

Financial impact of Pick Your Meal

Besides obvious and crucial environmental benefits, Pick Your Meal can help airline companies to accomplish important cost reductions. We tried to assess the impact that Pick Your Meal might have, using two main variables : the cost of meals and the cost of kerozene.

By reducing the number of meals brought on board, airline companies can reduce these two cost items : Pick Your Meal will allow airline companies to pay less meals to their suppliers (most airline companies outsource catering), and will also help them reduce the weight of their plane, thus reducing kerozene consumption.

For the sake of clarity, we decided to illustrate the financial impact of our solution through the example of Air France. Since some data (actual cost of one meal, number of meals brought on-board per passenger,) is unavailable to the public, we used industry averages, or built our own estimations. The details of our calculations are available on the following link:

https://docs.google.com/spreadsheets/d/1f6CouJHo_UNbv282-F3xlwgU37iJ_stZS6mesc7ifcU/edit?usp=sharing

We also chose to present 3 scenarios. Each of the scenario depicts a different decrease in the number of meals prepared per passenger : a 10% decrease (from 2 to 1.8 meals prepared), a 15% decrease, and a 20% decrease. However, we think that Pick Your Meal could actually help companies accomplish more drastic decreases.

Direct cost of meals

Direct costs of meals - Air France current situation and potential savings				
Data	Current	Scenario 1	Scenario 2	Scenario 3
<i>Cost of 1 meal for AF (\$)</i>	\$6.00	\$6.00	\$6.00	\$6.00
<i>Number of meals prepared / passenger</i>	2	1.8	1.7	1.6
<i>Numberb of passengers /year (long haul)</i>	25,000,000	25,000,000	25,000,000	25,000,000
Direct costs of meals / year(\$)	\$300,000,000.00	\$270,000,000.00	\$255,000,000.00	\$240,000,000.00
Savings / year (\$)		\$30,000,000.00	\$45,000,000.00	\$60,000,000.00

Interpretation : When the number of meals prepared per passengers shifts from 2 to 1.8 (Scenario 1), Air France can save \$30M every year. When the number of meals prepared per passengers shifts from 2 to 1.7 (Scenario 2), Air France can save \$45M every year. Finally, when the number of meals prepared per passengers shifts from 2 to 1.6 (Scenario 3), Air France can save \$60M every year. Therefore, by reducing the number of meals prepared per passenger, it is obvious the direct costs of meals will be reduced. The less meals per passenger Air France will prepare, the higher the savings will be.

Note : We chose to focus on long-haul flights, since Air France does not necessarily serve meals on other flights.

Costs of meals in terms of kerozene consumption

Costs of meals in terms of kerozene consumption - Air France current situation and potential savings				
Data	Current	Scenario 1	Scenario 2	Scenario 3
<i>Number of meals prepared / passenger</i>	2	1.8	1.7	1.6
<i>Weight of 1 meal (kg)</i>	1	1	1	1
<i>Number of yearly passengers (long haul)</i>	25,000,000	25,000,000	25,000,000	25,000,000
Weight of meals (kg)	50,000,000.00	45,000,000.00	42,500,000.00	40,000,000.00
Cost of kerozene (\$ per gallon)	\$1.60	\$1.60	\$1.60	\$1.60
<i>Kerozene consumption per flight (6000km) due to 1kg of meals on board (gallon)*</i>	0.4	0.4	0.4	0.4
Cost of meals in terms of kerozene consumption (\$)	\$32,000,000.00	\$28,800,000.00	\$27,200,000.00	\$25,600,000.00

Yearly Savings (\$)		\$3,200,000.00	\$4,800,000.00	\$6,400,000.00
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Interpretation : In the Scenario 1, when the number of meals prepared per passengers shifts from 2 to 1.8, the weight of meals will be reduced from 50Mkg to 45Mkg, and the cost of meals in terms of kerozene consumption from \$32M to \$28,8M; Air France can save \$3,2M every year. When the number of meals prepared per passengers shifts from 2 to 1.7 (Scenario 2), the weight of meals will be reduced from 50Mkg to 42,5Mkg, and the cost of meals in terms of kerozene consumption from \$32M to \$27,2M; Air France can save \$4,8M every year. Finally, when the number of meals prepared per passengers shifts from 2 to 1.6 (Scenario 3), the weight of meals will be reduced from 50Mkg to 40Mkg, and the cost of meals in terms of kerozene consumption from \$32M to \$25,6M; Air France can save \$6,4M every year. Therefore, by reducing the number of meals prepared per passenger, it is obvious that the weight of meals will be reduced, as the cost of meals in terms of kerozene consumption, and that Air France will save money.

Total savings

Total savings				
Data	Current	Scenario 1	Scenario 2	Scenario 3
Direct Costs of meals	\$300,000,000.00	\$270,000,000.00	\$255,000,000.00	\$240,000,000.00
Cost of meals in terms of kerozene consumption (\$)	\$32,000,000.00	\$28,800,000.00	\$27,200,000.00	\$25,600,000.00
Total Costs of meals	\$332,000,000.00	\$298,800,000.00	\$282,200,000.00	\$265,600,000.00
Total Savings		\$33,200,000.00	\$49,800,000.00	\$66,400,000.00

Return on Investment

The investment in Pick Your Meal can prove very fruitful. Indeed, Pick Your Meal is a rather low cost solution, applied at a large scale. This can result in large scale economies.

Return on Investment			
Data	Scenario 1	Scenario 2	Scenario 3
Site development	\$15,000.00	\$15,000.00	\$15,000.00
Site maintenance per year	\$20,000.00	\$20,000.00	\$20,000.00
Wage of the person affected to the service per year	\$60,000.00	\$60,000.00	\$60,000.00
Total Savings per year	\$33,200,000.00	\$49,800,000.00	\$66,400,000.00
Return on Investment- Year 1	348.5	523.2	697.9
Return on Investment - Year 2	378.4	568.1	757.9
Return on Investment- Year 3	389.6	584.9	780.2
Return on Investment - Year 4	395.4	593.6	791.8

Interpretation : In each scenario, we consider that the site development costs \$15k, the maintenance per year \$20k and the wage of the person affected to the service per year is about \$60k. The only variable is the total savings per year as explained before. When \$33,2M are saved per year (Scenario 1), the return on investment is from about 348 to 395 between Year 1 and Year 4. When \$49,8M are saved per year (Scenario 2), the return on investment is from about 523 to 593 during the same period. Finally, when \$66,4M are saved per year (Scenario 3), the return on investment goes from about 697 to 791 during the same period.

Note: The return on investment was computed the following way : (Cumulated gains from investment - Cumulated cost of investment) / (Cumulated cost of investment)

Conclusion

The two variables used by Pick Your Meal - the cost of meals and the cost of kerozene - can help airline companies to accomplish important cost reductions. Each of the scenario depicts a different decrease in the number of meals prepared per passenger : a 10% decrease (from 2 to 1.8 meals prepared), a 15% decrease, and a 20% decrease, and then, the weight of their plane and the kerozene consumption would be reduced accordingly. The more the weight of their plane and the kerozene consumption would be reduced, the higher the return of investment will be.