

Written Assignment 2 - specification

You are approached by Ryan Morrison, the mayor of a medium-sized city in the Midwest of the United States. He has heard that you know a lot about gamification and believes that gamification techniques can transform city government.

He would like to start with the health of city employees. The city has 50,000 employees and they happen to have exactly the same rates of obesity as the U.S. average: 34.4% overweight (but not obese) and 33.9% of them are obese. 53.1% of the city's employees do not meet the U.S. Physical Activity Guidelines for aerobic physical activity and 76% of them fail to meet the Guidelines for muscle-strengthening activity. The city pays for health benefits for its employees and this cost is a huge part of the city budget. Economists in Mayor Morrison's office have estimated that a 3% improvement in the average physical fitness of city employees would amount to a US\$94 million reduction in annual city health costs; a 5% improvement would save US\$188 million.

Describe in general terms a gamified system that could effectively motivate behavior change to address the challenge presented above. Specifically, explain how the system would effectively incorporate intrinsic motivation, extrinsic motivation, or both. Your answer should address the fact that this is an internal gamification project, targeted at the institutional goals of the city government. The system can use any technology (or no technology!), so long as the resources required seem justified by the scope of the opportunity.

Format: Maximum of 500 words. A normal answer will be 2-3 paragraphs of text, and/or a set of bullet points. Your submission should be self-contained (not requiring the grader to view any outside materials) and should provide sufficient details for the grader to understand the basis for your statements.

Program design by Cheryl Orosz

I was particularly pleased by and proud of this assignment. Using gamification techniques to gently nudge people toward better life choices on their own terms seems a much better idea than coercive "wellness" programs that actually just penalize those unwilling to participate and feel their privacy is being systematically violated. Worse, some seem to tell participants to make the lifestyle changes that the program designer thinks are best, or else! I've heard a few horror stories from friends whose workplaces decided to implement such a program. One size does not fit all, and the best path to wellness is one that the participant can enjoy and take ownership of.

Everyone would like to be healthier. Some find it difficult to find the motivation or time to exercise. Intrinsic motivation can be sapped by the demands of balancing obligations of family, organizations, work, and school.

Consider three categories of employees:

- **Those who already meet U.S. Physical Activity Guidelines (20-25% of employees)**, who may enjoy additional support, rewards, and recognition; we will recruit them to mentor other employees.
- **Those who would like to incorporate exercise and wellness into their lives but have barriers.** We expect this to be the largest group. Extrinsic encouragement and rewards will foster improvements. Demonstrating that workplace culture supports and encourages healthy lifestyles is important to support internalization of motivation over time.
- **Those who have no intrinsic motivation to exercise.** We may not be able to immediately reach skeptics. As they see improvements in the health and wellness of peers, we expect that some will become interested in program. Coercive programs have been shown to increase resistance to making life changes, so we will avoid punitive measures.

We will provide education and support in a voluntary program. We will employ a small staff to develop, expand, and maintain resources including a tracking web site, articles on healthy eating and simple exercises, and a moderated wiki. A free pedometer will be provided to any interested participant. Each participant can earn “Wellness Points” (WP) by

- reading articles on the web site or wiki and completing a short comprehension quiz
- logging steps each day from the pedometer
- adding resources to the wiki
- logging daily exercise and health activities:
 - met goals for fruits & vegetables servings
 - aerobic exercise (kickboxing, Zumba)
 - strength exercise (weights, push-ups, squats)
 - meditation
- organizing or participating in wellness-promoting group activity (lunch walking group, yoga class) with co-workers, beyond points for the activity itself
- completing President’s Fitness Challenge testing, or completion of significant events, e.g. a triathlon, including special badges
- meeting self-directed goals; suggested goals will be available, self-designed quests encouraged
- demonstrating consistency (for example, exercise 4 days per week)
- trying new activities

WP will be redeemable for token prizes (mugs, tee shirts) at levels indicating habit formation. These and the virtual rewards (badges for events, special activities, level, etc.) involve introjection by highlighting pride of accomplishment.

For those that demonstrate significant improvement in or maintenance of fitness or weight/BMI targets, we will award small amounts of bonus vacation time per month (1-2 hours), up to 3 extra days per year. A department can earn a day to go home early on a Friday, for completing a group goal. These are the most external rewards offered, for results most directly tied to the institutional goal.

Participants will see improved health from making changes they choose, and will identify with the value of healthy living to take ownership of health goals. We will foster a health-friendly work environment, where individuals can meet their goals while meeting the City’s goal of improving the wellness of employees to control costs.