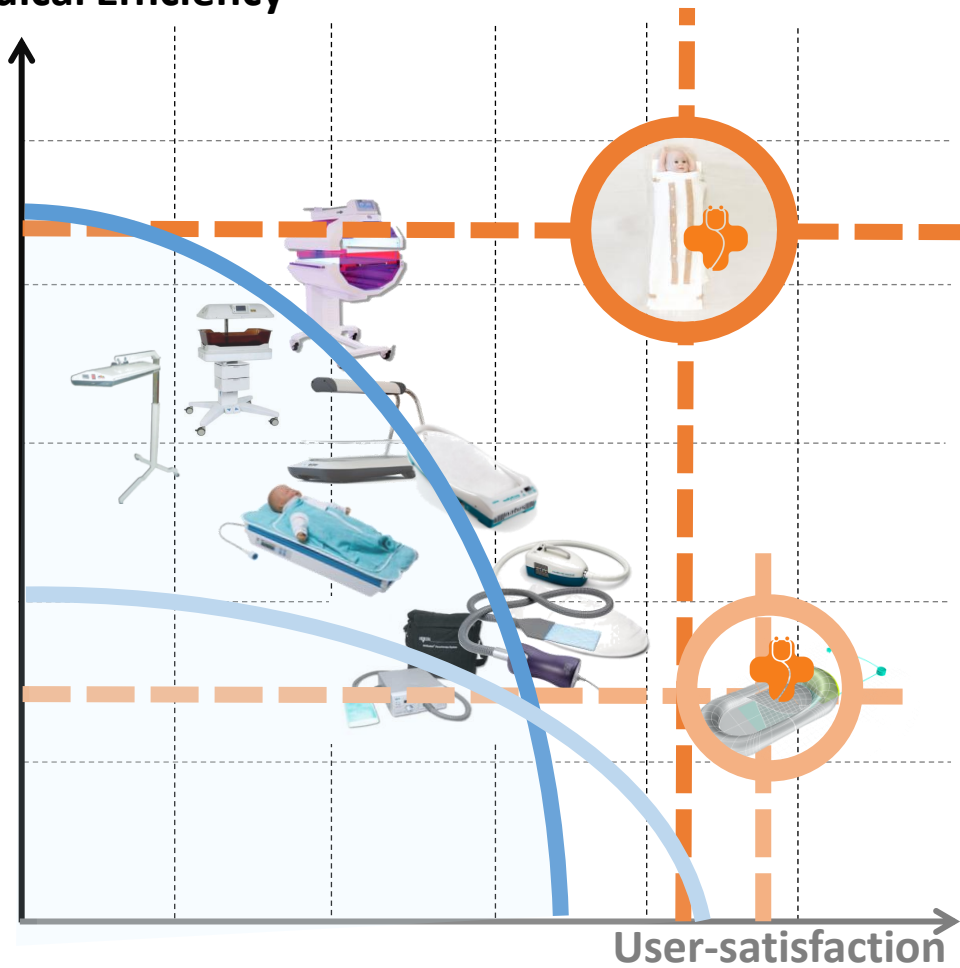


User-satisfaction

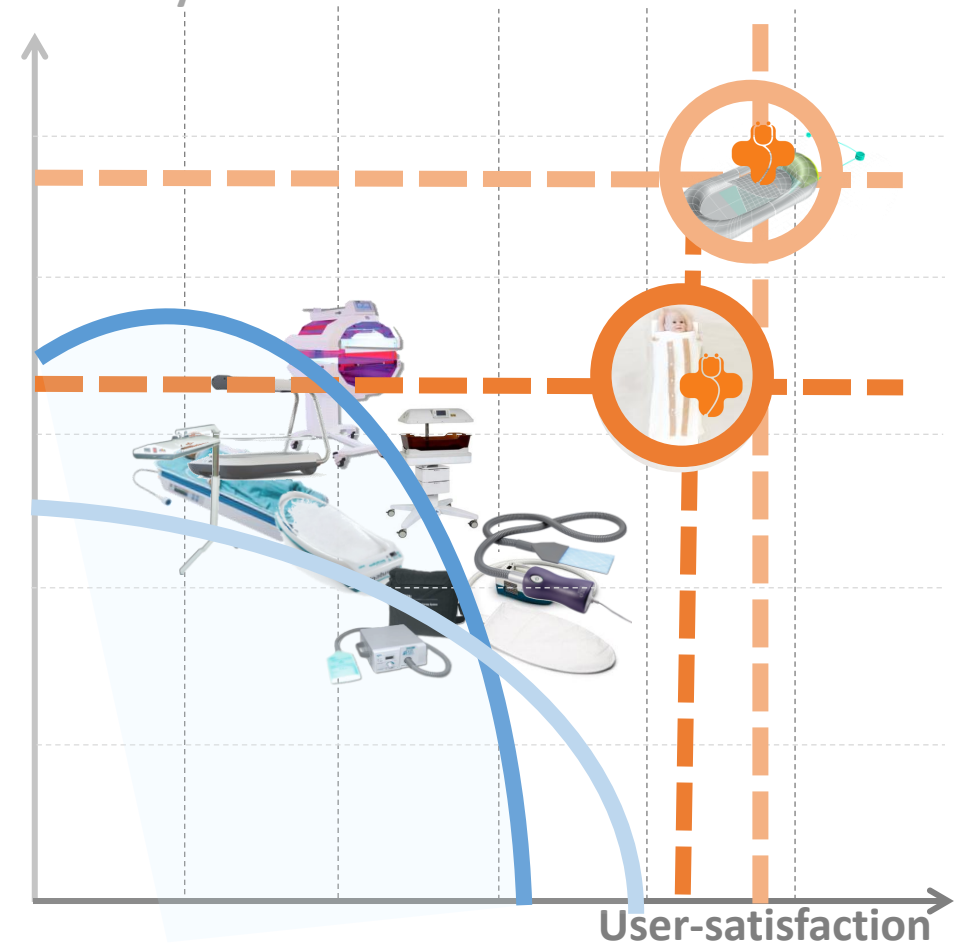


ANALYSIS OF OUR COMPETITORS

Medical Efficiency



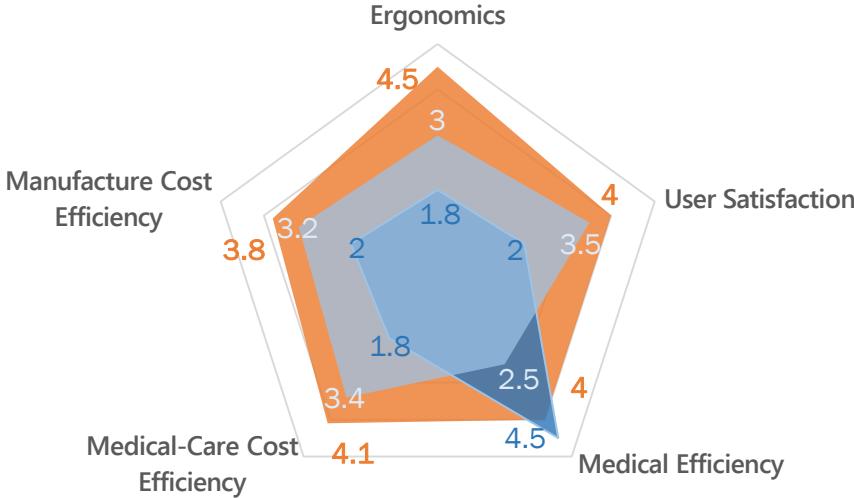
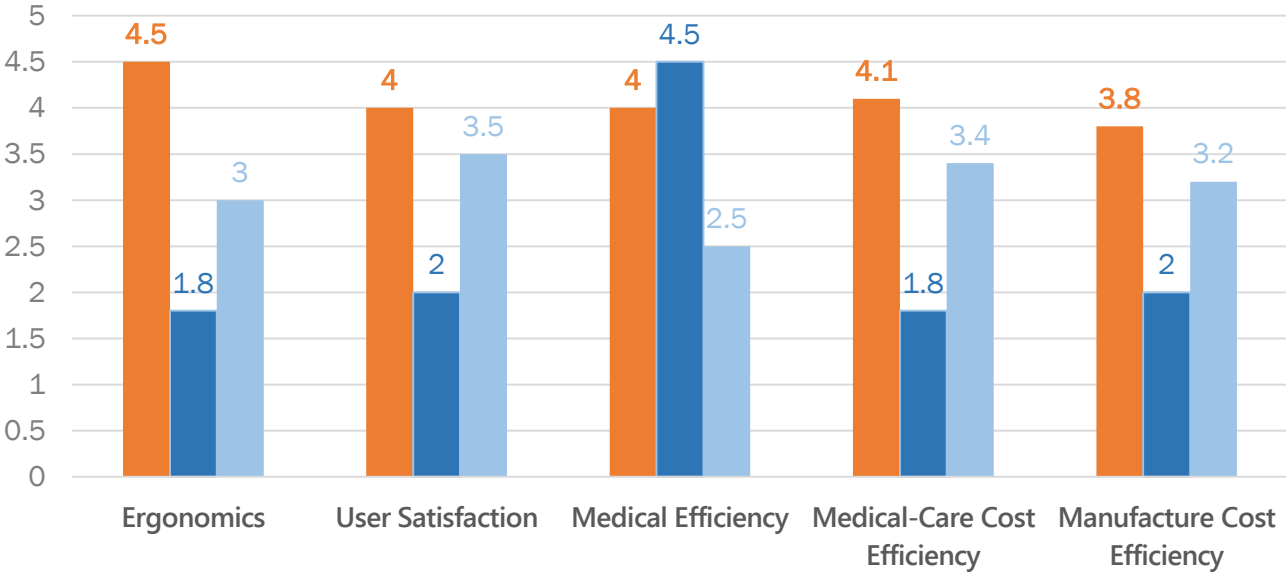
Cost Efficiency



OUR ADVANTAGES

E-Care Tech vs Traditional Phototherapy vs Blanket Phototherapy

■ E-Care Tech
 ■ Conventional phototherapy
 ■ Current optical fiber phototherapy



We have innovative user requirement analysis methods, smart diagnosis, and humanized phototherapy care design with higher medical efficiency.

Compared with current products, our product is economical, efficient, and ergonomic at the same time.

Our innovative design - the structure of side-gluing optical fibers blanket and its joint with LED modular - can not only simplify manufacture and assembling process, but also enhance the lighting efficiency and LED heat dissipation.

BUSINESS MODEL



Big-data & Design Management

Sustainable Development

B2B+ Digital Marketing

Sell + Re-buy & Refurbish

Value-Added User Service

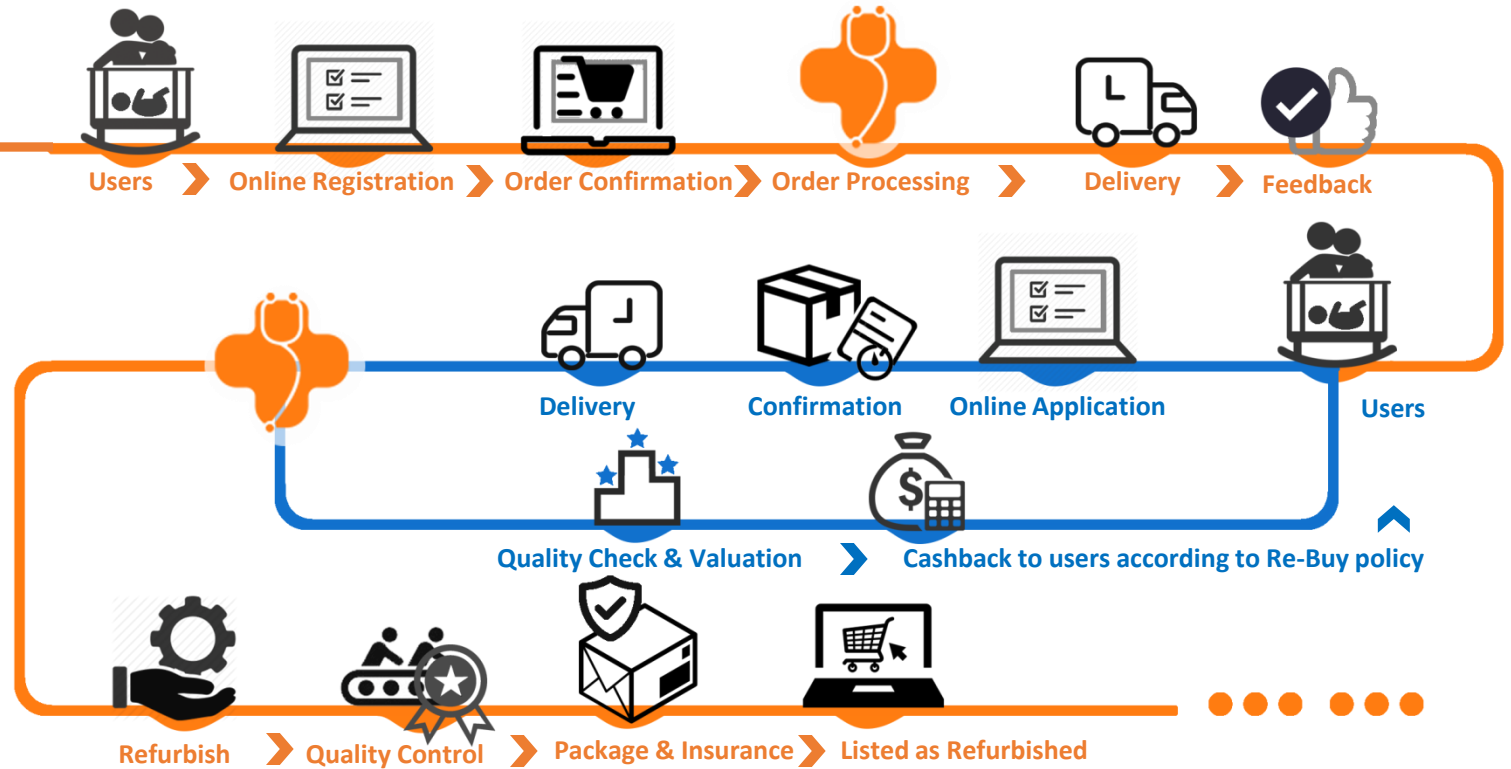


- Innovative crowd-funding based on big data analytics and machine learning
- Reduction of the storage cost and avoid supply shortage via the real-time updating big data analytics precise product demand
- Optimisation of production process by assigning the best suppliers for producing, assembling and

- packaging the building blocks
- Combine digital marketing and brand management to create a good recognition in markets.
- Positioning our brand as 'Ergonomics, Efficiency, Economy', we will provide users (including hospital and families) premium customer service.

- **Better than Shared Economy, we re-buy & refurbish mini pads from customers. It will ensure our products a competitive price and a good quality control.**

BUSINESS MODEL



- ✓ **Modular Industrial Design** contributes to cost-saving refurbishment
- ✓ **Unique ID** of each phototherapy set and smart control system will record essential usage information for tele-medical care, product maintenance, refurbish quality control and post-service.
- ✓ **Cooperation with express company and insurance agent** will enhance risk control.
- ✓ We **save manufacture cost** through recycle products, and get a **stable cash flow** for business running.
- ✓ Users benefits from **cost-saving and high-quality** products

Similar To Shared Economy, And Even Better

Endless Creations

Design, Technology, Humanization



Business Plan & Mile Stones

07/2018



Mobile App
Design Refining
Modeling & Testing

11/2018



CE & CFDA application
Application for FDA
Patent Application

02/2019



Marketing
Manufacture Plan

12/2019



Pre-Sale
Production

06/2020



Sale
Post-Service

Market Research

User Interview+Online Survey
Big Data analysis

User requirements + Marketing needs

Developing & Testing & CFDA + CE

NHS + Capital Children Hospital (China)+ Technical Team

PRE-PRODUCT

Application for CFDA & CE

Pre-Marketing

Digital Marketing + Target Crowd Funding

Production Plan

Highly Quality Control + Cost Control
Distributed Components Manufacturer
CONCENTRATED ASSEMBLY LINE

Cost Budget at early stage (07/2018–07/2020)

User & Market Research



£ 30,000

Product & app Development



£ 60,000

Patent & Certification application



£ 100,000

Testing



£ 20,000

Marketing



£ 100,000

Production



£ 300,000

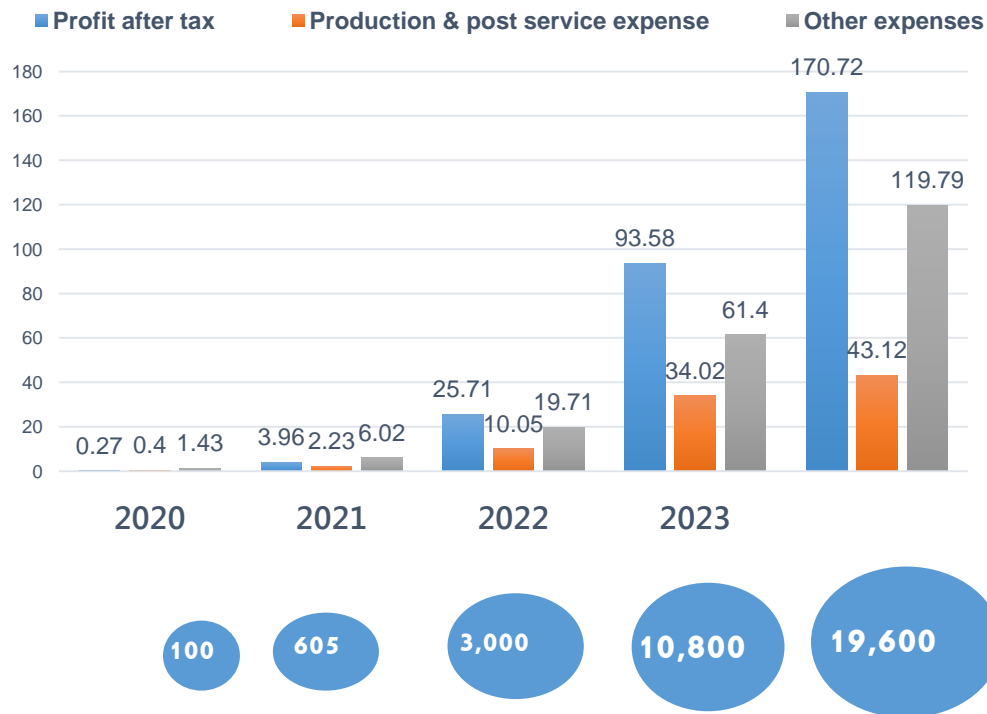
Salary



£ 100,000

Preliminary Financial Projection for the **Phototherapy Device** Product Line

Phototherapy Device Set for Hospital-Based Treatment Unit: Million GBP

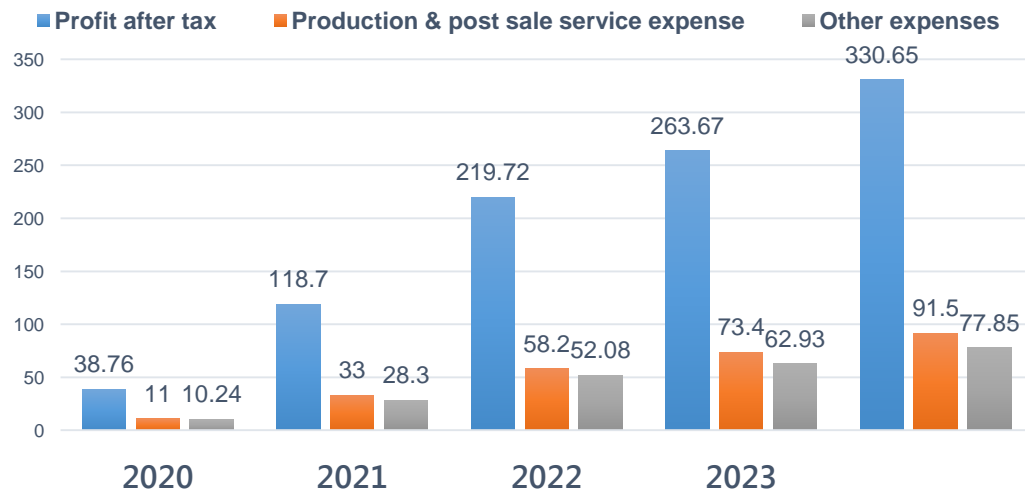


| Year | 2020 | 2021 | 2022 | 2023 | 2024 |
|--|----------------|------------------|------------------|-------------------|-------------------|
| No. of Partner Hospitals | 10 | 55 | 250 | 900 | 1800 |
| No. of Product annual sales | 100 | 605 | 3,000 | 10,800 | 19,600 |
| Product Price | 2,100 | 2,000 | 1,850 | 1,750 | 1,700 |
| Revenue from Product Sales | 210,000 | 1,210,000 | 5,550,000 | 18,900,000 | 33,320,000 |
| Overall Production cost per product | (300) | (280) | (250) | (235) | (220) |
| Gross Profit | 180,000 | 1,040,600 | 4,800,000 | 16,362,000 | 29,008,000 |
| Marketing & Sales Expense | (36,000) | (208,120) | (960,000) | (3,272,400) | (5,801,600) |
| Post sale service Expense | (10,000) | (54,450) | (255,000) | (864,000) | (1,528,800) |
| Miscellaneous Expense (e.g. legal service) | (2,000) | (12,100) | (60,000) | (216,000) | (392,000) |
| R&D Expense | (100,000) | (300,000) | (500,000) | (1,000,000) | (1,200,000) |
| Profit Before Interest and Tax | 32,000 | 465,930 | 3,025,000 | 11,009,600 | 20,085,600 |
| Tax (15%) | (4,800) | (69,890) | (453,750) | (1,651,440) | (3,012,840) |
| Profit After Tax | 27,200 | 396,040 | 2,571,250 | 9,358,160 | 17,072,760 |

Note: The unit of financial values in the table is GBP.
The tax rate is adjustable to different target markets.

Preliminary Financial Projection for the Mini Phototherapy Product Line

Mini Phototherapy Products for Home-Based Care Unit: Million GBP



Annual Revenue **6** Million **18** Million **33** Million **40** Million **50** Million

| Year | 2020 | 2021 | 2022 | 2023 | 2024 |
|--|------------------|-------------------|-------------------|-------------------|-------------------|
| Product annual sales | 100,000 | 300,000 | 600,000 | 800,000 | 1,000,000 |
| Product Price | 60 | 60 | 55 | 50 | 50 |
| Revenue from Product Sales | 6,000,000 | 18,000,000 | 33,000,000 | 40,000,000 | 50,000,000 |
| Overall production cost per product | 10 | 10 | 9 | 8.5 | 8.5 |
| Gross Profit | 5,000,000 | 15,000,000 | 27,600,000 | 33,200,000 | 41,500,000 |
| Marketing & Sales Expense | (180,000) | (400,000) | (600,000) | (700,000) | (800,000) |
| Post-Sale Service Expense | (100,000) | (240,000) | (420,000) | (540,000) | (650,000) |
| Miscellaneous Expense (e.g. legal service) | (100,000) | (300,000) | (600,000) | (800,000) | (1,000,000) |
| R&D Expense | (60,000) | (95,000) | (130,000) | (140,000) | (150,000) |
| Profit Before Interest and Tax | 4,560,000 | 13,965,000 | 25,850,000 | 31,020,000 | 38,900,000 |
| Tax (15%) | (684,000) | (2,094,750) | (3,877,500) | (4,653,000) | (5,835,000) |
| Profit After Tax | 3,876,000 | 11,870,250 | 21,972,500 | 26,367,000 | 33,065,000 |

Note: The unit of values in the table is GBP.
 The tax rate is adjustable to different target markets.
 The R & D expense of the home-based product line is lower than the hospital-based one, which is contributable to a higher profit rate.

THANK
YOU

E-CARE TECH



www.e-tech-care.com

design.365dn@gmail.com,

+44 745 657 2412

1 Holford Way, London, SW15 5DH, UK