



# Implantica

Bringing advanced technology into the body

Aiming to restore bodily functions

*After a decade of developing and patenting our Wireless Energising and eHealth platform,  
we have gone through the entire body to determine and patent suitable applications*

# The Wireless Energising Platform paving the way for many new implants

A decade of development focused on eHealth and Smart Medical Implants

## Current status

- The pacemaker (CHF 5.6bn market) – the most successful active implant uses a very low current and a battery that lasts for 8 years
- Other active implants using a pump or motor would need 10,000 times more current and the batteries would then run out of power too quickly

## Necessary improvements

- **Wireless energising**— avoids performing surgery every few months to change a battery
- **Maintain temperature control**— between body temperature (approx. 37°C) and 42°C to prevent tissue damage
- More **advanced feedback** systems
- **Advanced security** systems

## Implantica's solution

Hospital station

Miniaturised system

Remote control

Wireless energy supply



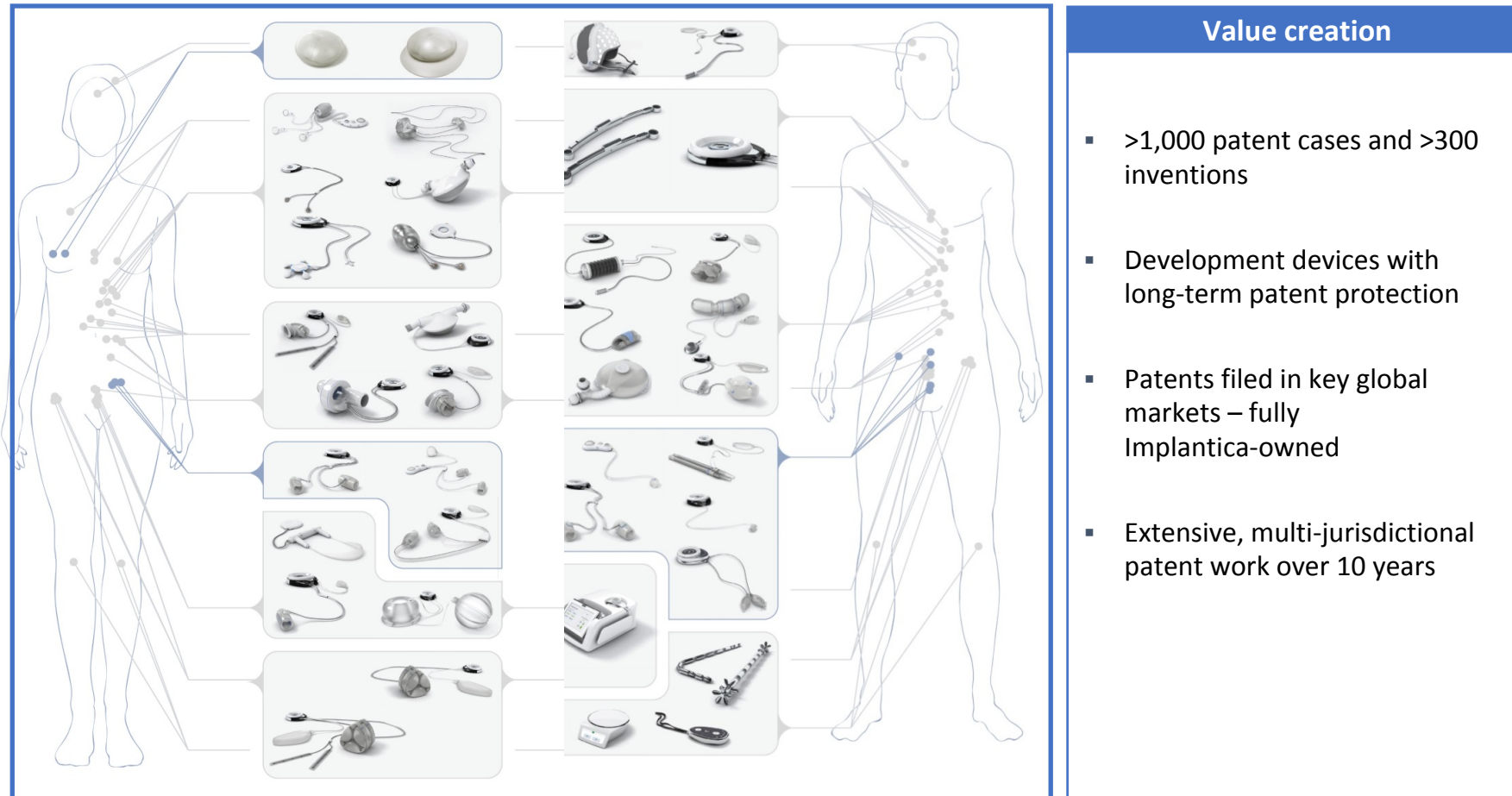
- ✓ **Powering** and recharging remote controlled devices **wirelessly through intact skin**
- ✓ **Paving the way for many new implants**, integrating e-health solutions
- ✓ **Platform to be used for future new treatments** in large therapeutic segments such as:
  - Obesity
  - Urinary incontinence
  - Impotence
  - Intestinal stoma
  - Anal incontinence
  - Aorta aneurysm

Note:

1 Grand View Research - Pacemaker market share analysis report 2018








# IP portfolio of >1,000 patent cases with long-term protection

A decade of strategic and systematic development of our IP portfolio using a “Carpet Patent Bombing Approach”



Market analysis and prototyping on 40 selected inventions/development devices, whereof 2/3 are energised/active

# 6 prioritised implants/pipeline implants in digestive surgery and urology

Treatment fields		Potential global and addressable market (surgeries p.a.)	Prioritised implants	Active (energised) / passive implants
Digestive surgery	Acid reflux	400m <sup>1,2</sup> (150k surgeries) <sup>1</sup>	RefluxStop™ 	Passive implant launched in August 2018
	Obesity	650m <sup>1,3</sup> (568k surgeries) <sup>1,4</sup>	AppetiteControl™ 	 <p>Wireless energising platform</p>
	Anal incontinence	200m <sup>1,5</sup> (10k surgeries) <sup>1</sup>	RectalRestore® 	
	Stoma	NA (800k surgeries) <sup>1</sup>	StomaRestore® 	
Urology	Urinary incontinence	200m <sup>1,6</sup> (500k surgeries) <sup>1,7</sup>	UriControl® 	
	Erectile dysfunction	150m <sup>1,8</sup> (35k surgeries) <sup>1,9</sup>	PotencyFlow® 	

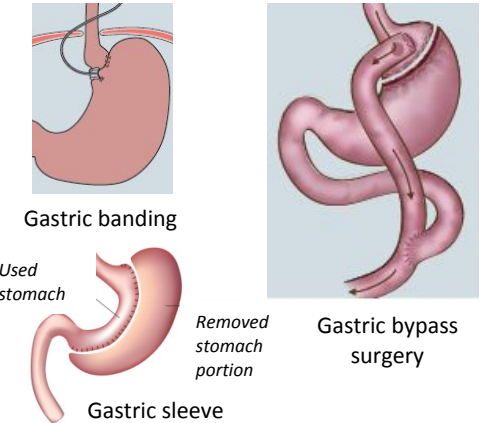

## Patent portfolio

### Notes:

- |   |  |    |   |
|---|--|----|---|
| 1 | ISS 2018   | 6  | Calhoun, Nygaard & Thom 2007; Barry 2003  |
| 2 | Johnson D 2009; Stuart M 2005  | 7  | HBS Consulting 2007   |
| 3 | World Health Organization 2018   | 8  | Medtech Insight 2011  |
| 4 | Angrisani L, Buchwald H et al., Bariatric surgery worldwide, Obesity Surgery 2015  | 9  | PR Newswire 2017  |
| 5 | Andromanakos et al. 2006; Tan, Chan & Tjandra 2007; Kalantar, Howell & Talley 2002 | 10 | Johnsson W 2016, Dua A et al. 2014, Kühnl, Eckstein et al. 2017, Calculation Aortic Aneurysm 2018 |

# AppetiteControl™ – eHealth supports smart weight control

“Someone that develops such a technique that leads to weight loss by stopping people from being so hungry without malnourishing them or being at risk should win the Nobel prize.” (MD at Polyclinique de Rillieux, France)

Obesity market	Status-quo treatment	Our solution - AppetiteControl™
<p data-bbox="417 379 565 475"><b>650m</b></p> <ul data-bbox="588 415 879 444" style="list-style-type: none"> <li>▪ Obese people globally<sup>1,2</sup></li> </ul> <p data-bbox="417 515 565 611"><b>£12bn</b></p> <ul data-bbox="588 529 904 615" style="list-style-type: none"> <li>▪ Made available by NHS for obesity surgery<sup>3</sup> (saves money for society)</li> </ul> <p data-bbox="417 668 565 763"><b>568k</b></p> <ul data-bbox="588 696 843 725" style="list-style-type: none"> <li>▪ Surgeries p.a. 2014<sup>4</sup></li> </ul>	 <p data-bbox="970 354 1149 544">Gastric banding</p> <p data-bbox="970 601 1149 772">Used stomach Removed stomach portion Gastric sleeve</p> <p data-bbox="1238 354 1447 644">Gastric bypass surgery</p> <ul data-bbox="1014 811 1337 882" style="list-style-type: none"> <li>▪ Destroys the normal anatomy</li> <li>▪ Causes too much vomiting</li> </ul>	 <ul data-bbox="1651 672 2130 901" style="list-style-type: none"> <li>▪ AppetiteControl™ is an adjustable satiety controller that imitates real life by stretching the upper part of the stomach wall to cause satiety</li> <li>▪ Stretching receptors and satiety proven by third-party research<sup>5</sup></li> <li>▪ Remote monitoring enabled</li> </ul>

**3** AppetiteControl™ does not affect the food passageway but controls appetite

**3** AppetiteControl™ is programmable to target ideal weight loss

Notes:

1 ISS 2018

2 World Health Organization 2018

3 Daily Mail 2014

4 Angrisani L et al., Obesity Surgery 2015

5 Marciani L et al. 2014

