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 .

Our goal is to help our employees become more healthy and active – so we are offering a program filled with intrinsic rewards (appealing to the need for Autonomy, Competence, Relatedness, Altruism) and extrinsic motivators (Status, TangibleStuff, RecognitionOfEffort, UnexpectedRewards) and structured fun …

**VirtualTrainer** - People avoid using free weights and exercise machines because they don't know how to use the equipment or forget their weight settings, and because it can get boring. VirtualTrainer removes these roadblocks -- providing motivational dialog, suggestions for weight settings and safe usage. Once Virtual Trainer recognizes the piece of equipment, it suggests settings, provides equipment usage instructions, tracks progress, detects boredom and verbally motivates. Employees control VirtualTrainer by selecting their fitness goals and selecting a VirtualTrainer personality/voice. [Autonomy-Competence]

**HealthyEatingBingo!** – Lunch receipts for healthy meals have a special code printed at the bottom. When an employee enters this code, they get a HealthyEating Bingo! chit, and progress towards victory on their HealthyEatingBingo! board. The board persists on their page until they win … or until the end-of-the-month, when a new board is posted. [TangibleStuff-UnexpectedRewards]

**Foursquare-ish GymMap** - Workouts are more enjoyable with friends, and with a nod to Foursquare, we set up a system to increase the social content of gym-ming. Check-in occurs both when leaving to go to the gym and when arriving at the gym, because if you wait til you are at the gym, you will be done with your workout by the time your friends can get there. Each gym visit is worth 2 check-in points, and everyone who checks in at least 15 times in a month is entered into a prize lottery.
[Relatedness-Competence-Status-TangibleStuff-UnexpectedRewards]

**CardioChaser** lets you cardio-compete with friends who are far away. CardioChaser syncs up

your phone to your cardio machine, and your friend syncs up their phone to their cardio machine, and you are off to the races. Each is represented by a little blip on the screen, and the two blips race around the track. Seeing your friend's blip catching up to you motivates you to work harder. Even when you don't have friends gymming at the same time, you can CardioChase with yourself (previous races can be recalled from the database). [Competence-Relatedness-Status-RecognitionOfEffort]

**MovingGallery** - This section highlights employees on the move ... in group sports, community service, or lunchtime walks. Employees on sports teams can post their photos, achievements, and announcements re upcoming events. Active community service groups are also featured -- like the group who recently worked the BeachCleanUp. Employees post maps/descriptions of their lunchtime walk routes ... or news of the upcoming 3-Mile SpringScavengerHunt, the annual spring event where we take a lunchtime walk and find clues along the way to solve the PuzzleOfSpring. [Altruism-Relatedness-Status-RecognitionOfEffort-UnexpectedRewards]

**HealthiestDepartment** - A leaderboard shows the departments charting employees progress towards healthy habits, and departments compete for the title of HealthiestDepartment (as well as group and individual prizes) on a quarterly basis, with leaderboard tracking current status and highlighting previous victors. [Relatedness-RecognitionOfEffort-Status-TangibleStuff-Competence]