

CASE STUDY

# How Evidence-Based Strength Training Builds Stronger, Healthier Fitness Communities

Published February 2017



**ShapeLog is a new kind of fitness tracker.**

ShapeLog automatically tracks workouts and serves up evidence-based programming, without asking the user to carry a phone or do anything special. We do this for all of your members, at no cost to your club.





## A Message from the ShapeLog Team

We all know exercise is important, but few of us know what the heck we're doing at the gym. For twelve weeks, ShapeLog tracked the workouts of fifty normal people, and used the data to help users improve their performance.

### What happened?

Users got stronger and healthier. Engagement and membership grew. Users felt empowered to spend time in the weight room, which can be an intimidating place for most folks.

### These results are repeatable at scale.

The technology to help fifty million people is exactly the same that we used for this pilot. Soon we'll all be able to stop guessing at the gym, and use evidence-based programming designed just for us.

A warning for non-geeks: this report gets very geeky. Since we all know data is only as useful as what you can do with it, our motivation for making it available here is to connect with others who see the potential in it.

Thanks for engaging with us in this conversation!

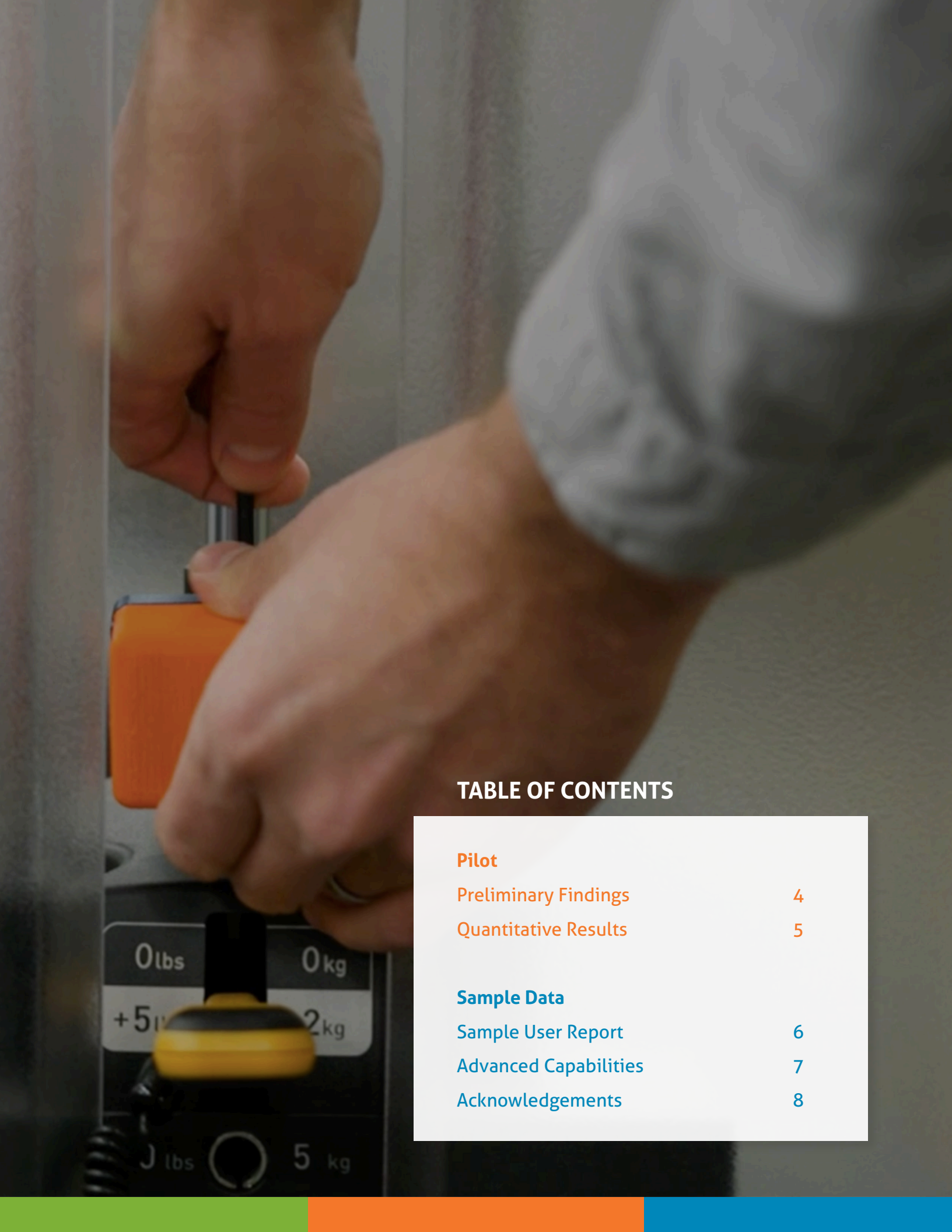


### Sample Feedback from Real ShapeLog Users:

*"I am seeing positive changes in my body that I attribute to the ShapeLog class."*

*"Once you get used to seeing the data, it's hard to go back."*

*"I never thought I belonged in the weight room until ShapeLog gave me a plan."*



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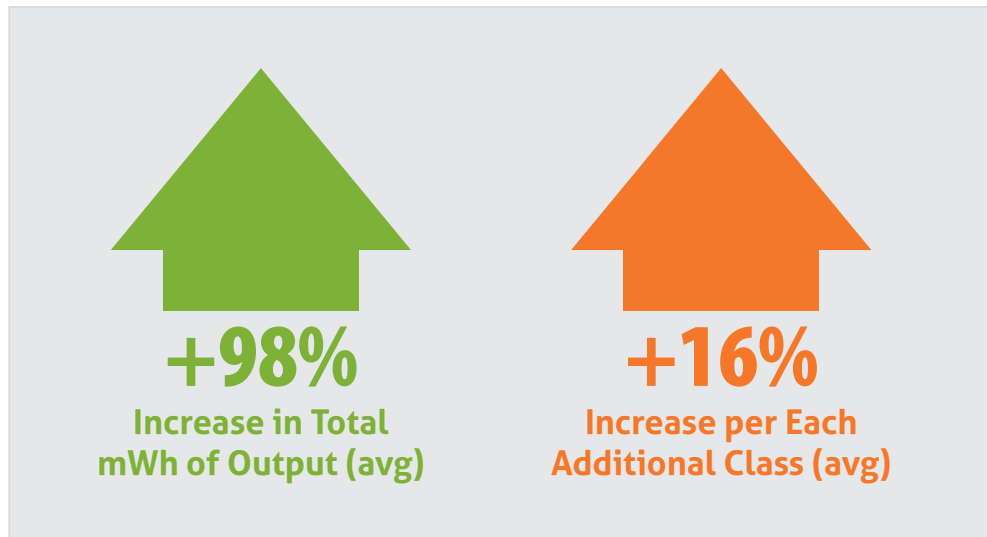
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# PILOT: PRELIMINARY FINDINGS

## Overview

ShapeLog engaged in a pilot that spanned four months at three medium-sized gym locations (250-750 members). Involvement included 30 women and 20 men who have collectively experienced more than 160 workouts. The average participant returned for more than 3 ShapeLog workouts and the maximum

experienced by a single individual was 16. The participants voluntarily opted in to the engagement, which was formatted as a group strength training circuit class. Each circuit class was designed and administered by one of our three trainers.



## Circuit Format

The circuits were routinely changed according to the desires of the trainers, but always consisted of 6 – 10 weight machine stations (equipped with one of our patented sensors) and included “active rest” exercises (jumping jacks, lunges, etc.) performed during the breaks between the sets. Participants performed three 30-second sets at a single station then rotated to the next location. Given the variability in the number of stations, the results reported here are normalized by the station count so as to not favorably skew values from circuits that feature a greater number of machines.

## Methodology

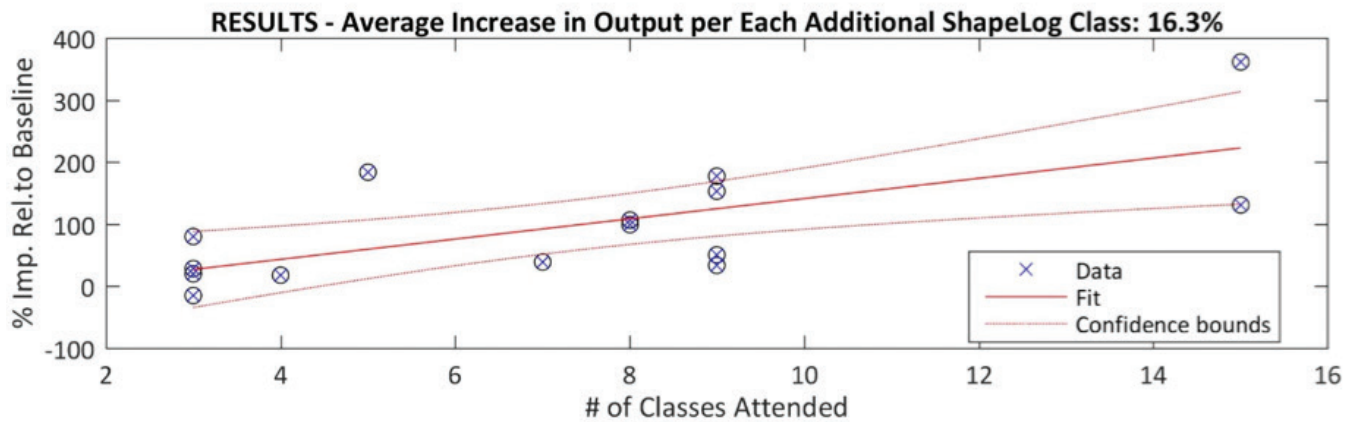
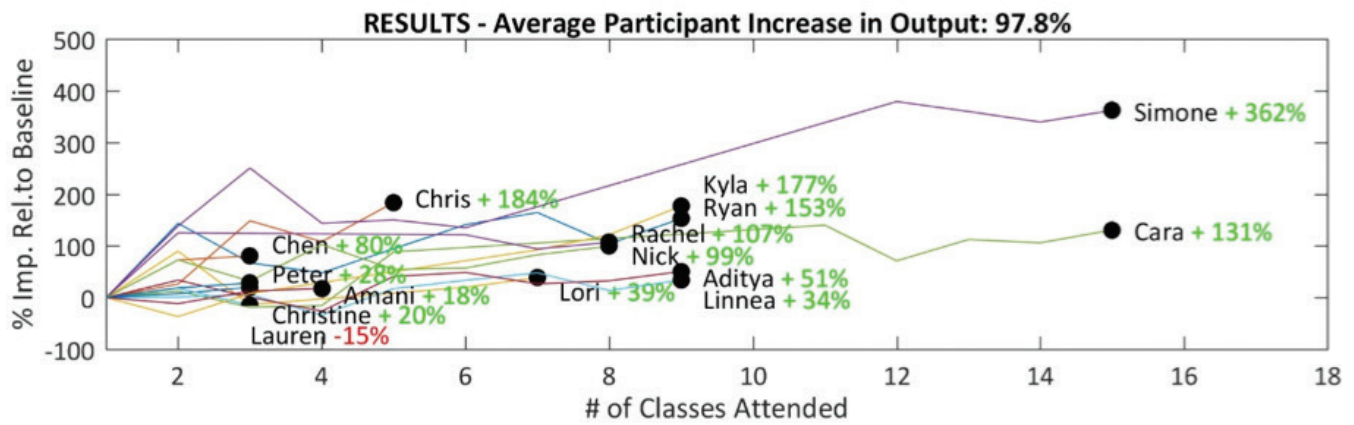
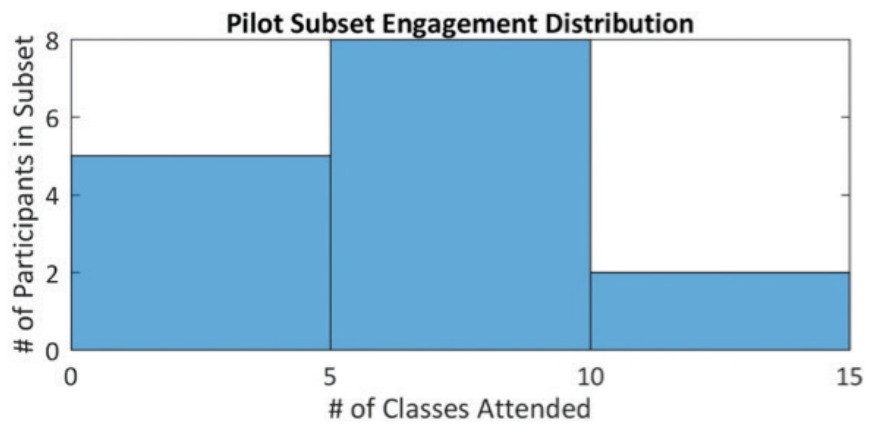
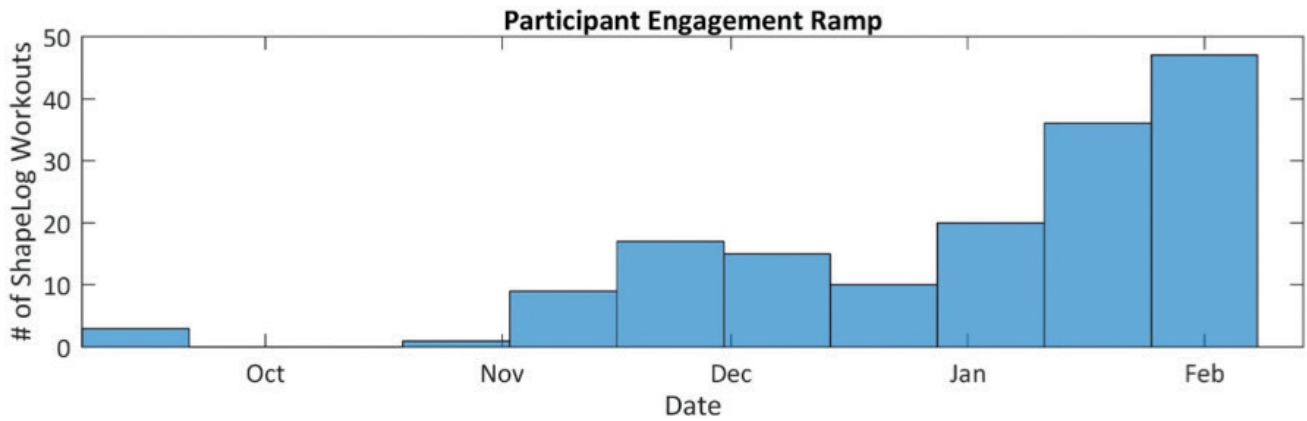
Each participant shown the format for the circuit then given a sample report illustrating the type of information being tracked. The reports tracked work output (measured in milliwatt-hours, or mWh) which measures the amount of weight lifted and total distance travelled. It is also a unit that can be summed for all machine types in a scientifically valid manner. Emphasizing work output in the reports inherently encourages power training rather than strength training (i.e. leaning/toning rather than adding bulk) but also maximizes calorie expenditure in a fixed amount of time, therefore creating a well-rounded and efficient format.

## Results

**The full quantitative summary is on the following page, but key takeaways are:**

- » The average participant increased his/her output by 98%
- » Increase in output was proportional to the number of classes attended, with an average of 16% increase for each additional class taken
- » 98% of the participants increased his/her work output capability

# PILOT: QUANTITATIVE RESULTS



# SAMPLE WORKOUT REPORT

Cara - Feb 8 - 2017 - TOTAL OUTPUT: 27543 mWh

## A message from Hector:

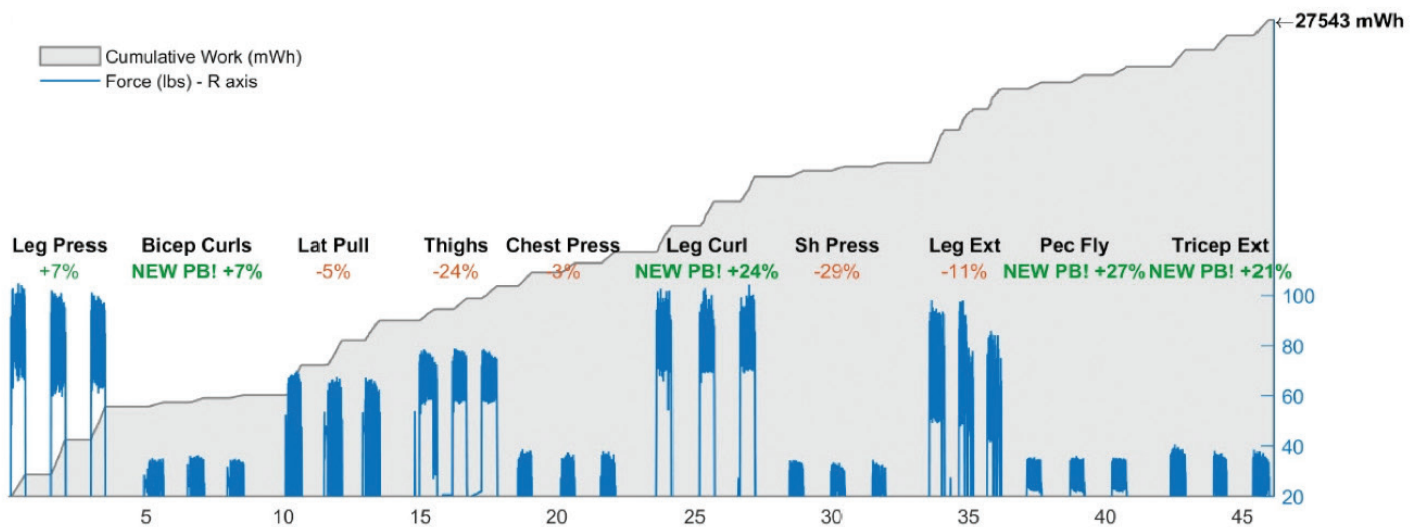


## Noteworthy Accomplishments

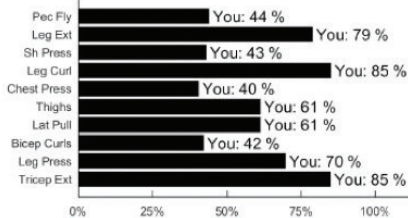
Top performance from the women today!  
 You burned 237 Calories today on the machines!  
 New personal best for TOTAL OUTPUT! **+ 5%**  
 New personal bests: 4  
 Improvements from last time: 5



Cumulative Work (mWh)  
 Force (lbs) - R axis

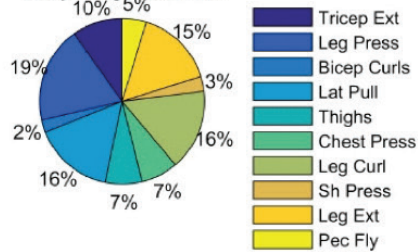


Here is how your mWhs compare, and recommendations to do better next session

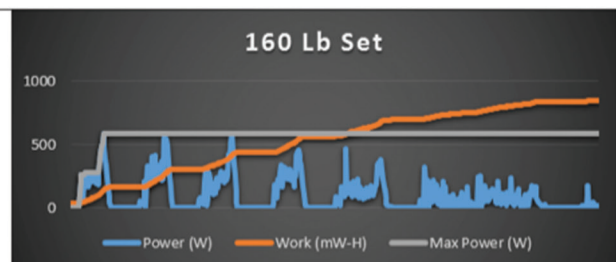
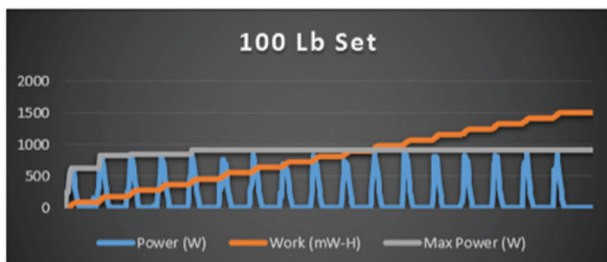
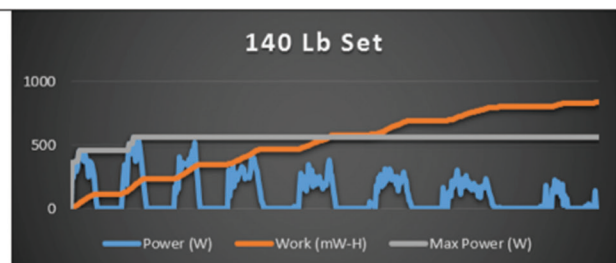
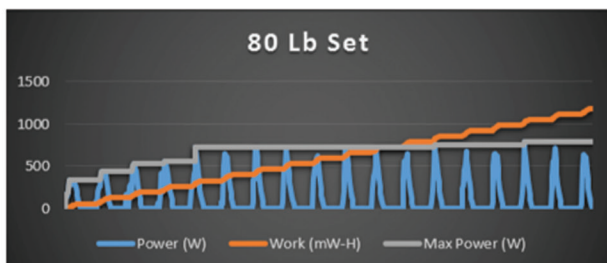
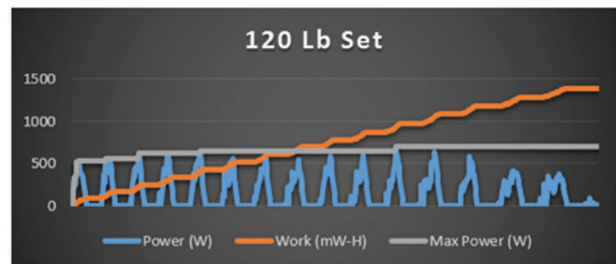
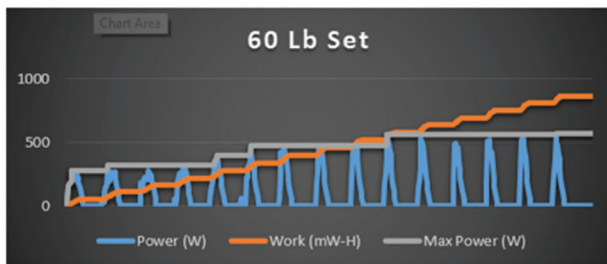
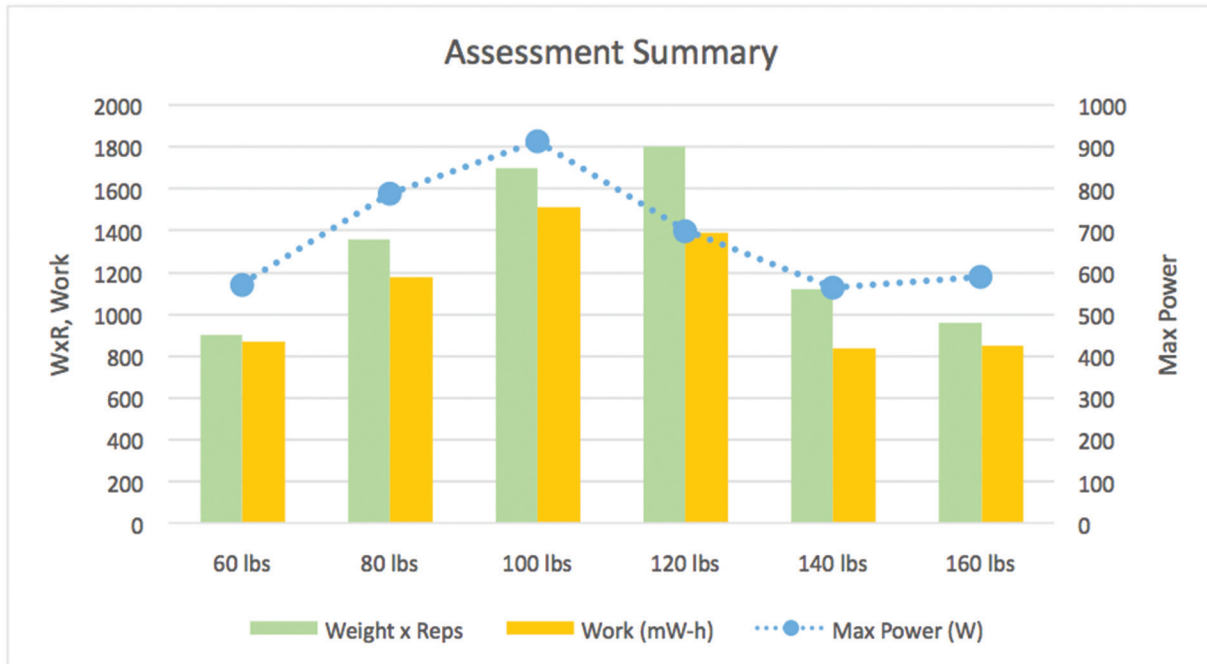


Your Avg Setting: 30 lbs, Next: Move ↑ to 40 lbs  
 Your Avg Setting: 80 lbs, Next: More Reps!  
 Your Avg Setting: 30 lbs, Next: More Reps!  
 Your Avg Setting: 80 lbs, Next: More Reps!  
 Your Avg Setting: 30 lbs, Next: More Reps!  
 Your Avg Setting: 70 lbs, Next: More Reps!  
 Your Avg Setting: 60 lbs, Next: More Reps!  
 Your Avg Setting: 10 lbs, Next: Move ↑ to 20 lbs  
 Your Avg Setting: 90 lbs, Next: More Reps!  
 Your Avg Setting: 30 lbs, Next: More Reps!

## Output by Exercise



# ADVANCED: STRENGTH ASSESSMENT, WORKOUT OPTIMIZATION



## ACKNOWLEDGEMENTS



### Real People Behind the Data

A special thanks to all of the brave early adopters who trusted us with their time and energy over these twelve weeks. Thank you to the gym owners (Laura, Scott) and trainers (Tyce, Hector, Alyssia, Sandy) who welcomed us and introduced us to their members and clients. Thank you to Dr. Victor Katch, David Berman, Dr. Wendy Kort, and Dr. Stephen Lebouf for helping us navigate the vast and varied waters of exercise science. There have been countless others who contributed ideas to the project.



**The next pilot is already underway.**

Stay tuned for more.



ShapeLog automatically captures **over one million data points** from every workout to help you **work out smarter.**

**Join in now!**  
Give ShapeLog a try and see what your data says.



**ShapeLog.com**