

**Feasibility Study
for a
Power Assisted Exercise Gym**

on behalf of

West Berkshire Neurological Alliance

with



West Berkshire
COUNCIL



Multiple Sclerosis Society
Newbury & District

November 2007
C836

Profundus Consulting Ltd.
PO Box 519, Reading RG7 5YZ, U.K.
Tel +44(0)118-971-2948; e-mail info@profundus.com

Disclaimer

Whilst every care has been taken to ensure the accuracy of this report, the facts, estimates and opinions stated are based on information and sources which, while believed to be reliable, are not guaranteed. In particular, it should not be relied upon as the sole source of reference in relation to the subject matter.

No liability can be accepted by Profundus Consulting Ltd. or the author of the report for any loss occasioned to any person or entity acting or failing to act as a result of anything contained in or omitted from this report or any conclusions stated.

Acknowledgements

This feasibility study was financed by the West Berkshire Neurological Alliance, West Berkshire Council and the Newbury & District branch of the Multiple Sclerosis Society.

West Berkshire Neurological Alliance



Newbury & District

CONTENTS

1. Executive Summary	5
2. Introduction	9
2.1 Background	9
2.2 Methodology	9
3. Power Assisted Exercise	11
3.1 What is power assisted exercise?	11
3.2 Examples of PAEGs	12
3.3 Benefits of power assisted exercise	16
3.4 The Inclusive Fitness Initiative	19
3.5 'Activity for Health'	20
4. Equipment Suppliers	21
4.1 Shapemaster	22
4.2 Slim Images	23
4.3 VibroGym	23
4.4 Vibrant Medical	24
4.5 Cyclone Mobility	24
4.6 Medimotion	24
4.7 Biodex	25
4.8 Slender You	26
5. The Market	27
5.1 Demographic profile	27
5.2 Segmentation	27
5.3 Medical conditions	29
6. Design and Staffing Issues	33
6.1 Size and shape	33
6.2 Equipment choice	34
6.3 Other facilities	35
6.4 Staffing	36
7. Marketing	37
7.1 Promotion	37
7.2 Pricing	37
7.3 Fund raising	38
8. Financial Model	39
8.1 Scenarios	39
8.2 Operating costs	39
8.3 Operating revenues	40
8.4 Surpluses	41
8.5 Combined Profit & Loss	41
8.6 Risks and sensitivities	41
Appendices	43
A. Acknowledgements	43
B. Profundus Consulting Ltd.	45

The report layout is optimised to facilitate double-sided printing with all main sections beginning on a right-hand page (i.e. odd-numbered)



Doug Burns, reigning 'Mr Universe', who has Type 1 Diabetes

1. Executive Summary

We can confidently state that a Power Assisted Exercise Gym, co-located with a hydrotherapy pool, will provide many health and fitness benefits, will be of great benefit to the community and has the scope to generate a significant surplus, which can be put to reserves or used to subsidise needy users.

This report represents an extension to a feasibility study completed in December 2006 looking into the potential for a hydrotherapy pool for the benefit of the West Berkshire community.

The West Berkshire Neurological Alliance (WBNA) issued a brief requiring an examination of the feasibility for a Power Assisted Exercise Gym (PAEG) as an additional, incremental facility co-located with the proposed hydrotherapy pool adjacent to the West Berkshire Community Hospital.

We thank those who have contributed information and views (see Appendix A).

The government is keen to promote exercise for all and, indeed, has instigated an Inclusive Fitness Initiative which entreats existing fitness facilities to create an inclusive service, increasing participation by disabled people. While we would all like to see disabled users treated equally in public and private fitness centres, there is a fundamental dichotomy between this objective and our scheme to build a centre of excellence, comprising hydrotherapy pool and PAEG for users with neurological and other disabilities.

Further, most of the professionals we have spoken to in the course of this work have told us that MS sufferers, stroke victims and others with comparable complaints need a special environment and special care. Also, they are often embarrassed to exercise with able-bodied people; this is often the reason they do no exercise at all before visiting a PAEG.

West Berkshire Council is especially keen to promote health and fitness for its citizens and sponsors a major initiative called 'Activity for Health', which comprises the running of activities for various groups at the Council's leisure centres. It is proving to be a great success and ways should be explored to partner this initiative in order to provide it access to the PAEG.

Put simply, power assisted exercise is the use of exercise equipment which incorporates motors to assist the user in achieving the range of movements required. Most equipment permits the user, if they wish, to add his/her contribution to the exercise.

There are several types of equipment:



Toning tables. Originally invented in the 1930s in the USA, toning tables enjoyed a boom in the 1980s and were seen as products for beauty salons, spas and 'well being' centres, mainly appealing to overweight ladies. This perception results in some degree of scepticism from the medical profession but toning tables can provide improvements in mobility and flexibility for some severely disabled patients. It is notable that they are used in many of the UK's MS Therapy Centres.

Upright machines. This group of machines is a modern development pioneered by Shapemaster Ltd. Their design owes more to modern gym equipment, where systems of pulleys and weights permit the user to exercise a range of muscle groups. Power assisted machines include motors which determine the movements for users who can add as much or as little of their own effort as they can and wish.



Cycling machines. Both examples available through distributors in the UK are imported from Germany where they are popular. They are proving to be well accepted in cardiac rehabilitation units, MS centres and hospital physiotherapy departments.

Vibrating equipment.

Vibrating tables, platforms and pads might be considered to be power-assisted, even though not strictly providing exercise but conferring certain related benefits.



Other examples of PAEGs were sought. The Brain and Spinal Injury Centre (BASIC) in Salford is closest to the concept of the West Berkshire facility. It is affiliated to the nearby Manchester Clinical Neuroscience Centre at Hope Hospital. Even though BASIC is open only four days per week and it does little or no marketing it has attracted 120 regular users, with stroke victims and MS sufferers being its two largest groups.

Others include the Tibshelf Cardiac Rehabilitation Support Centre, in Derbyshire, and many of the UK's 50 or so MS Therapy Centres.

Shapemaster is rolling out a network of 'Feel Good factories' - fitness clubs equipped with its equipment. While these are aimed at the overweight ladies market it is notable that they also attract clients for therapeutic reasons. For instance, its flagship centre, in Stoke-on-Trent (which attracted 420 members in its first 30 weeks of operation) includes 20 MS sufferers and four clients with fibromyalgia.

Equipment suppliers claim a vast array of benefits for their products. Some are vague (e.g. 'toning') and some extravagant but there is considerable empirical evidence that in general their products improve muscle function (or reduce wastage), improve circulation and promote a feeling of well-being.

There is little medical, scientific or academic research available to back up these claims but several studies are being conducted at Leeds Metropolitan University. The pilot for one has been completed. It has allowed its leader, Dr Ron Butterly, to state with some authority some real benefits of power-assisted exercise:

1. It is safe - no injuries and accidents, which is important for the older generation, especially when overweight.
2. Users can do as much or as little as they wish - the amount of power which they contribute can be varied; in practice, most users begin fairly passively to regain flexibility and confidence and later begin to contribute meaningfully towards a proper workout.

3. The assisted power means that users do not have to overcome inertia at the start of an exercise - it is the middle range which is most beneficial.
4. There is a much improved range of movement for most users.
5. There is a considerable mood enhancement effect.

This study will be repeated in a more rigorous manner in early 2008 and it has also spawned other, subsidiary work, with studies looking into the mood enhancement effect and examining benefits to cardiac patients.

It is strongly recommended that all users of the PAEG are referred, either by a hospital or a GP, and that they receive an assessment by a qualified physiotherapist. We expect that clients with a wide range of medical conditions will benefit from assisted exercise. These include:

- Neurological disorders - stroke, MS, fibromyalgia and cerebral palsy are expected to make up the majority of such users.
- Musculoskeletal problems - arthritis and those with spine/neck/back injuries and disorders.
- Cardiovascular - especially rehabilitation following angioplasty and bypass surgery.
- Diabetes - sufferers are constantly being urged to undertake exercise in order to help manage their condition.
- COPD - chronic bronchitis and emphysema sufferers.
- Obesity - especially those with morbid obesity, defined as having a BMI above 40.

While the categories above represent the medical conditions most likely to benefit from assisted exercise it ignores a very substantial commercial opportunity - the overweight ladies market segment, pursued with much success by salons and spas. We suggest there is scope for a 'fitness club' to run alongside the mainstream work to utilise the gym's assets during non-core times. At the very least it will generate additional funds which can be used to cover operating costs and reduce prices for therapy users.

There are too many unknowns to be definite about the size, shape and contents of a PAEG. This is a very new concept, not just in the UK but in the world. We can draw on some of the experience of BASIC, in Salford, and note what is happening elsewhere but at the end of the day we advocate caution but flexibility. We propose initially a large space with a minimum of equipment. As numbers build then decisions can be made about what additional equipment to purchase. Additionally, suppliers, who are all keen to expand into the health sector, have generally indicated a willingness to work closely with the gym, to provide machines on trial or sale and return or to offer generous part exchange terms.

We recommend providing a space of about 1600 sq ft, which is sufficient for 20 machines. It should either be divided by a moveable partition or possibly an L-shaped space would work. Initial purchases of equipment should be:

- one toning table - one which combines several functions; either Shapemaster's 'Multimaster' or the 'Multitone' from Slim Images.
- a set of six Shapemaster 'Easytone' upright machines;
- one vibrating machine - either Body Action or VibroGym;
- two cycling machines, either Thera-vital (preferred) or Medimotion;
- one conventional treadmill.

The total cost of this equipment is £45,000 at list prices. In the financial model we amortise it over four years and allow 5% of purchase cost each year to cover repairs and maintenance. As gym usage expands so will the equipment inventory. It is better that later purchasing decisions are based on experience and demand rather than unreliable early guesswork. However, retaining a budget of £4000 per machine would be wise.

One of the beauties of co-locating the PAEG with the hydrotherapy pool is the potential to share peripheral facilities, including:

- toilets - including those providing access for the disabled;
- changing facilities and showers - which are not generally provided in PAEGs, though there is evidence that a small proportion of clients would use them if they were;
- office/reception - for dealing with subscriptions, bookings and other administration;
- social area - for clients and also for their carers and drivers, while waiting;
- car parking - including spaces for the disabled.

Staff, too, will be shared between the pool and gym. One of two qualified physiotherapists will already be on duty at all times for the pool and that person can also be available for assessments and advice in the gym when required. A gym 'trainer', who is relatively unqualified, will also need to be present at all times in the gym and this results in two additional members of staff.

Promotion of the gym (brochure, website, PR, etc.) will take place alongside the similar activity for the pool.

We advocate a pay-as-you-go pricing system for the gym, at £6 per nominal 40-minute session. However, with season tickets' or monthly subscriptions we anticipate the average income per session being some 15% lower than this figure. Additionally, like the pool, there will be further subsidies for those who need them, paid for out of a pool generated by fund-raising activities.

Should it be decided to also run a fitness club in the gym beside the therapy sessions then we recommend a £30 per month subscription - a formula which is proven to be widely accepted at such clubs across the country.

In the financial model we describe four scenarios:

	No fitness club	With fitness club
Minimum therapy use	100 users	300 users
Expected therapy use	200 users	400 users

It is inconceivable that the number of regular therapy users will be less than 100 and we expect at least 200. The addition of a fitness club, which we assume will have to be limited to about 200 users, will make a huge difference to the model, which is summarised below:

£K	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Fixed costs	37.0	37.0	37.0	37.0
Equipment costs	13.2	16.8	20.4	24.0
Revenues	40.8	81.6	112.8	153.6
Surplus	(9.4)	27.8	55.4	92.6