

Bella Mossa: One Italian city, two mass-engagement programmes – a comparison



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Introduction

In 2017, SRM, the public transport authority in Bologna, Italy, wanted to try a new approach to tackling CO₂ emissions. The city had tried banning the use of polluting vehicles during the day and wanted to see if incentives would make more difference than penalties. With funding from the European Commission's Horizon 2020 EMPOWER programme¹, they partnered with BetterPoints to build *Bella Mossa*, a six-month incentives scheme that would encourage large numbers of people to reduce their day-to-day reliance on single-occupancy car journeys.

The BetterPoints system comprises a user-facing smartphone app, a digital management platform and client-facing dashboards. Participants in a client's programme track their activity in the app, which they can do manually or let the app do automatically. The client offers BetterPoints (reward points that can be redeemed against high-street vouchers or donated to charity) and can administer a range of other incentives, such as push-messages, treasure-hunts and team leaderboards.

SRM partnered with more than 100 local, national and global brands to provide a wide range of reward vouchers. They wanted the bar to participation to be as low as possible, so they asked BetterPoints to build a barcode into the app so that participants could scan the vouchers they had collected directly into the retailers' barcode readers.

One thing is clear: a programme's social and environmental impact does not simply depend on the number of participants.

The programme in 2017 generated a huge amount of interest and earned SRM the CIVITAS Bold Measure Award that year. It was so successful that SRM commissioned a second, six-month *Bella Mossa* programme from BetterPoints in 2018. They were helped with a little more funding from EMPOWER to gather data from two programmes that could be compared and learned from.

Bella Mossa 2017 attracted 15,000 active users. The numbers were down to 10,000 in 2018 though, surprisingly, that didn't affect engagement; in fact, many more active journeys (walking and cycling) were made in 2018 than in 2017. The amount of CO₂ mitigated went down only slightly by around 2% in 2018, which is interesting considering participant numbers were down by a third. 38% of participants from 2017 took part again in 2018: it's possible they had been so motivated in year one that they increased their activity in year two. Whatever the reason, one thing is clear: a programme's social and environmental impact does not simply depend on the number of participants.

¹ Horizon 2020's EMPOWER programme was set up by the European Commission to 'influence drivers of conventionally fuelled vehicles to change their travel choices by rewarding change'.

<https://ec.europa.eu/inea/en/horizon-2020/projects/h2020-transport/urban-mobility/empower>

Design and delivery

Bella Mossa 2017 simply offered rewards for making journeys by foot, bicycle, bus, train or car-sharing and set up leaderboards for businesses to run workplace challenges. They repeated this in 2018, with the same level of rewards but with extra ways to earn points. In 2018, participants could form teams outside the workplace to compete against friends and family, join new monthly challenges, and take part in a special challenge for the summer holiday. SRM also introduced a Schools Challenge in 2018, which pitted local schools against each other (Table 1).

Table 1

| 2018 | 2017 |
|---|---|
| Walking, cycling, bus, train, car sharing | Walking, cycling, bus, train, car-sharing |
| 60 points per trip, 100 points total distance | 60 points per trip, 100 points total distance |
| 4 trips per day, per vehicle | 4 trips per day, per vehicle |
| Extra points for 3 out of 7 and 5 out of 7 days in a week | Extra points for 3 out of 7 and 5 out of 7 days in a week |
| Extra points for special events | Extra points for special events |
| Workplace challenge | Workplace challenge |
| Personal Teams | |
| Monthly Challenge | |
| On Holiday with Bella Mossa (Jun-Aug) | |
| Schools Challenge | |

Bella Mossa 2017

Table 2

| Active participants | Commercial partners | km of sustainable travel | Number of journeys | Co2 mitigated (tonnes) |
|---------------------|---------------------|--------------------------|--------------------|------------------------|
| 15,000 | 85 | 3.7M | 895,000 | 728 |

Over the six months between March and October 2017, 15,000 people recorded 895,000 sustainable transport journeys, totalling 3.7 million kilometres – equivalent to 93 times around the globe. It's calculated those journeys mitigated 728 tonnes of CO2 emissions².

Participants used the app to track their journeys and earn points. The programme was designed to encourage the incentivised behaviour to continue over time (Figure 1 and Figure 2).

Journeys were tracked using GPS in participants' mobile phones, verified by sophisticated algorithms and OpenStreetMap data. Cheating was mitigated by calibrating a validation system on each mode of transport and waypoint checking.

The programme hit its six-month target registration numbers³ (10,000) in the first week, thanks to a decent advertising budget that enabled SRM to get national media coverage.

The programme appealed more to younger people, with 59% of participants between the ages of 18 and 35 (Figure 5). This would change in 2018. The gender split was 60% female and 40% male (Figure 6), which would be the same in 2018.

In September, the final month of the programme, SRM tried more gamification, which resulted in a major spike in user activity. The game was simple: turn up at the city square at 10am on Saturday to get a mystery prize. At 9:30 there was a line of people around the square.

This demonstrated the power of gamification in engaging people even in the last month of a project and paved the way for features that SRM would commission for the programme in 2018.

The game was simple: turn up at the city square at 10am to get a mystery prize. By 9:30 there was a line of people around the square.

² Compared to the same journeys made in a large, petrol car as defined in [Defra's 2013 GHG Conversion Factors for Company Reporting](#).

³ In total, 35,000 people registered for the programme. 15,000 of those actually took part.

Figure 1 – The basic loop

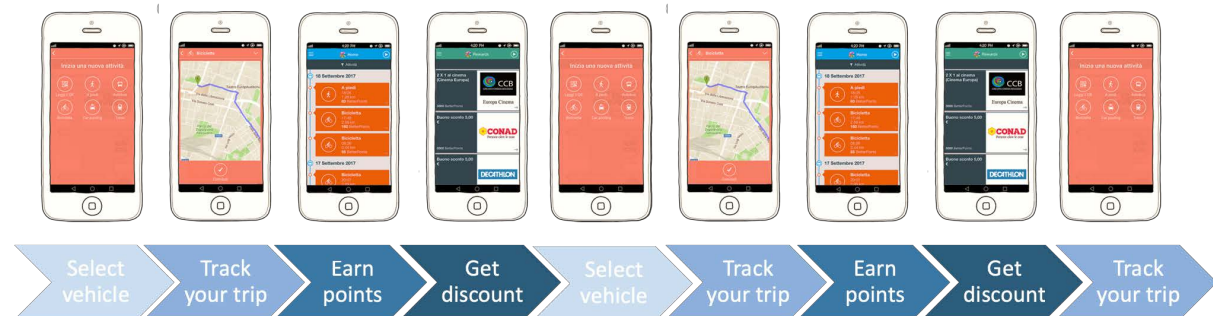


Figure 2 – Extended loop



Workplace challenge 2017

Table 3

| Teams | Employees | km travelled | co2 mitigated |
|-------|-----------|--------------|---------------|
| 39 | 1,800 | 1M | 190 |

The Workplace challenge was very successful in 2017 (Table 3), with results above average. 1,800 people from 39 workplace teams travelled one million kilometres.

However, the feedback made clear that it could be improved with more informative leaderboards, such as the option to see the full list of competitors (participants could only see a segment showing their own position). This feedback was taken into account in year two, which yielded more uptake and better results (Table 5).

Bella Mossa 2018

Table 4

| Active participants | | Commercial partners | | km of sustainable travel | | Number of journeys | | Co2 mitigated (tonnes) | |
|---------------------|------|---------------------|------|--------------------------|-------|--------------------|------|------------------------|-----|
| 10,000 | -33% | 108 | +27% | 3.7M | +/-0% | 995,000 | +11% | 711 | -2% |

Over the six months between March and October 2018, 10,000 people recorded 995,000 sustainable transport journeys – 100,000 more than the previous year, despite the 33% drop in participant numbers. The distance covered was the same – 3.7 million kilometres – which suggests that the encouragement to use the car less frequently for short, everyday journeys was more successful this year.

There were fewer participants in 2018. In many cases, however, levels of engagement were even greater than 2017.

Based on the feedback from 2017, SRM wanted to apply more gamification and, by doing so, target the age group identified as ‘gamers’ (35–54). They also wanted to add a social dimension, which was missing the previous year.

To inject some dynamism, they created a monthly challenge, each with a different theme and its own goals. For the social element, they set up team challenges for informal, self-selecting groups, in which each team member had to reach the goals in order for the team to earn its rewards. Both of these initiatives achieved the goal of extending user engagement over a longer period compared to 2017.

There were fewer participants in 2018, due mainly to the reduced advertising budget and lack of national media coverage inspired by the programme’s novelty value the first time around. However, engagement levels were much the same, and even greater for walking, cycling and car-sharing (Table 6).

62% of the 2018 cohort were new whereas the remaining 38% had taken part in 2017 (Figure 4). The ages of participants were now spread evenly across the 25 to 54 brackets (Figure 5). The gender split remained the same: 60% female, 40% male (Figure 6).

Workplace challenge 2018

Table 5

| Teams | | Employees | | km travelled | | co2 mitigated | |
|-------|------|-----------|------|--------------|------|---------------|------|
| 53 | +36% | 2,080 | +16% | 1.5M | +50% | 290 | +53% |

Improvements to the leaderboards, based on feedback from the previous year, paid off – particularly the new option to see the full leaderboard rather than just the portion containing the viewer. While the number of participants rose by 16%, the distance they travelled increased by 50%. Participants in workplace challenges accrued twice as many points as other *Bella Mossa* participants.

Engagement

| Year | Active participants | Commercial partners | km of sustainable travel | Number of journeys |
|------|---|--|--|--|
| 2018 | 10,000 -33% | 108 +27% | 3.7M +/-0% | 995,000 +11% |
| 2017 | 15,000 | 85 | 3.7M | 895,000 |

Despite lower numbers of active participants in year two (Figure 3), the amount of active travel (walking and cycling) increased (Table 6). The number of journeys on foot and the distance travelled both rose by around 25%. The distance travelled by bicycle dipped a little, but only by just over 4%. Interestingly, there was less activity on public transport in year two – bus travel increased marginally but train travel dropped by nearly 9%.

Figure 3

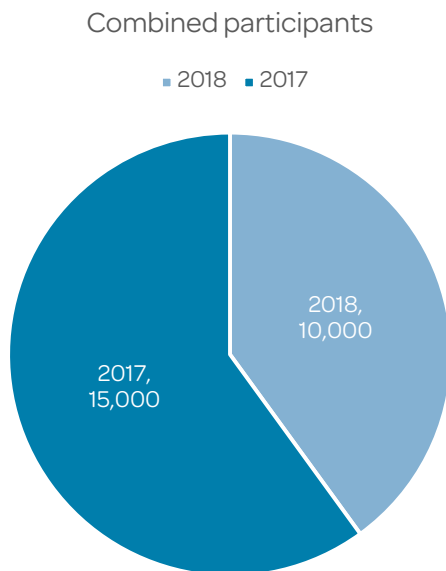
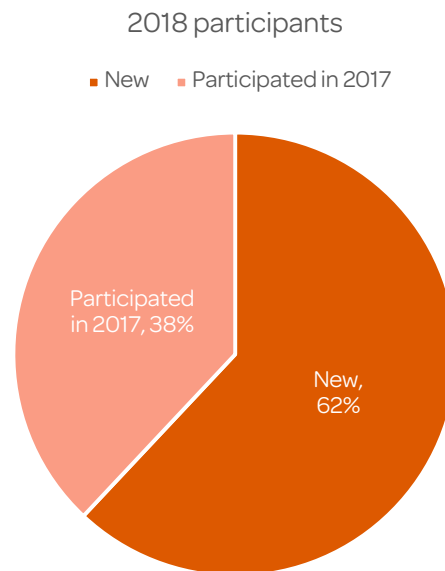


Figure 4



Retention

Six months is a long time to keep people engaged and it is normal for an app of this kind to see a drop-off after the first two or three months. In addition, Bella Mossa ran into the school holidays, which saw a change in people's mobility habits.

However, more people stayed active for longer in 2018 than in 2017, thanks to the improved workplace challenge and additional gamification elements. The success in 2017 of offering people a prize for turning up at the town square at a given time, despite it being in the last month of the programme, had demonstrated the power of gamification, which SRM capitalised on in year two.

Demographics

The gender split was the same in both years: 60% female, 40% male (Figure 6).

The age range, however, shifted upwards. Whereas in 2017 it was dominated by younger people (18–34, 59%), this group dropped away in 2018 (40%), replaced by growth in the upper age groups (Figure 5).

Figure 5

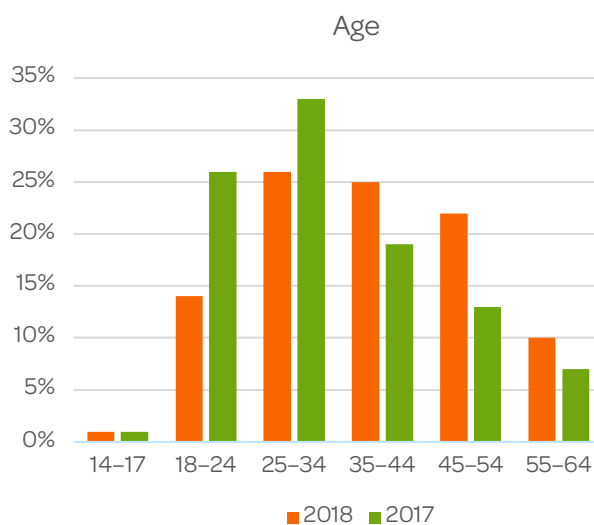
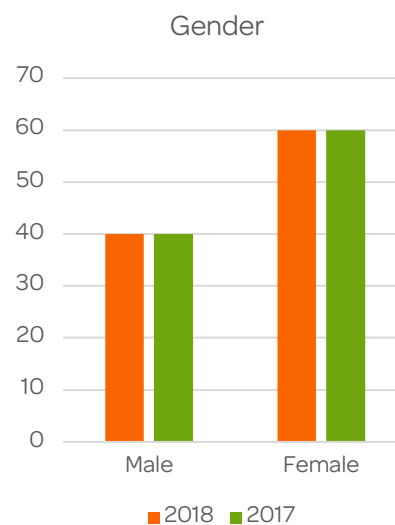


Figure 6



Impact

Air quality

While the amount of Co2 mitigated by public transport dropped significantly in 2018 (21% for train travel), the amount mitigated by walking rose by nearly 28% (Table 6). It's hard to draw a correlation and conclude that year two further improved the activity of participants from year one, but it is interesting that 2018 – in which 38% of participants had also taken part the previous year (Figure 4) – saw a decrease in train journeys and an increase in walking and cycling .

Public health

The number of calories burned rose by nine million in 2018 (Figure 8), thanks to the increased percentage of active journeys (walking and cycling) (Table 6).

Figure 7

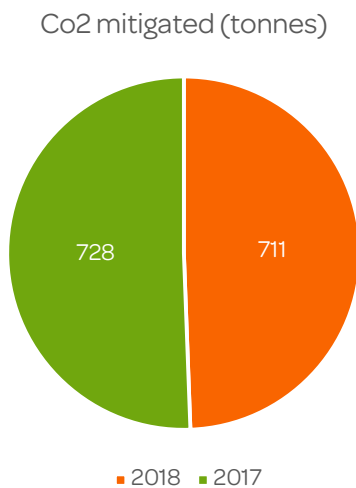


Figure 8

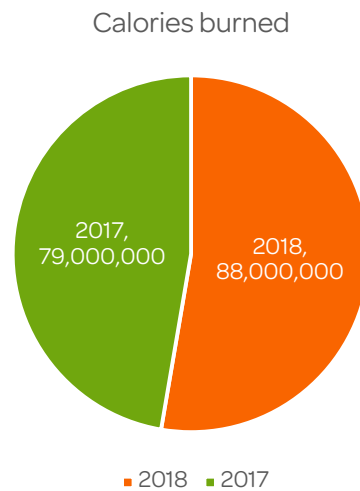







Table 6

| | | 2018 | 2017 |
|--|------------------------|---------|------------|
|  Walking | km walked | +28.8% | 670,000 |
| | Walking journeys | +24.9% | 437,000 |
| | Calories burned | +29.0% | 40,000,000 |
| | Co2 mitigated (tonnes) | +27.8% | 161 |
|  Cycling | km cycled | -4.1% | 980,000 |
| | Cycle journeys | +3.4% | 300,000 |
| | Calories burned | +/-0.0% | 48,000,000 |
| | Co2 mitigated (tonnes) | -5.3% | 233 |
|  Bus | km travelled | +1.9% | 846,000 |
| | Bus journeys | +3.6% | 203,000 |
| | Co2 mitigated (tonnes) | +0.9% | 108 |
|  Train | km travelled | -19.6% | 1,045,000 |
| | Train journeys | -8.8% | 52,000 |
| | Co2 mitigated (tonnes) | -20.8% | 190 |
|  Car-sharing | km travelled | +153.3% | 114,000 |
| | Car-share journeys | +53.5% | 3,300 |
| | Co2 mitigated (tonnes) | +111.1% | 19 |

Conclusions

Retention requires dynamism.

Gamification made a big difference in year two. Thanks to the improved workplace challenge and new monthly challenge, more people stayed active for longer in 2018 than in 2017.

It's not a numbers game.

The number and distance of active travel journeys increased in 2018 despite the number of participants being a third lower than the year before.

Put in the effort and you'll see the benefit.

SRM put a lot of time and effort into planning *Bella Mossa*, absorbing feedback and delivering the programme. *Bella Mossa's* success was, in large part, down to their enthusiasm and determination to make it work.