

Dundalk Bay to Carlingford Greenway

Options Report – Volume 3 – Appendix C – Economic Appraisal

September 2026

AECOM ROD ROUGHAN & O'DONOVAN

TII Transport Infrastructure Ireland

Comhairle Contae Lú Louth County Council

Rialtas na hÉireann Government of Ireland | Tionscadal Éireann Project Ireland 2040

An Roinn Iompair Department of Transport

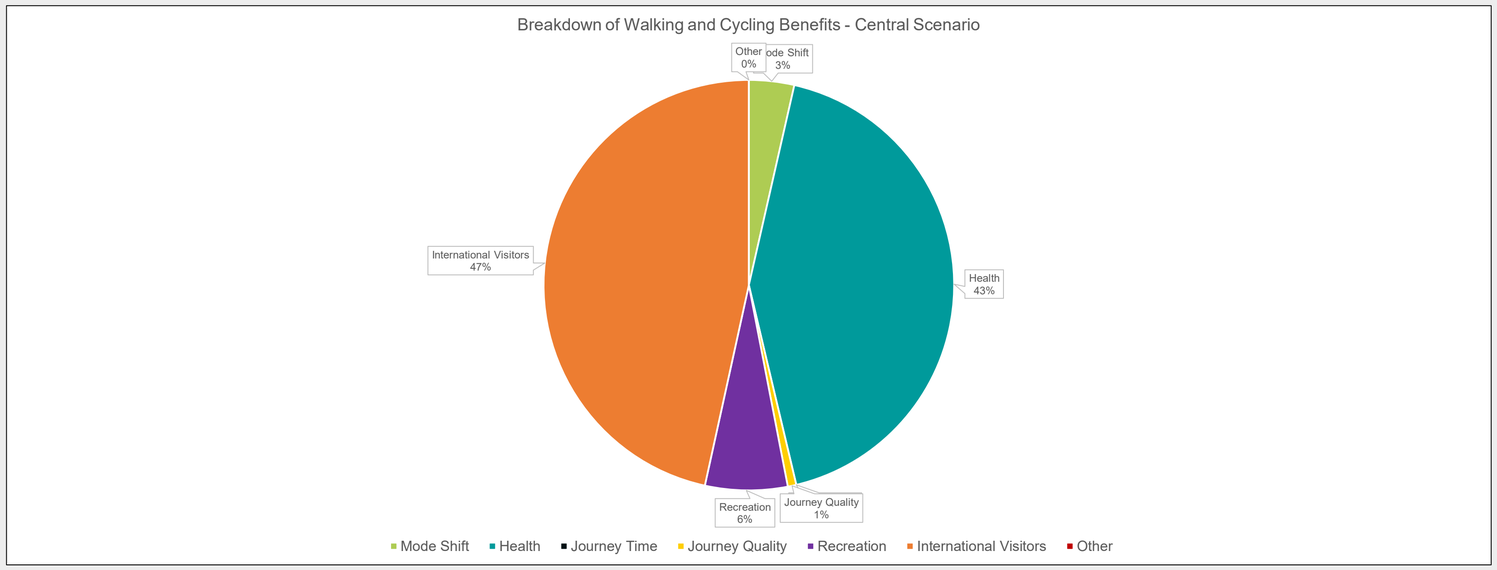
Greenway

Dundalk Bay to Carlingford Greenway

WESTMEATH NATIONAL ROADS OFFICE
Oifig na hIarmhí um Bhóithre Náisiúnta

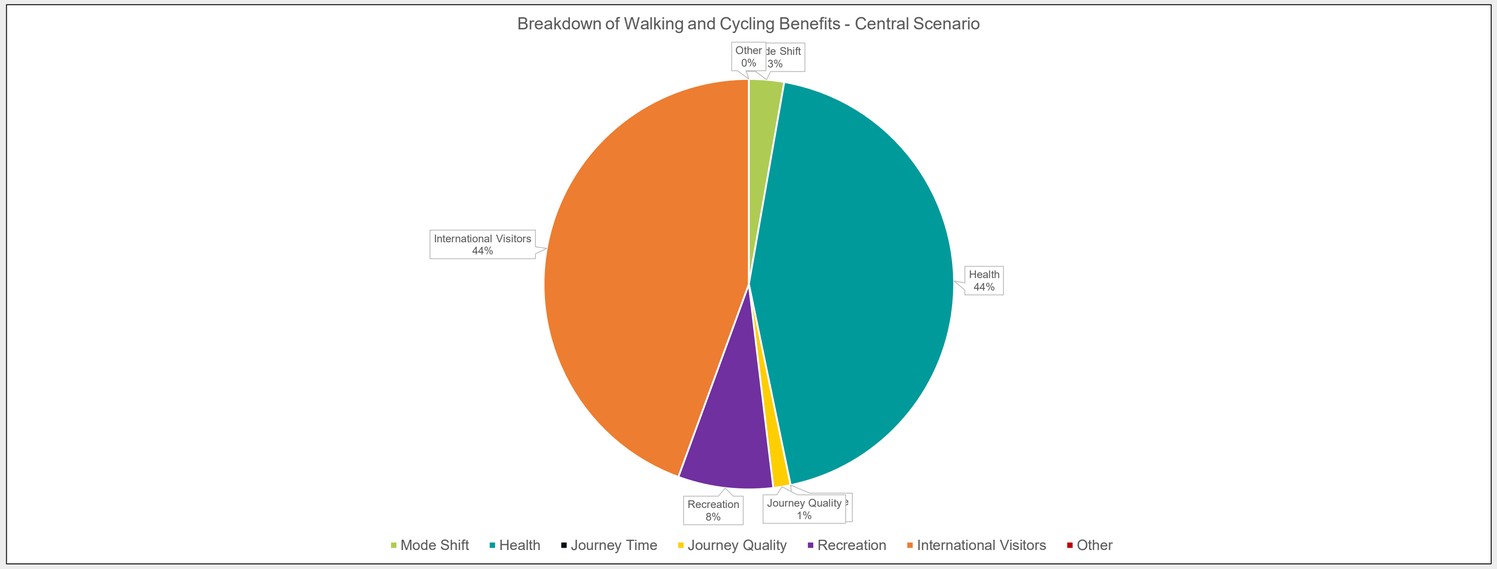
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€28,211**
☑	Vehicle Operating & Ownership Costs	€9,679
☑	Carbon	€13,498
☑	Air Quality	€516
☑	Noise	€335
☑	Congestion	€4,183
	Health	**€338,617**
☑	Reduced Mortality	€327,085
☑	Workplace Absenteeism	€11,532
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€5,303**
☑	**Recreation**	**€51,376**
☑	**International Visitors**	**€368,988**
	Other	**€0**
	Present Value of Benefits (PVB)	**€761,815**
	Present Value of Costs (PVC)	**€2,584,885**
	Net Present Value (NPV)	**-€1,823,069**
	Benefit-to-Cost Ratio (BCR)	**0.29**



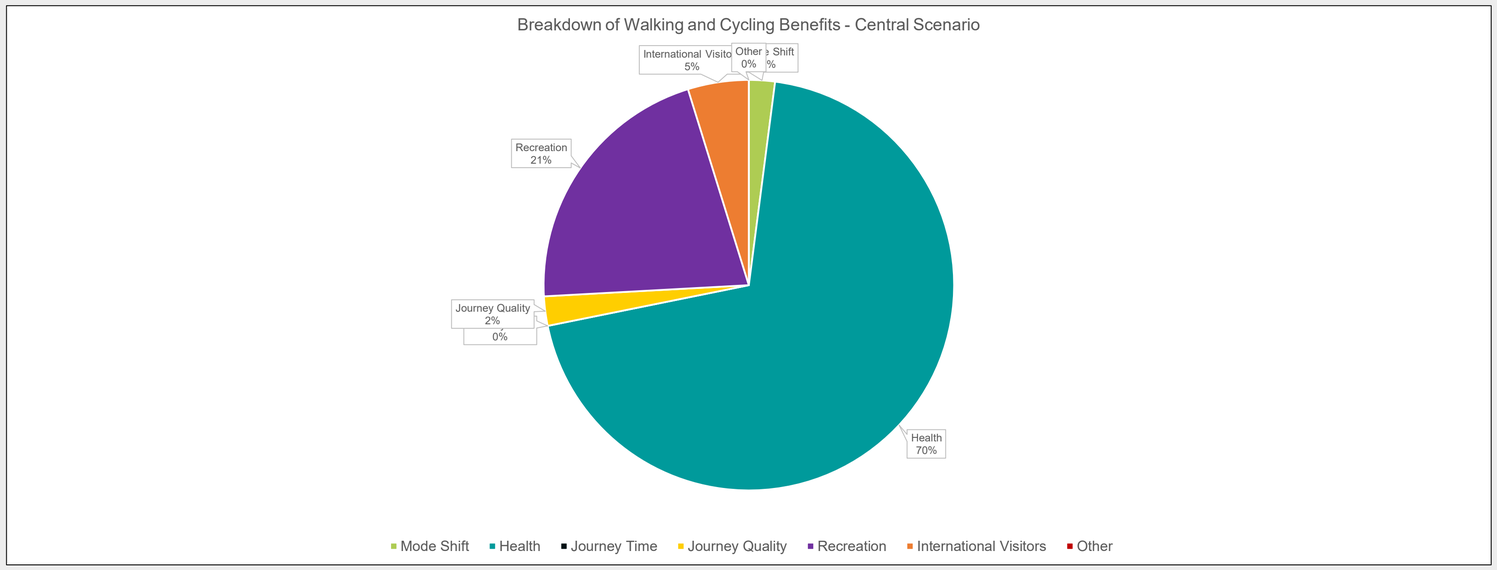
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€53,863**
☑	Vehicle Operating & Ownership Costs	€18,503
☑	Carbon	€25,737
☑	Air Quality	€987
☑	Noise	€641
☑	Congestion	€7,996
	Health	**€857,976**
☑	Reduced Mortality	€831,533
☑	Workplace Absenteeism	€26,443
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€26,420**
☑	**Recreation**	**€146,040**
☑	**International Visitors**	**€866,536**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,874,830**
	Present Value of Costs (PVC)	**€2,896,521**
	Net Present Value (NPV)	**-€1,021,690**
	Benefit-to-Cost Ratio (BCR)	**0.65**



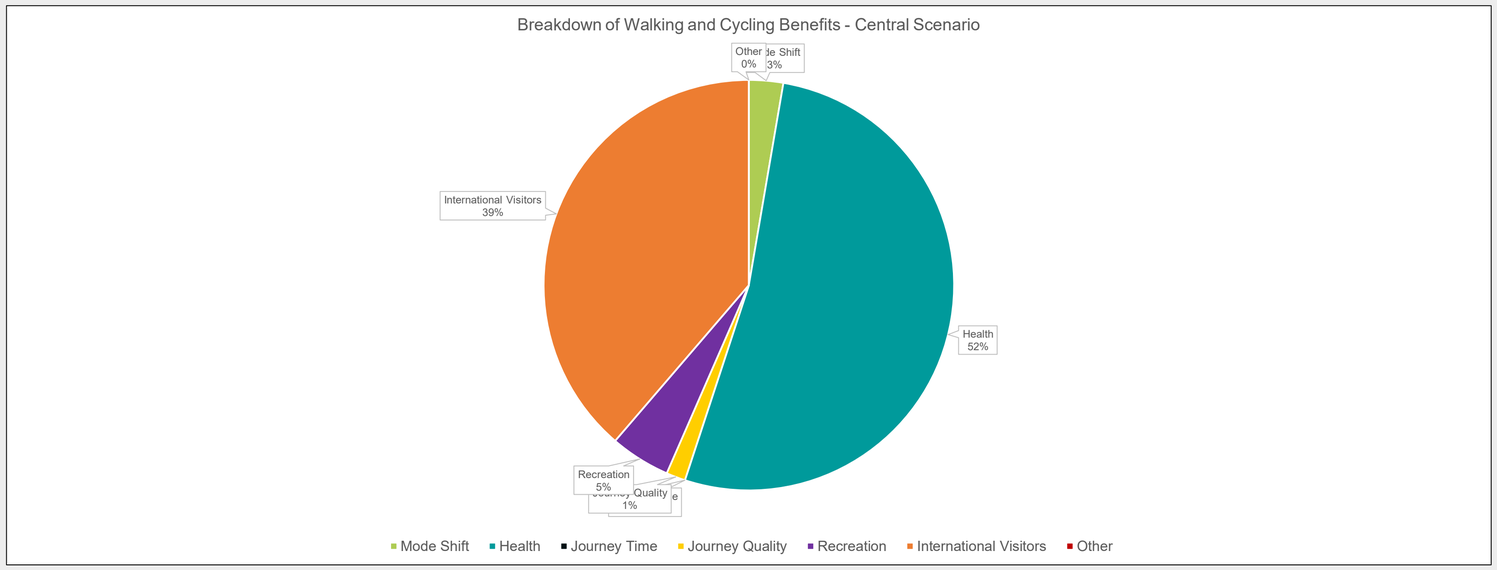
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€135,475**
☑	Vehicle Operating & Ownership Costs	€39,181
☑	Carbon	€63,905
☑	Air Quality	€4,012
☑	Noise	€2,765
☑	Congestion	€25,613
	Health	**€4,624,438**
☑	Reduced Mortality	€4,482,159
☑	Workplace Absenteeism	€142,279
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€153,068**
☑	**Recreation**	**€1,396,781**
☑	**International Visitors**	**€317,623**
	Other	**€0**
	Present Value of Benefits (PVB)	**€6,365,396**
	Present Value of Costs (PVC)	**€6,217,205**
	Net Present Value (NPV)	**€148,191**
	Benefit-to-Cost Ratio (BCR)	**1.02**



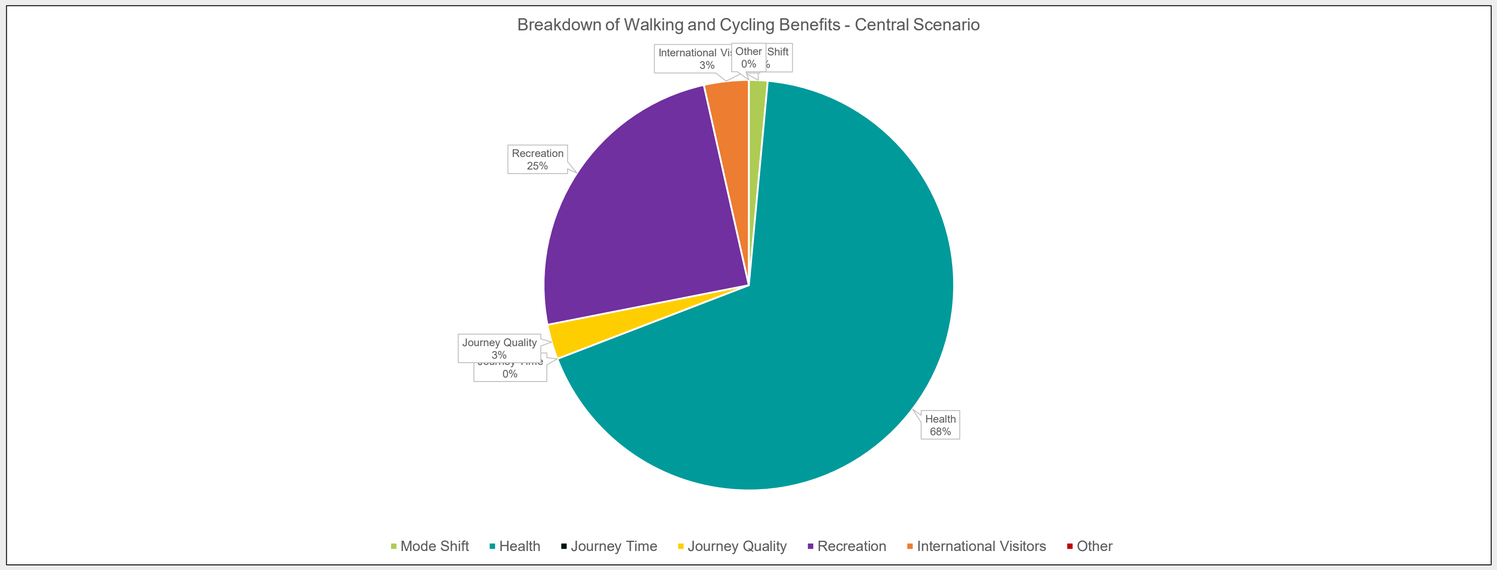
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€61,369**
☑	Vehicle Operating & Ownership Costs	€20,617
☑	Carbon	€30,026
☑	Air Quality	€1,100
☑	Noise	€715
☑	Congestion	€8,909
	Health	**€1,191,831**
☑	Reduced Mortality	€1,153,449
☑	Workplace Absenteeism	€38,383
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€34,303**
☑	**Recreation**	**€107,956**
☑	**International Visitors**	**€881,238**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,187,707**
	Present Value of Costs (PVC)	**€6,994,999**
	Net Present Value (NPV)	**-€4,807,292**
	Benefit-to-Cost Ratio (BCR)	**0.31**



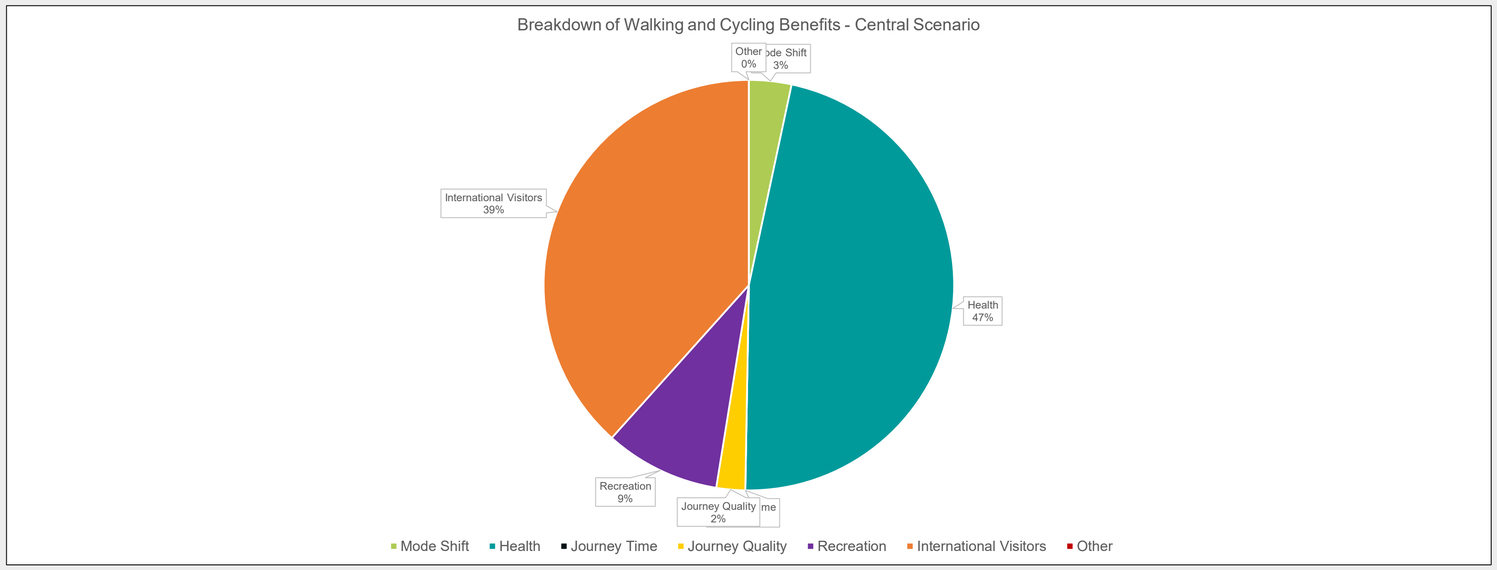
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€136,724**
☑	Vehicle Operating & Ownership Costs	€47,710
☑	Carbon	€64,200
☑	Air Quality	€2,544
☑	Noise	€1,652
☑	Congestion	€20,617
	Health	**€6,293,606**
☑	Reduced Mortality	€6,099,926
☑	Workplace Absenteeism	€193,680
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€255,638**
☑	**Recreation**	**€2,284,614**
☑	**International Visitors**	**€327,401**
	Other	**€0**
	Present Value of Benefits (PVB)	**€8,929,249**
	Present Value of Costs (PVC)	**€6,711,795**
	Net Present Value (NPV)	**€2,217,453**
	Benefit-to-Cost Ratio (BCR)	**1.33**



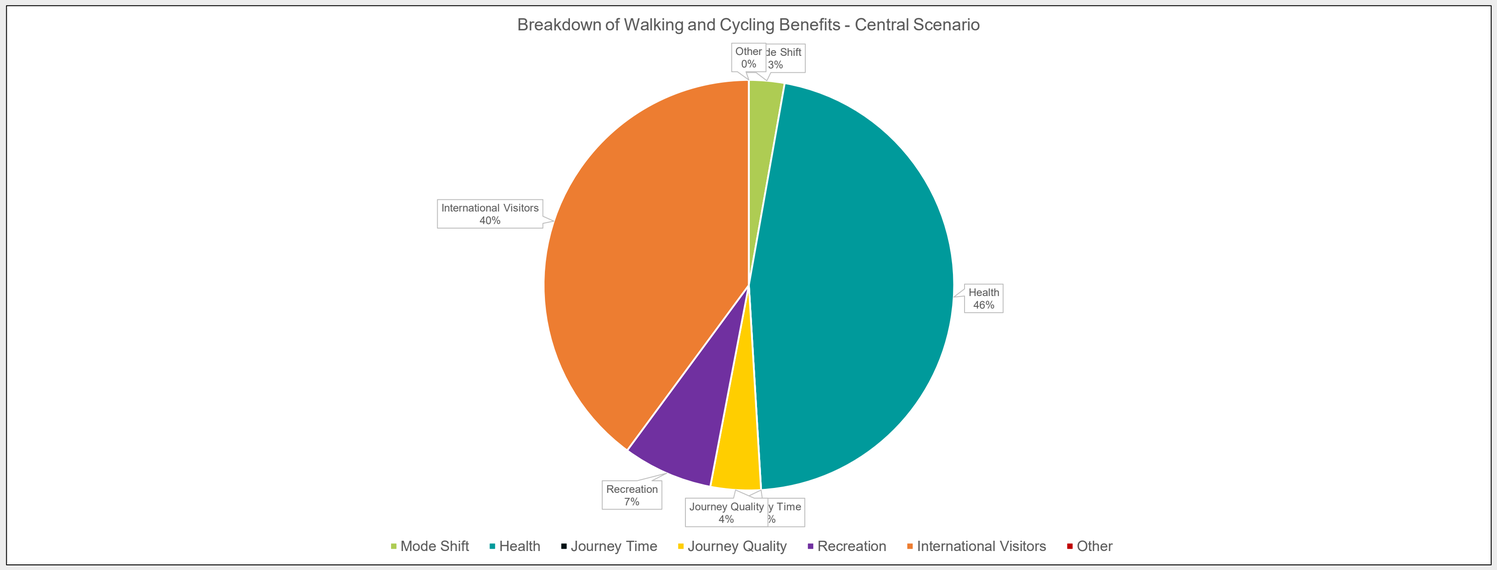
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€60,588**
☑	Vehicle Operating & Ownership Costs	€20,663
☑	Carbon	€29,178
☑	Air Quality	€1,102
☑	Noise	€716
☑	Congestion	€8,929
	Health	**€850,127**
☑	Reduced Mortality	€823,516
☑	Workplace Absenteeism	€26,611
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€41,125**
☑	**Recreation**	**€164,785**
☑	**International Visitors**	**€694,834**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,741,121**
	Present Value of Costs (PVC)	**€5,547,183**
	Net Present Value (NPV)	**-€3,806,062**
	Benefit-to-Cost Ratio (BCR)	**0.31**



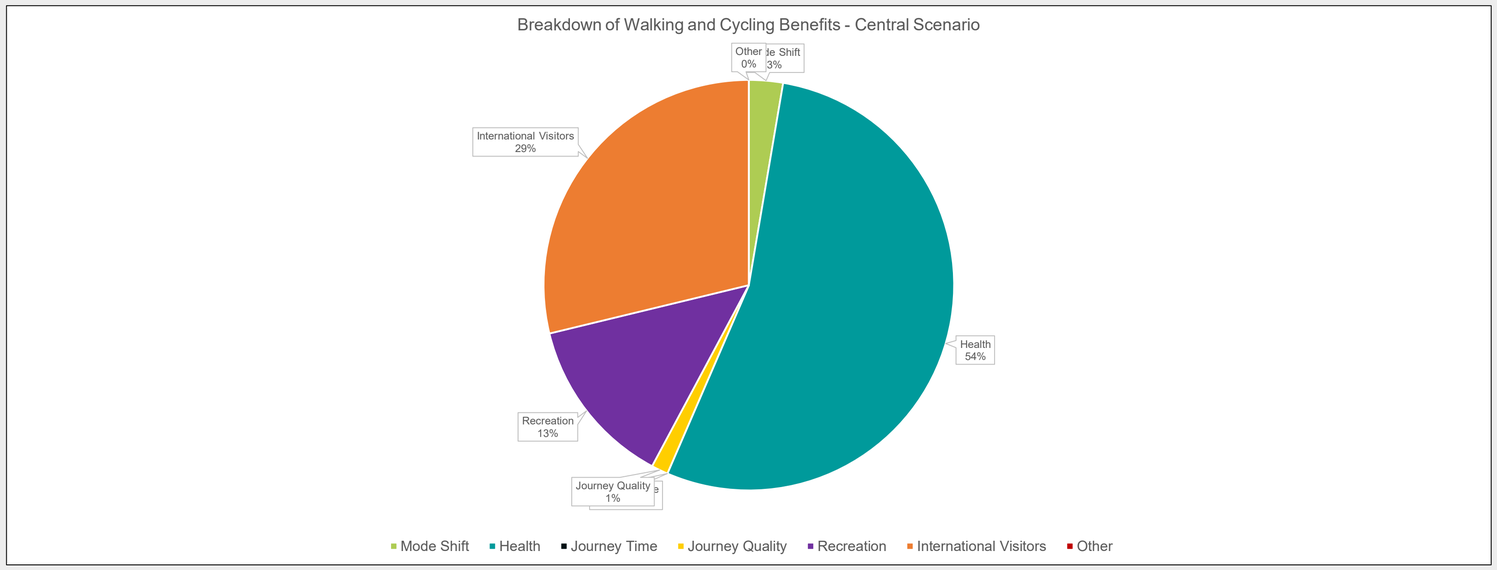
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€101,112**
☑	Vehicle Operating & Ownership Costs	€34,247
☑	Carbon	€49,051
☑	Air Quality	€1,827
☑	Noise	€1,188
☑	Congestion	€14,799
	Health	**€1,671,485**
☑	Reduced Mortality	€1,620,082
☑	Workplace Absenteeism	€51,404
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€143,089**
☑	**Recreation**	**€256,239**
☑	**International Visitors**	**€1,441,791**
	Other	**€0**
	Present Value of Benefits (PVB)	**€3,472,866**
	Present Value of Costs (PVC)	**€8,320,336**
	Net Present Value (NPV)	**-€4,847,470**
	Benefit-to-Cost Ratio (BCR)	**0.42**



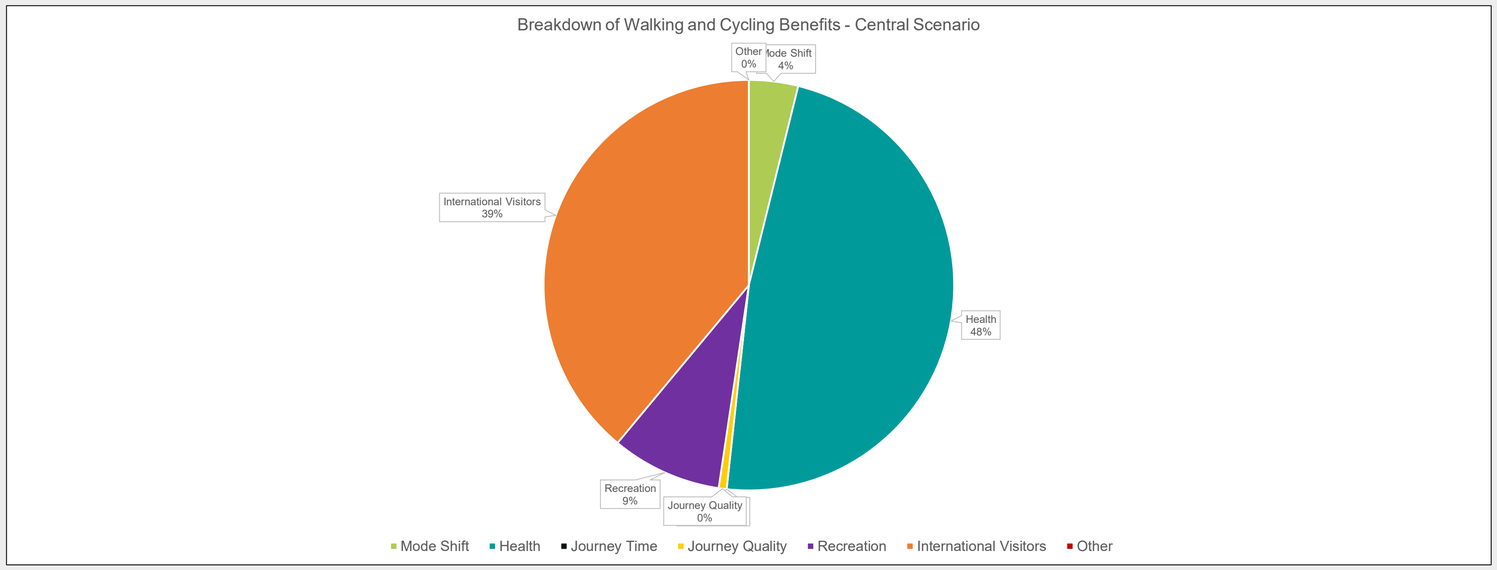
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€52,947**
☑	Vehicle Operating & Ownership Costs	€17,754
☑	Carbon	€25,958
☑	Air Quality	€947
☑	Noise	€616
☑	Congestion	€7,672
	Health	**€1,064,983**
☑	Reduced Mortality	€1,030,560
☑	Workplace Absenteeism	€34,423
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€26,063**
☑	**Recreation**	**€265,142**
☑	**International Visitors**	**€569,619**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,901,361**
	Present Value of Costs (PVC)	**€5,820,971**
	Net Present Value (NPV)	**-€3,919,610**
	Benefit-to-Cost Ratio (BCR)	**0.33**



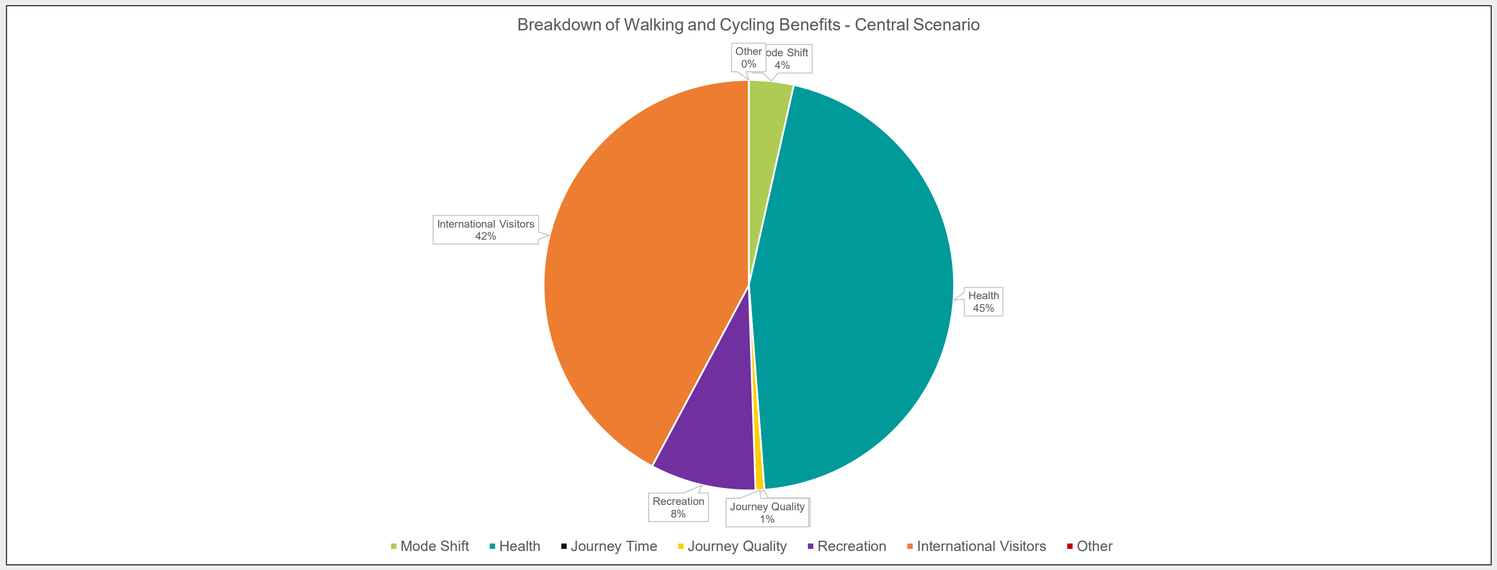
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€34,823**
☑	Vehicle Operating & Ownership Costs	€11,928
☑	Carbon	€16,691
☑	Air Quality	€636
☑	Noise	€413
☑	Congestion	€5,154
	Health	**€430,274**
☑	Reduced Mortality	€415,052
☑	Workplace Absenteeism	€15,222
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€5,641**
☑	**Recreation**	**€78,146**
☑	**International Visitors**	**€350,233**
	Other	**€0**
	Present Value of Benefits (PVB)	**€864,329**
	Present Value of Costs (PVC)	**€3,327,831**
	Net Present Value (NPV)	**-€2,463,503**
	Benefit-to-Cost Ratio (BCR)	**0.26**



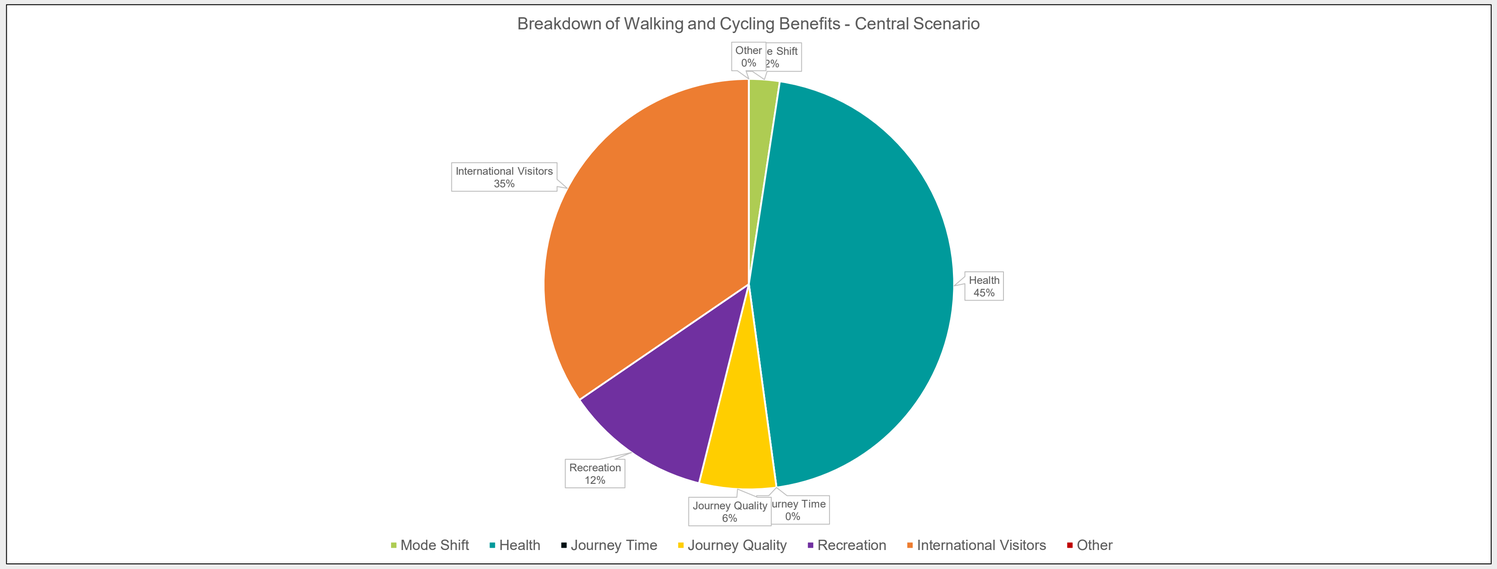
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€31,883**
☑	Vehicle Operating & Ownership Costs	€10,845
☑	Carbon	€15,397
☑	Air Quality	€579
☑	Noise	€376
☑	Congestion	€4,686
	Health	**€410,267**
☑	Reduced Mortality	€395,468
☑	Workplace Absenteeism	€14,798
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€6,237**
☑	**Recreation**	**€75,478**
☑	**International Visitors**	**€382,281**
	Other	**€0**
	Present Value of Benefits (PVB)	**€871,027**
	Present Value of Costs (PVC)	**€5,539,517**
	Net Present Value (NPV)	**-€4,668,490**
	Benefit-to-Cost Ratio (BCR)	**0.16**



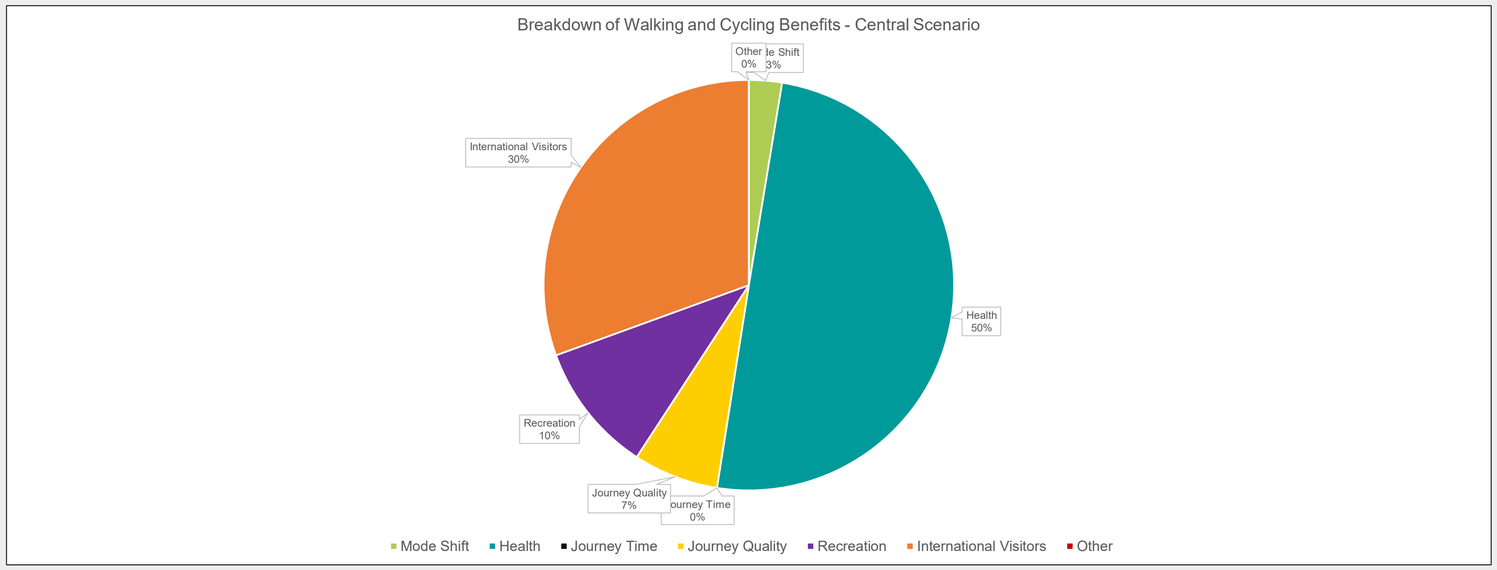
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€109,965**
☑	Vehicle Operating & Ownership Costs	€37,618
☑	Carbon	€52,781
☑	Air Quality	€2,007
☑	Noise	€1,304
☑	Congestion	€16,256
	Health	**€2,069,866**
☑	Reduced Mortality	€2,010,267
☑	Workplace Absenteeism	€59,599
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€275,948**
☑	**Recreation**	**€526,482**
☑	**International Visitors**	**€1,573,339**
	Other	**€0**
	Present Value of Benefits (PVB)	**€4,377,570**
	Present Value of Costs (PVC)	**€8,443,703**
	Net Present Value (NPV)	**-€4,066,133**
	Benefit-to-Cost Ratio (BCR)	**0.52**



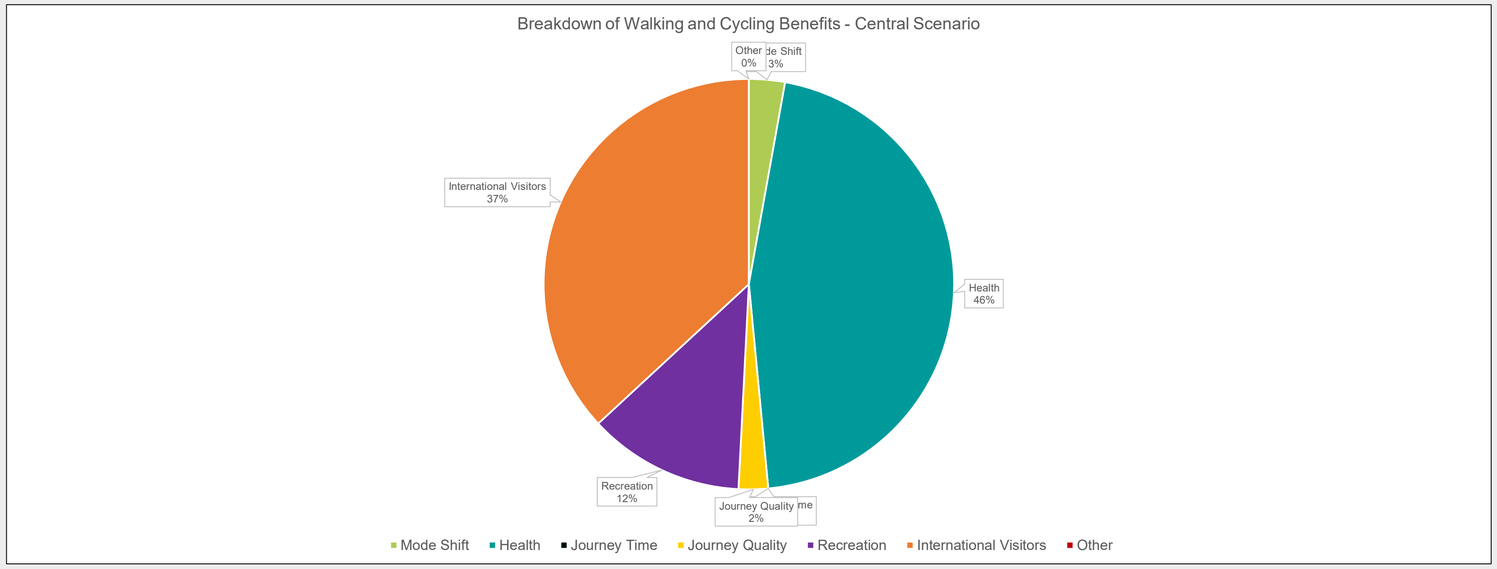
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€132,236**
☑	Vehicle Operating & Ownership Costs	€44,974
☑	Carbon	€63,868
☑	Air Quality	€2,399
☑	Noise	€1,560
☑	Congestion	€19,435
	Health	**€2,542,403**
☑	Reduced Mortality	€2,470,885
☑	Workplace Absenteeism	€71,518
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€341,952**
☑	**Recreation**	**€522,278**
☑	**International Visitors**	**€1,556,817**
	Other	**€0**
	Present Value of Benefits (PVB)	**€4,896,517**
	Present Value of Costs (PVC)	**€11,648,167**
	Net Present Value (NPV)	**-€6,751,651**
	Benefit-to-Cost Ratio (BCR)	**0.42**



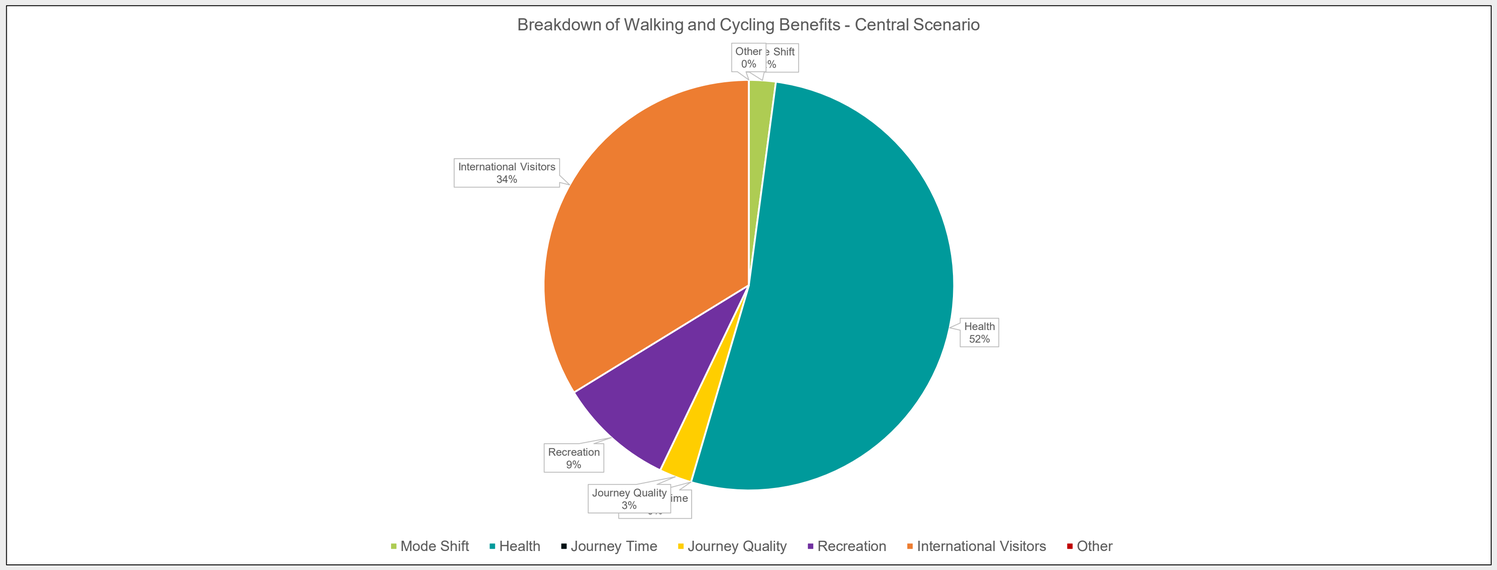
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€54,433**
☑	Vehicle Operating & Ownership Costs	€18,671
☑	Carbon	€26,052
☑	Air Quality	€996
☑	Noise	€647
☑	Congestion	€8,068
	Health	**€878,016**
☑	Reduced Mortality	€850,855
☑	Workplace Absenteeism	€27,161
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€44,499**
☑	**Recreation**	**€236,695**
☑	**International Visitors**	**€709,236**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,847,960**
	Present Value of Costs (PVC)	**€6,120,641**
	Net Present Value (NPV)	**-€4,272,681**
	Benefit-to-Cost Ratio (BCR)	**0.30**



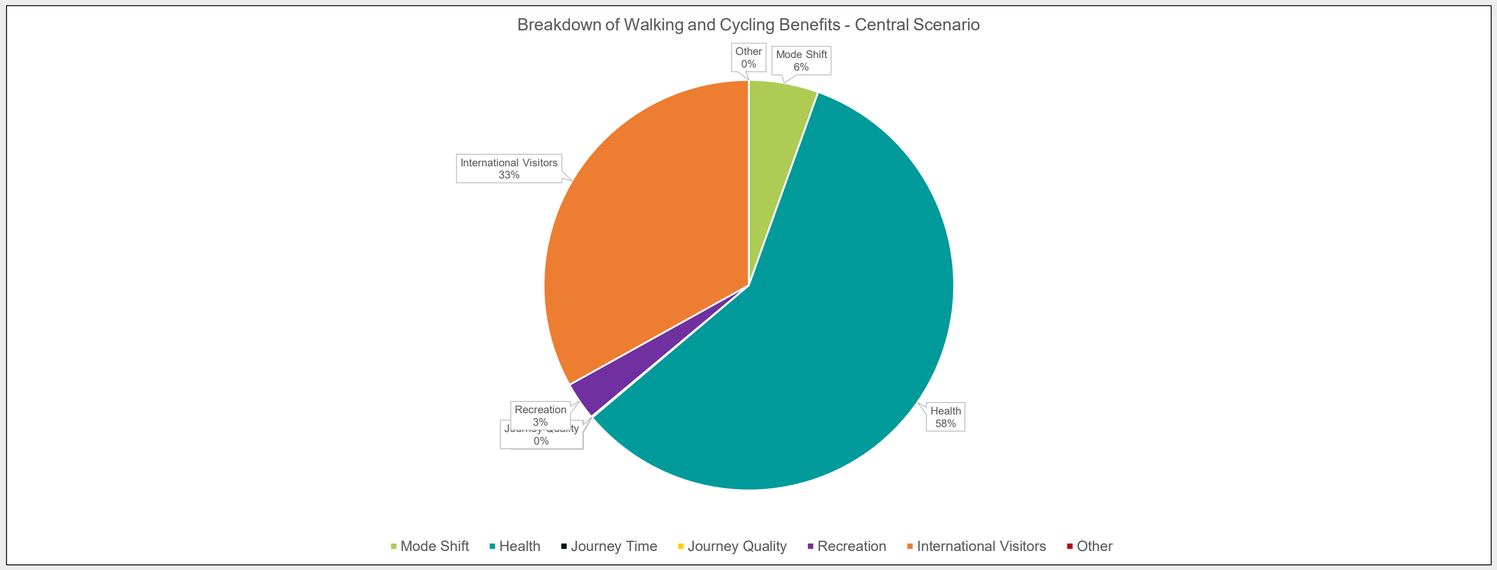
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€48,781**
☑	Vehicle Operating & Ownership Costs	€16,430
☑	Carbon	€23,806
☑	Air Quality	€877
☑	Noise	€570
☑	Congestion	€7,100
	Health	**€1,214,177**
☑	Reduced Mortality	€1,176,183
☑	Workplace Absenteeism	€37,994
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€59,244**
☑	**Recreation**	**€211,414**
☑	**International Visitors**	**€781,511**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,224,235**
	Present Value of Costs (PVC)	**€9,949,668**
	Net Present Value (NPV)	**-€7,725,432**
	Benefit-to-Cost Ratio (BCR)	**0.22**



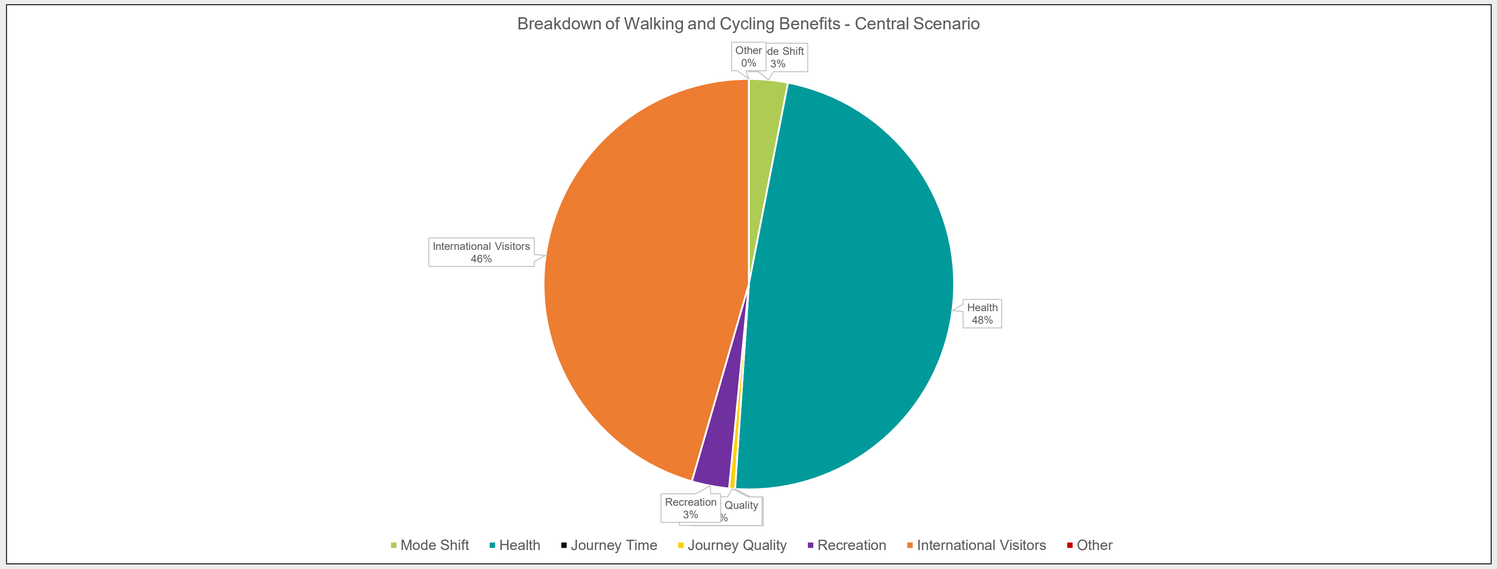
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€15,037**
☑	Vehicle Operating & Ownership Costs	€5,166
☑	Carbon	€7,184
☑	Air Quality	€276
☑	Noise	€179
☑	Congestion	€2,233
	Health	**€159,916**
☑	Reduced Mortality	€154,478
☑	Workplace Absenteeism	€5,438
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€235**
☑	**Recreation**	**€8,246**
☑	**International Visitors**	**€90,629**
	Other	**€0**
	Present Value of Benefits (PVB)	**€263,548**
	Present Value of Costs (PVC)	**€1,164,116**
	Net Present Value (NPV)	**-€900,568**
	Benefit-to-Cost Ratio (BCR)	**0.23**



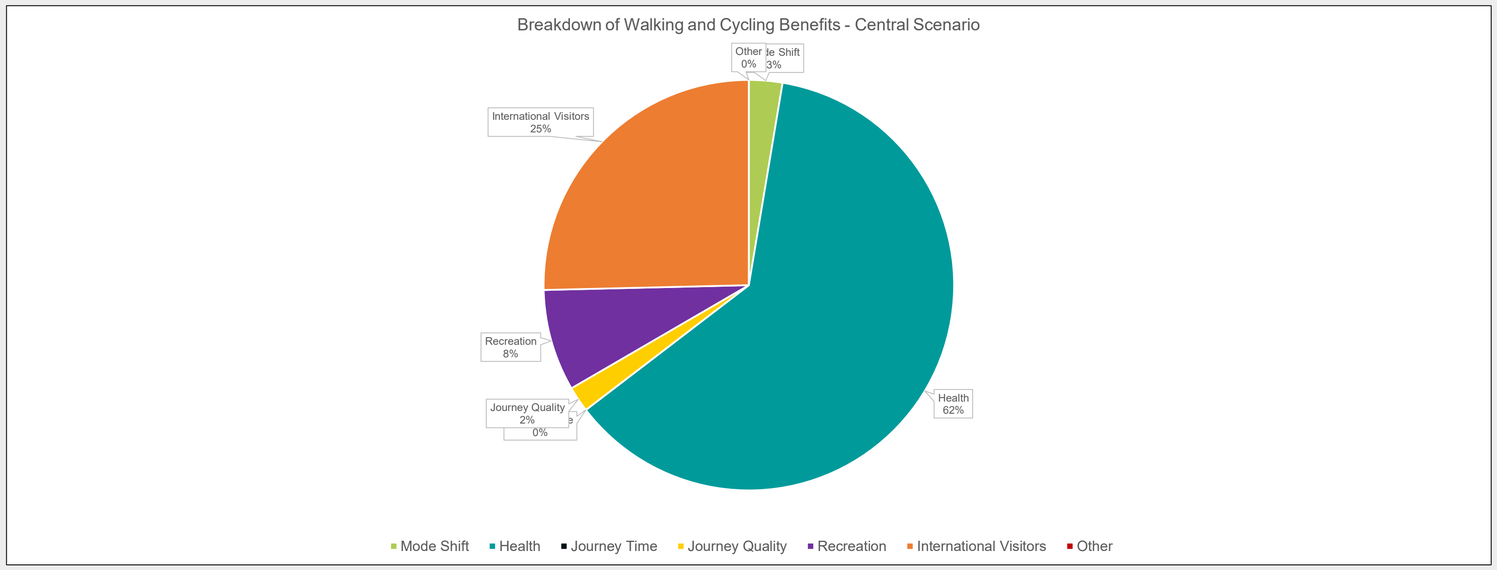
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€33,088**
☑	Vehicle Operating & Ownership Costs	€11,199
☑	Carbon	€16,063
☑	Air Quality	€598
☑	Noise	€388
☑	Congestion	€4,839
	Health	**€519,997**
☑	Reduced Mortality	€503,026
☑	Workplace Absenteeism	€16,970
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€5,033**
☑	**Recreation**	**€31,851**
☑	**International Visitors**	**€492,927**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,040,744**
	Present Value of Costs (PVC)	**€4,121,357**
	Net Present Value (NPV)	**-€3,080,613**
	Benefit-to-Cost Ratio (BCR)	**0.25**



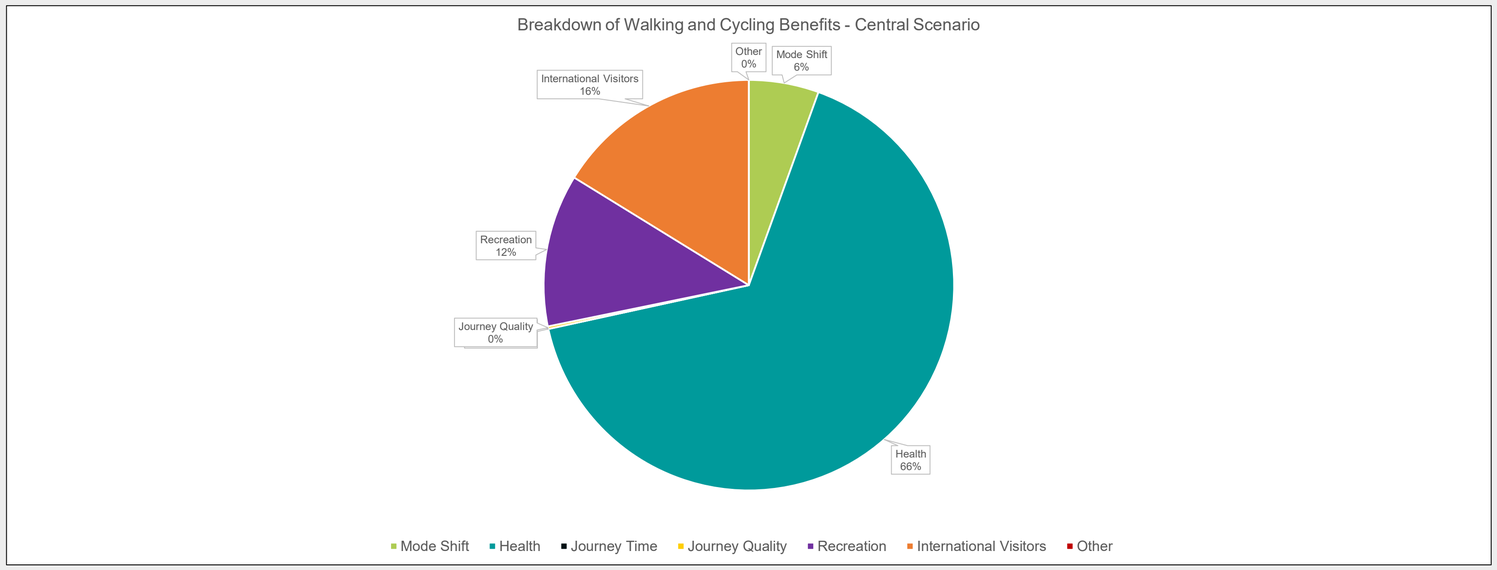
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€61,668**
☑	Vehicle Operating & Ownership Costs	€20,699
☑	Carbon	€30,202
☑	Air Quality	€1,105
☑	Noise	€718
☑	Congestion	€8,944
	Health	**€1,452,584**
☑	Reduced Mortality	€1,405,908
☑	Workplace Absenteeism	€46,676
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€47,337**
☑	**Recreation**	**€187,622**
☑	**International Visitors**	**€594,739**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,251,983**
	Present Value of Costs (PVC)	**€6,313,075**
	Net Present Value (NPV)	**-€4,061,091**
	Benefit-to-Cost Ratio (BCR)	**0.36**



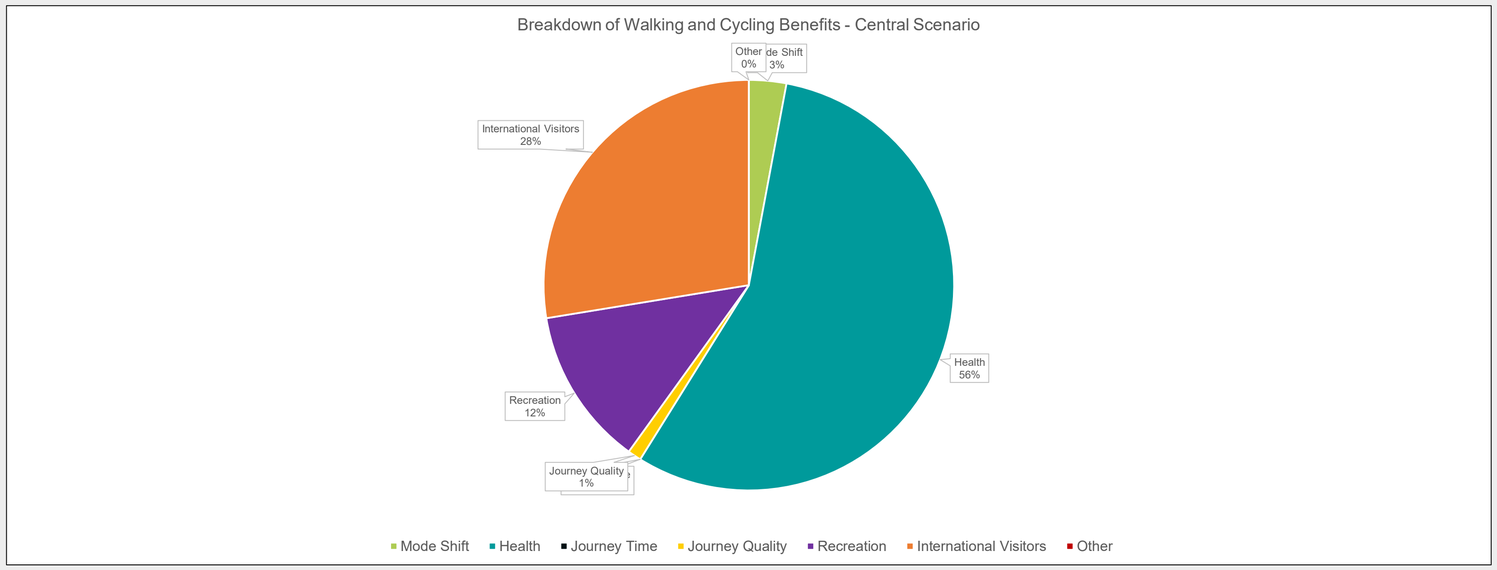
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€24,453**
☑	Vehicle Operating & Ownership Costs	€8,303
☑	Carbon	€11,832
☑	Air Quality	€443
☑	Noise	€288
☑	Congestion	€3,588
	Health	**€293,301**
☑	Reduced Mortality	€282,676
☑	Workplace Absenteeism	€10,624
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€898**
☑	**Recreation**	**€53,321**
☑	**International Visitors**	**€71,964**
	Other	**€0**
	Present Value of Benefits (PVB)	**€426,863**
	Present Value of Costs (PVC)	**€1,003,654**
	Net Present Value (NPV)	**-€576,791**
	Benefit-to-Cost Ratio (BCR)	**0.43**



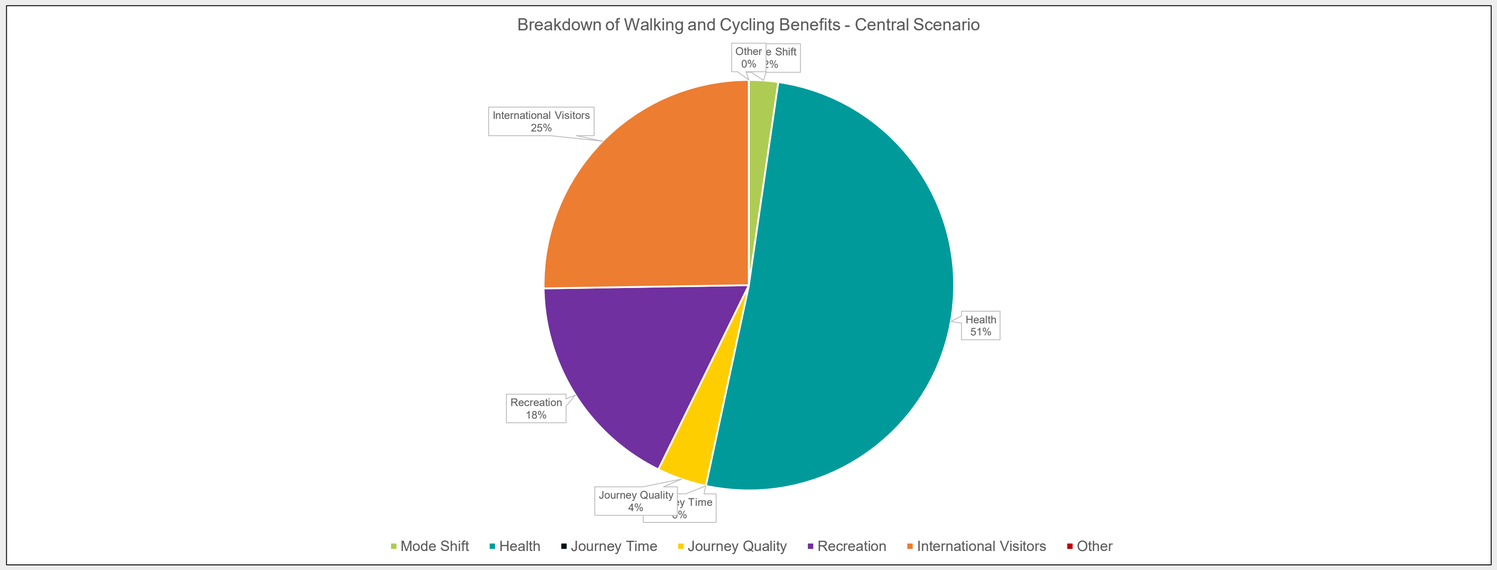
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€46,147**
☑	Vehicle Operating & Ownership Costs	€15,536
☑	Carbon	€22,530
☑	Air Quality	€829
☑	Noise	€539
☑	Congestion	€6,713
	Health	**€877,038**
☑	Reduced Mortality	€848,847
☑	Workplace Absenteeism	€28,190
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€16,769**
☑	**Recreation**	**€195,642**
☑	**International Visitors**	**€432,385**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,506,729**
	Present Value of Costs (PVC)	**€3,348,578**
	Net Present Value (NPV)	**-€1,841,849**
	Benefit-to-Cost Ratio (BCR)	**0.45**



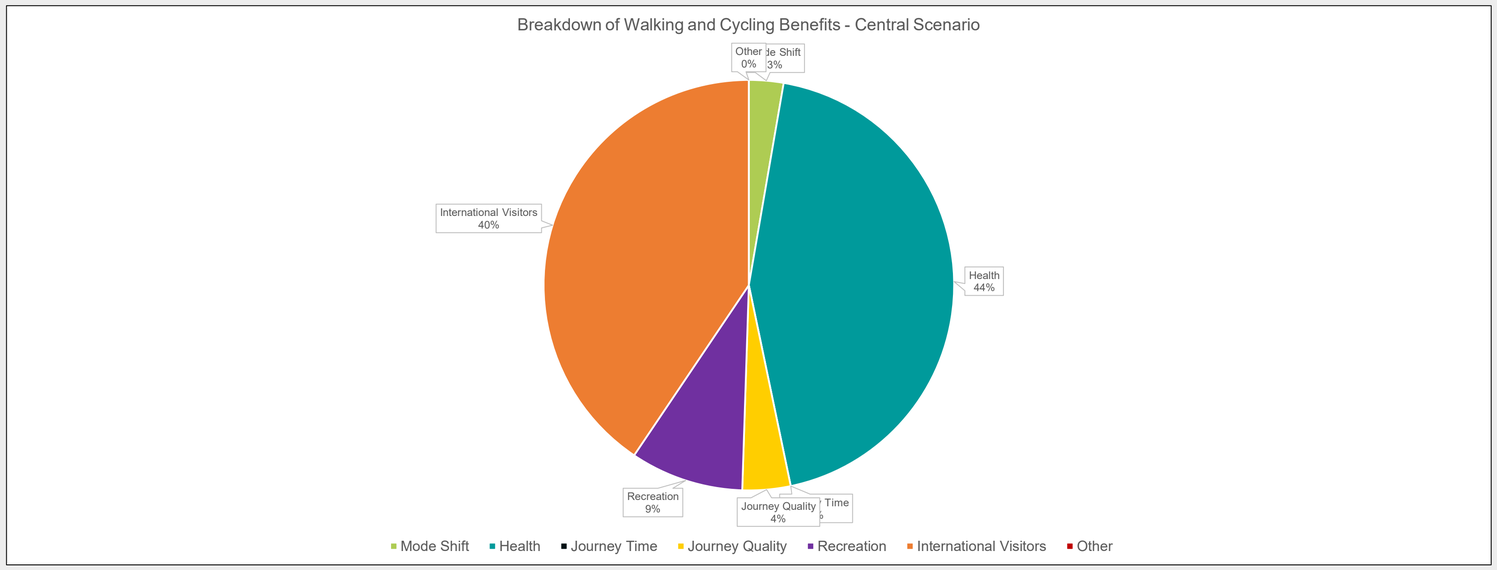
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€69,548**
☑	Vehicle Operating & Ownership Costs	€23,522
☑	Carbon	€33,790
☑	Air Quality	€1,255
☑	Noise	€816
☑	Congestion	€10,165
	Health	**€1,548,374**
☑	Reduced Mortality	€1,499,205
☑	Workplace Absenteeism	€49,169
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€118,406**
☑	**Recreation**	**€530,029**
☑	**International Visitors**	**€765,558**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,913,099**
	Present Value of Costs (PVC)	**€7,114,960**
	Net Present Value (NPV)	**-€4,201,861**
	Benefit-to-Cost Ratio (BCR)	**0.41**



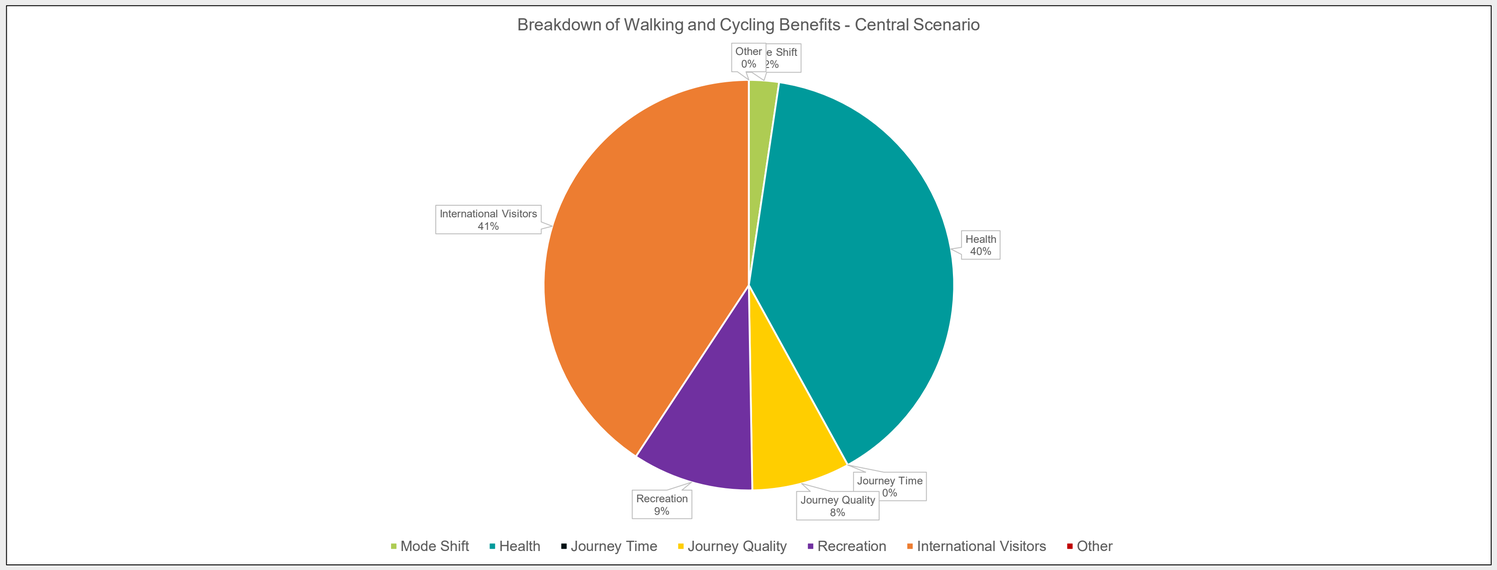
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€83,945**
☑	Vehicle Operating & Ownership Costs	€28,325
☑	Carbon	€40,886
☑	Air Quality	€1,511
☑	Noise	€983
☑	Congestion	€12,240
	Health	**€1,359,791**
☑	Reduced Mortality	€1,316,235
☑	Workplace Absenteeism	€43,556
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€116,947**
☑	**Recreation**	**€275,871**
☑	**International Visitors**	**€1,253,101**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,969,256**
	Present Value of Costs (PVC)	**€7,085,522**
	Net Present Value (NPV)	**-€4,116,266**
	Benefit-to-Cost Ratio (BCR)	**0.42**



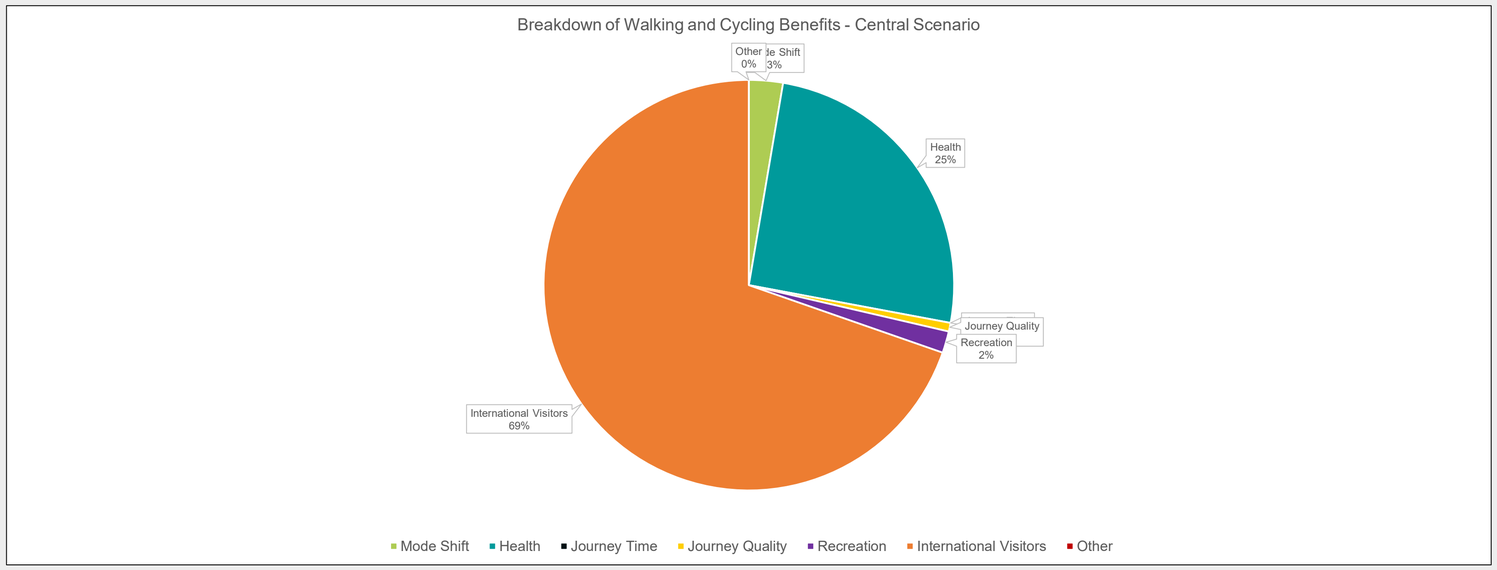
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€122,177**
☑	Vehicle Operating & Ownership Costs	€40,954
☑	Carbon	€59,919
☑	Air Quality	€2,185
☑	Noise	€1,421
☑	Congestion	€17,698
	Health	**€2,052,779**
☑	Reduced Mortality	€1,992,436
☑	Workplace Absenteeism	€60,344
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€400,497**
☑	**Recreation**	**€494,505**
☑	**International Visitors**	**€2,108,861**
	Other	**€0**
	Present Value of Benefits (PVB)	**€4,976,785**
	Present Value of Costs (PVC)	**€11,376,840**
	Net Present Value (NPV)	**-€6,400,055**
	Benefit-to-Cost Ratio (BCR)	**0.44**



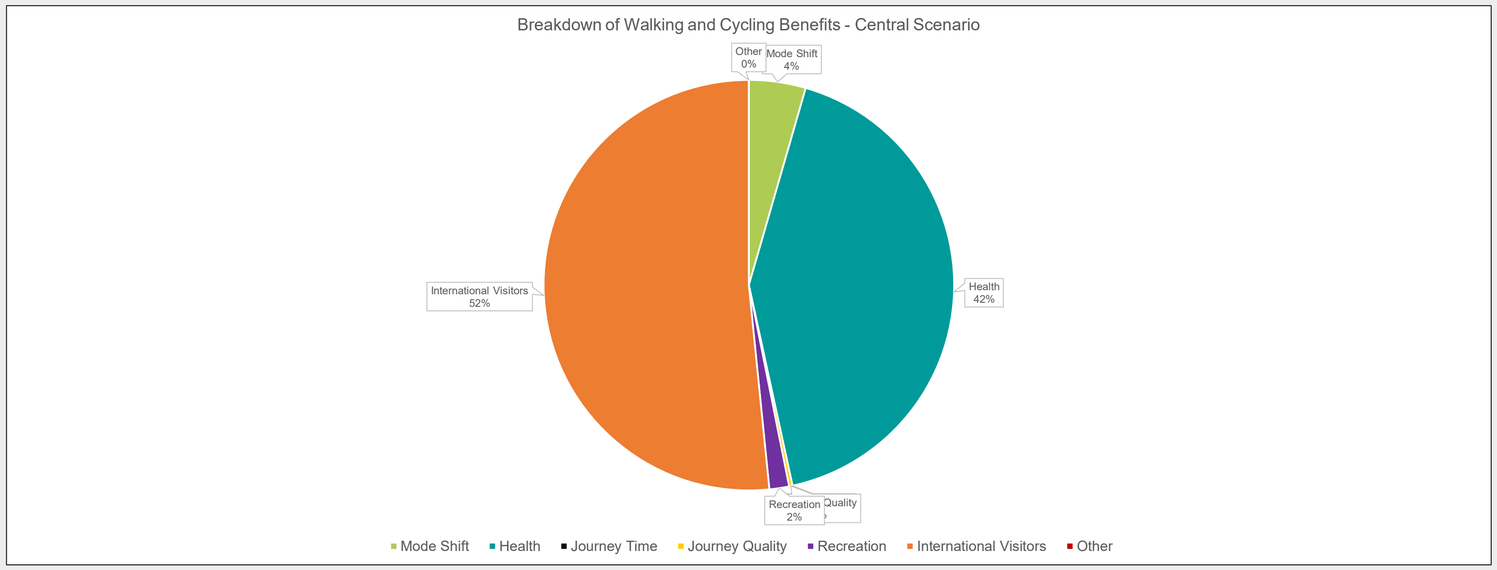
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€29,635**
☑	Vehicle Operating & Ownership Costs	€9,889
☑	Carbon	€14,601
☑	Air Quality	€528
☑	Noise	€343
☑	Congestion	€4,273
	Health	**€280,151**
☑	Reduced Mortality	€270,386
☑	Workplace Absenteeism	€9,765
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€7,551**
☑	**Recreation**	**€18,937**
☑	**International Visitors**	**€772,244**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,065,592**
	Present Value of Costs (PVC)	**€3,063,105**
	Net Present Value (NPV)	**-€1,997,513**
	Benefit-to-Cost Ratio (BCR)	**0.35**



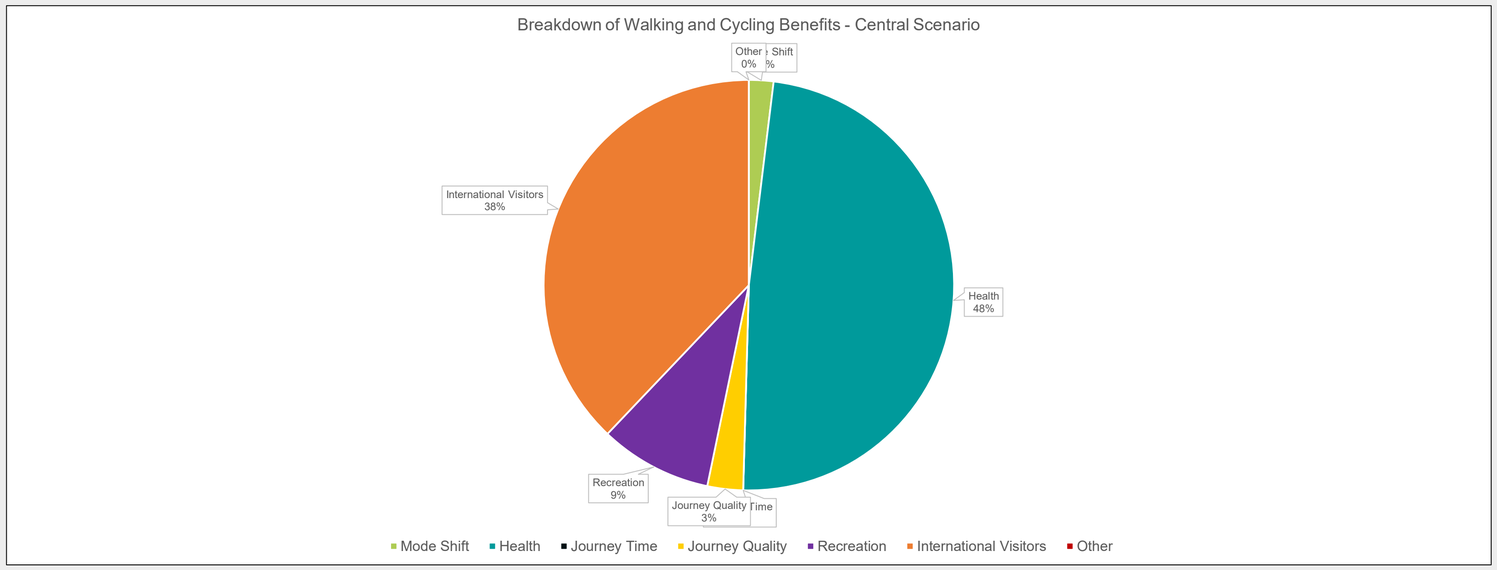
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€30,075**
☑	Vehicle Operating & Ownership Costs	€10,333
☑	Carbon	€14,367
☑	Air Quality	€551
☑	Noise	€358
☑	Congestion	€4,465
	Health	**€283,251**
☑	Reduced Mortality	€273,875
☑	Workplace Absenteeism	€9,377
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€1,794**
☑	**Recreation**	**€10,423**
☑	**International Visitors**	**€347,021**
	Other	**€0**
	Present Value of Benefits (PVB)	**€646,710**
	Present Value of Costs (PVC)	**€1,961,434**
	Net Present Value (NPV)	**-€1,314,725**
	Benefit-to-Cost Ratio (BCR)	**0.33**



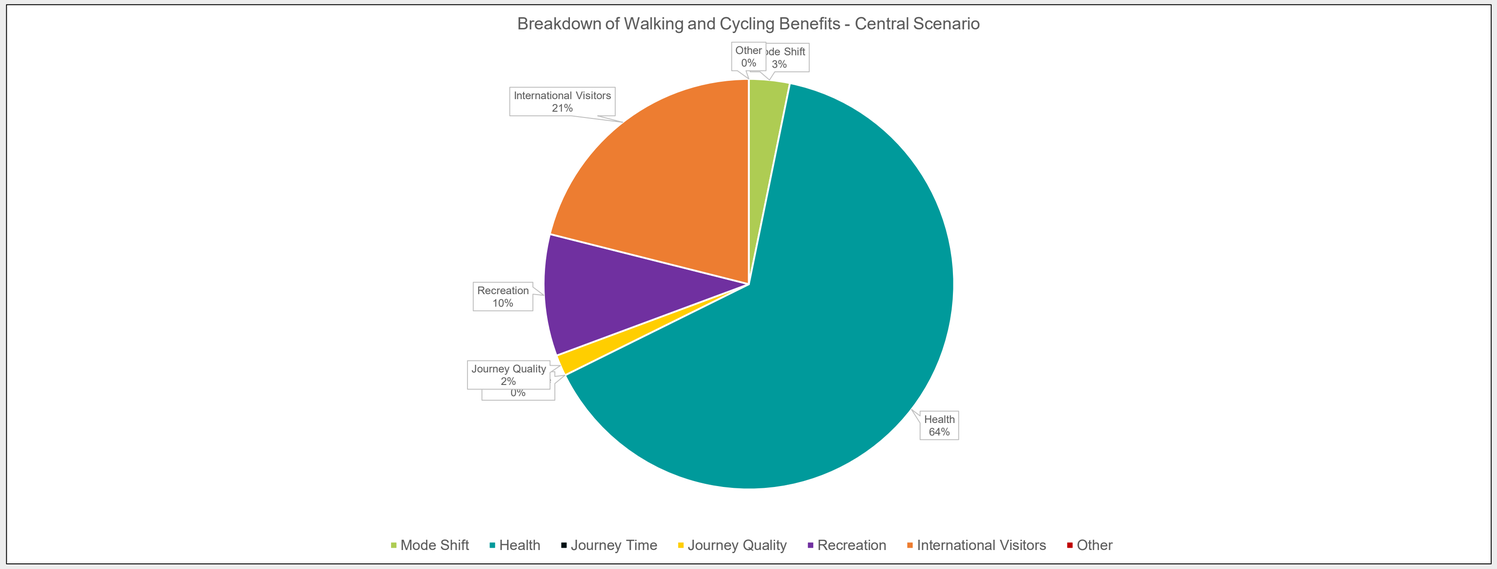
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€66,826**
☑	Vehicle Operating & Ownership Costs	€22,629
☑	Carbon	€32,426
☑	Air Quality	€1,207
☑	Noise	€785
☑	Congestion	€9,779
	Health	**€1,679,347**
☑	Reduced Mortality	€1,629,433
☑	Workplace Absenteeism	€49,914
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€97,256**
☑	**Recreation**	**€306,329**
☑	**International Visitors**	**€1,312,093**
	Other	**€0**
	Present Value of Benefits (PVB)	**€3,325,942**
	Present Value of Costs (PVC)	**€11,287,967**
	Net Present Value (NPV)	**-€7,962,025**
	Benefit-to-Cost Ratio (BCR)	**0.29**



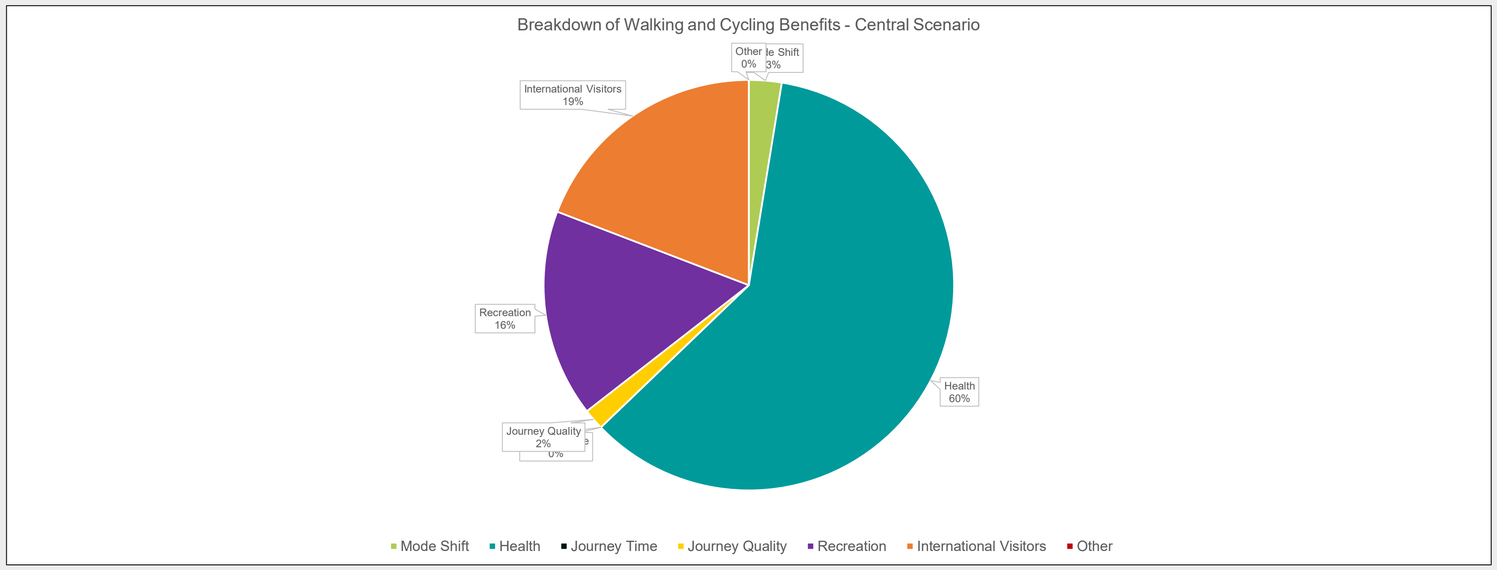
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€90,676**
☑	Vehicle Operating & Ownership Costs	€31,079
☑	Carbon	€43,432
☑	Air Quality	€1,658
☑	Noise	€1,077
☑	Congestion	€13,430
	Health	**€1,821,529**
☑	Reduced Mortality	€1,764,912
☑	Workplace Absenteeism	€56,617
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€46,868**
☑	**Recreation**	**€270,878**
☑	**International Visitors**	**€595,342**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,714,800**
	Present Value of Costs (PVC)	**€6,289,127**
	Net Present Value (NPV)	**-€3,574,327**
	Benefit-to-Cost Ratio (BCR)	**0.43**



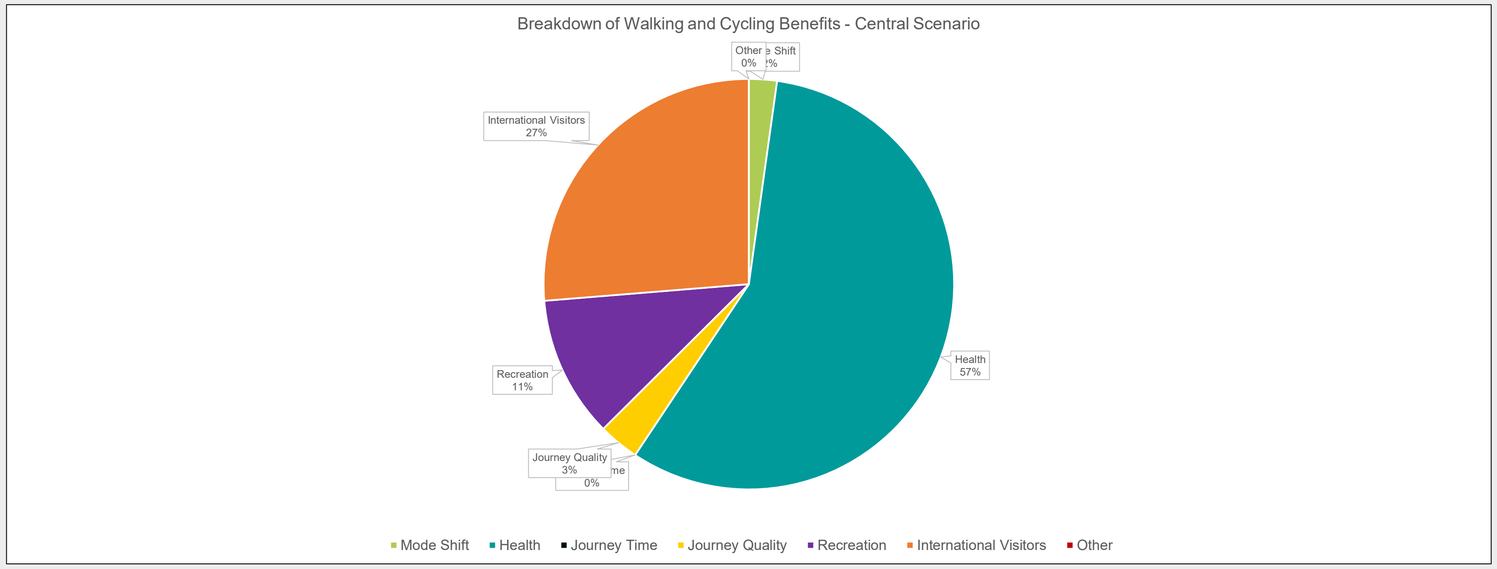
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€65,267**
☑	Vehicle Operating & Ownership Costs	€22,052
☑	Carbon	€31,745
☑	Air Quality	€1,177
☑	Noise	€765
☑	Congestion	€9,529
	Health	**€1,529,437**
☑	Reduced Mortality	€1,480,717
☑	Workplace Absenteeism	€48,720
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€42,179**
☑	**Recreation**	**€415,096**
☑	**International Visitors**	**€486,605**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,438,992**
	Present Value of Costs (PVC)	**€4,352,232**
	Net Present Value (NPV)	**-€1,913,240**
	Benefit-to-Cost Ratio (BCR)	**0.56**



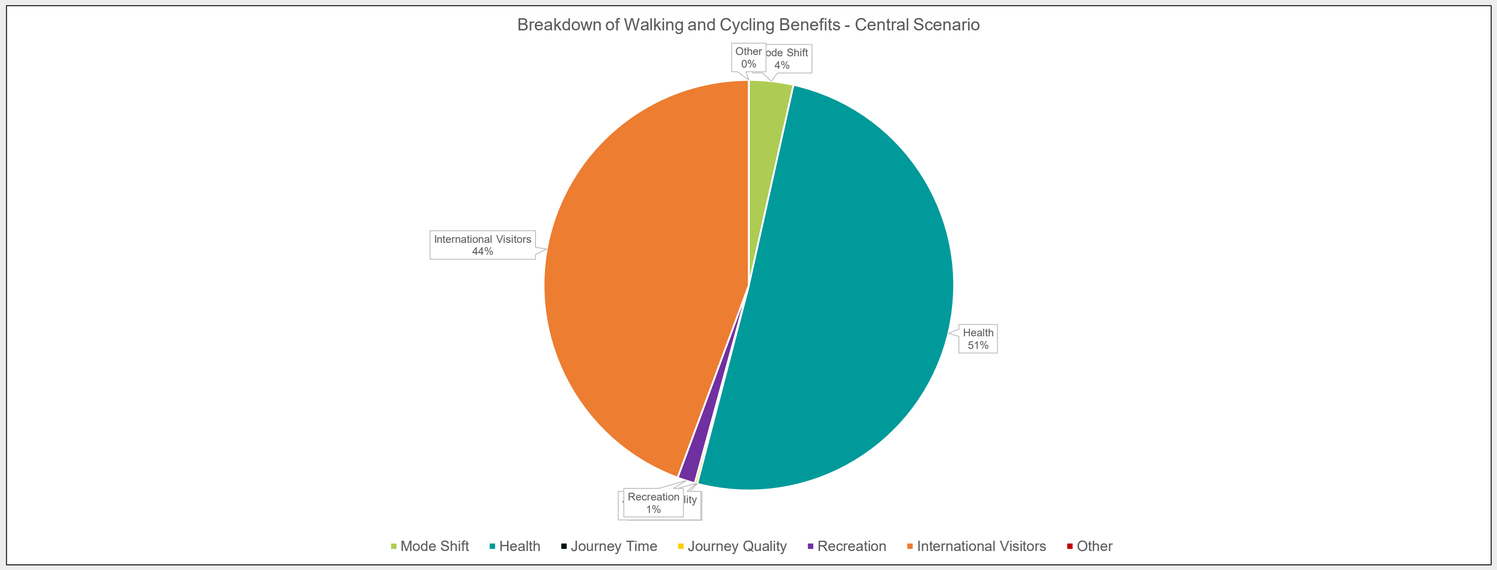
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€101,220**
☑	Vehicle Operating & Ownership Costs	€34,275
☑	Carbon	€49,116
☑	Air Quality	€1,829
☑	Noise	€1,189
☑	Congestion	€14,811
	Health	**€2,625,532**
☑	Reduced Mortality	€2,547,308
☑	Workplace Absenteeism	€78,223
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€147,147**
☑	**Recreation**	**€512,586**
☑	**International Visitors**	**€1,207,978**
	Other	**€0**
	Present Value of Benefits (PVB)	**€4,413,914**
	Present Value of Costs (PVC)	**€8,480,845**
	Net Present Value (NPV)	**-€4,066,930**
	Benefit-to-Cost Ratio (BCR)	**0.52**



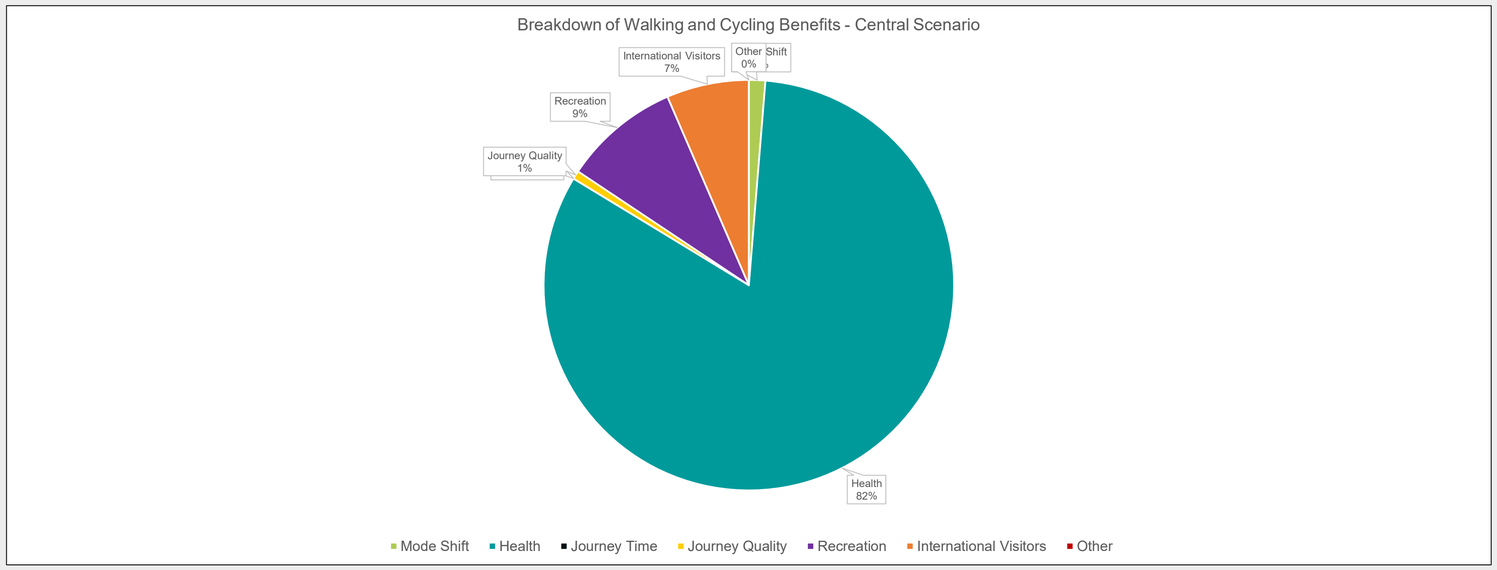
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€26,570**
☑	Vehicle Operating & Ownership Costs	€8,945
☑	Carbon	€12,972
☑	Air Quality	€477
☑	Noise	€310
☑	Congestion	€3,865
	Health	**€384,961**
☑	Reduced Mortality	€371,218
☑	Workplace Absenteeism	€13,743
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€1,442**
☑	**Recreation**	**€10,630**
☑	**International Visitors**	**€337,701**
	Other	**€0**
	Present Value of Benefits (PVB)	**€731,741**
	Present Value of Costs (PVC)	**€1,580,818**
	Net Present Value (NPV)	**-€849,077**
	Benefit-to-Cost Ratio (BCR)	**0.46**



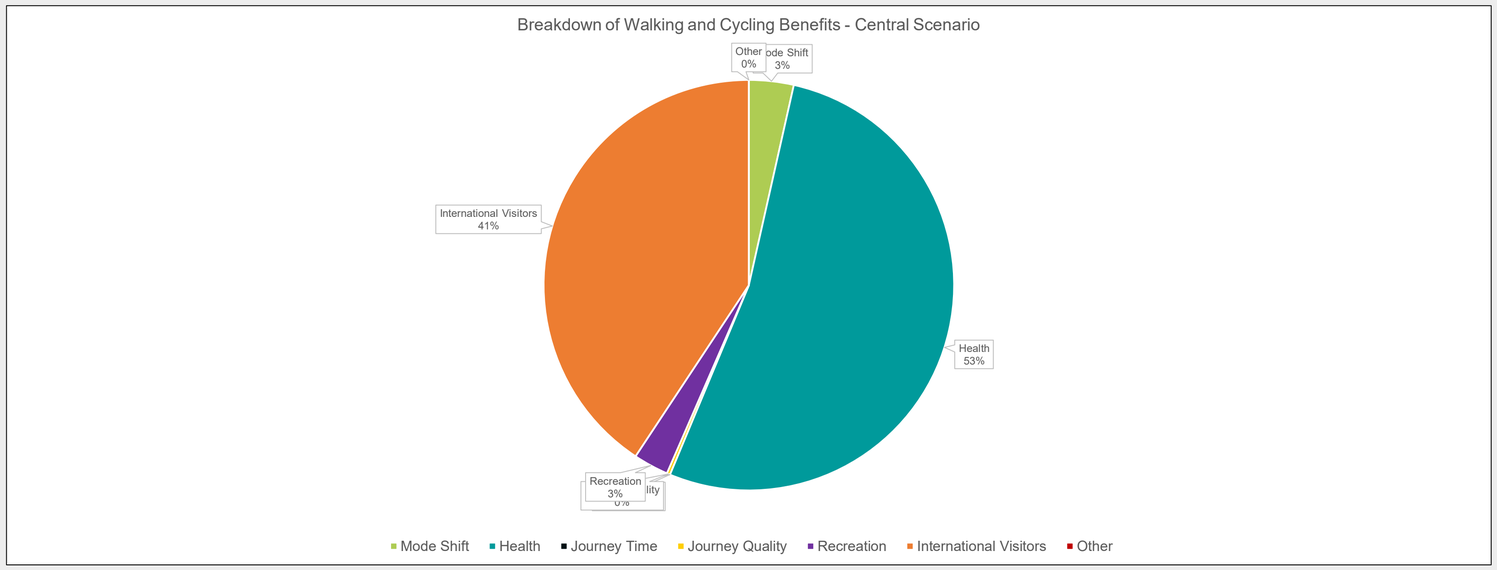
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€67,718**
☑	Vehicle Operating & Ownership Costs	€22,534
☑	Carbon	€33,461
☑	Air Quality	€1,203
☑	Noise	€782
☑	Congestion	€9,738
	Health	**€4,320,256**
☑	Reduced Mortality	€4,182,235
☑	Workplace Absenteeism	€138,022
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€34,574**
☑	**Recreation**	**€480,190**
☑	**International Visitors**	**€340,173**
	Other	**€0**
	Present Value of Benefits (PVB)	**€5,033,708**
	Present Value of Costs (PVC)	**€5,429,865**
	Net Present Value (NPV)	**-€396,157**
	Benefit-to-Cost Ratio (BCR)	**0.93**



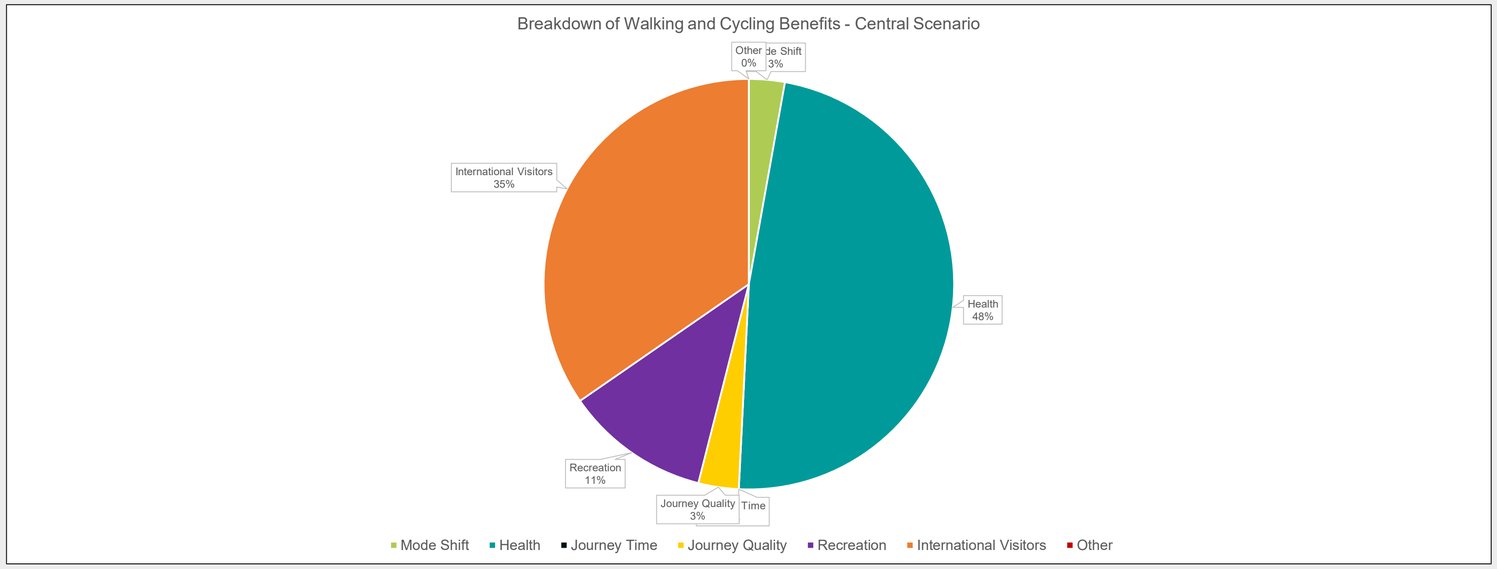
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€25,936**
☑	Vehicle Operating & Ownership Costs	€8,719
☑	Carbon	€12,682
☑	Air Quality	€465
☑	Noise	€303
☑	Congestion	€3,768
	Health	**€388,916**
☑	Reduced Mortality	€373,969
☑	Workplace Absenteeism	€14,947
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€1,863**
☑	**Recreation**	**€20,426**
☑	**International Visitors**	**€299,920**
	Other	**€0**
	Present Value of Benefits (PVB)	**€708,425**
	Present Value of Costs (PVC)	**€1,816,781**
	Net Present Value (NPV)	**-€1,108,356**
	Benefit-to-Cost Ratio (BCR)	**0.39**



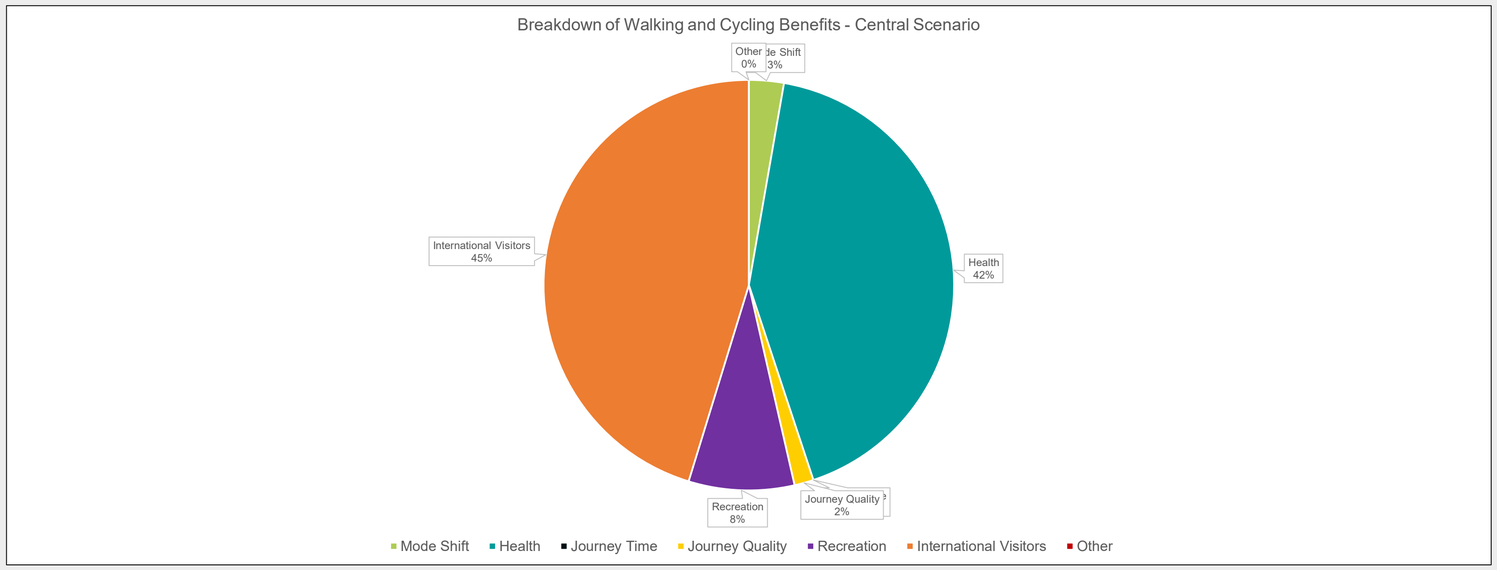
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€71,866**
☑	Vehicle Operating & Ownership Costs	€24,359
☑	Carbon	€34,835
☑	Air Quality	€1,300
☑	Noise	€845
☑	Congestion	€10,526
	Health	**€1,223,379**
☑	Reduced Mortality	€1,184,565
☑	Workplace Absenteeism	€38,814
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€81,081**
☑	**Recreation**	**€291,096**
☑	**International Visitors**	**€883,163**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,451,127**
	Present Value of Costs (PVC)	**€5,699,556**
	Net Present Value (NPV)	**-€3,248,429**
	Benefit-to-Cost Ratio (BCR)	**0.43**



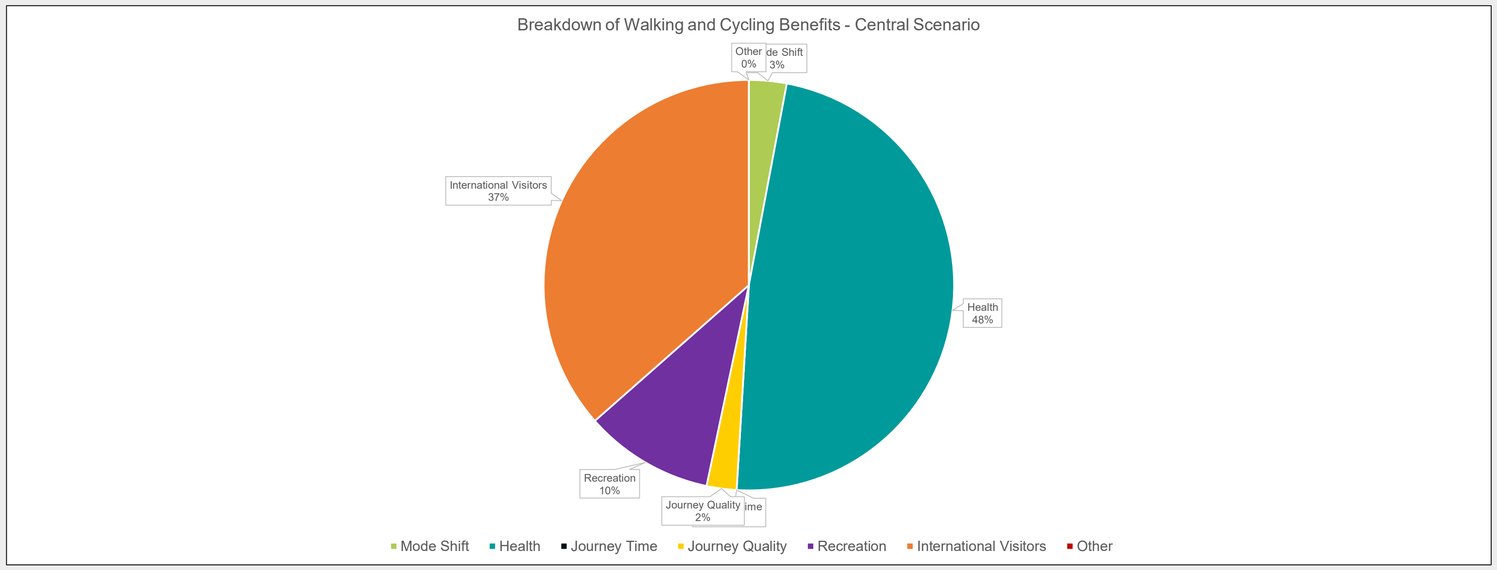
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€46,031**
☑	Vehicle Operating & Ownership Costs	€15,429
☑	Carbon	€22,576
☑	Air Quality	€823
☑	Noise	€535
☑	Congestion	€6,667
	Health	**€707,004**
☑	Reduced Mortality	€683,981
☑	Workplace Absenteeism	€23,023
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€25,307**
☑	**Recreation**	**€139,541**
☑	**International Visitors**	**€758,823**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,611,425**
	Present Value of Costs (PVC)	**€4,557,395**
	Net Present Value (NPV)	**-€2,945,969**
	Benefit-to-Cost Ratio (BCR)	**0.35**



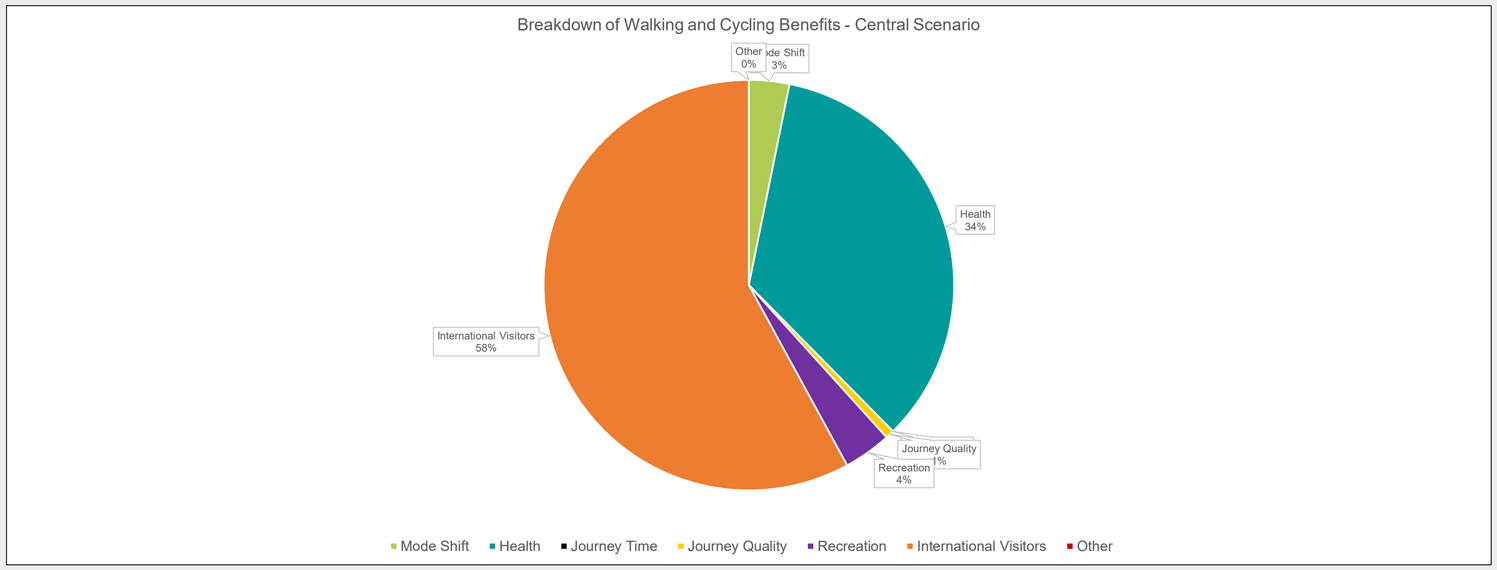
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€62,444**
☑	Vehicle Operating & Ownership Costs	€21,076
☑	Carbon	€30,405
☑	Air Quality	€1,125
☑	Noise	€731
☑	Congestion	€9,108
	Health	**€1,011,467**
☑	Reduced Mortality	€979,064
☑	Workplace Absenteeism	€32,403
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€49,669**
☑	**Recreation**	**€214,943**
☑	**International Visitors**	**€769,206**
	Other	**€0**
	Present Value of Benefits (PVB)	**€2,025,632**
	Present Value of Costs (PVC)	**€5,647,243**
	Net Present Value (NPV)	**-€3,621,612**
	Benefit-to-Cost Ratio (BCR)	**0.36**



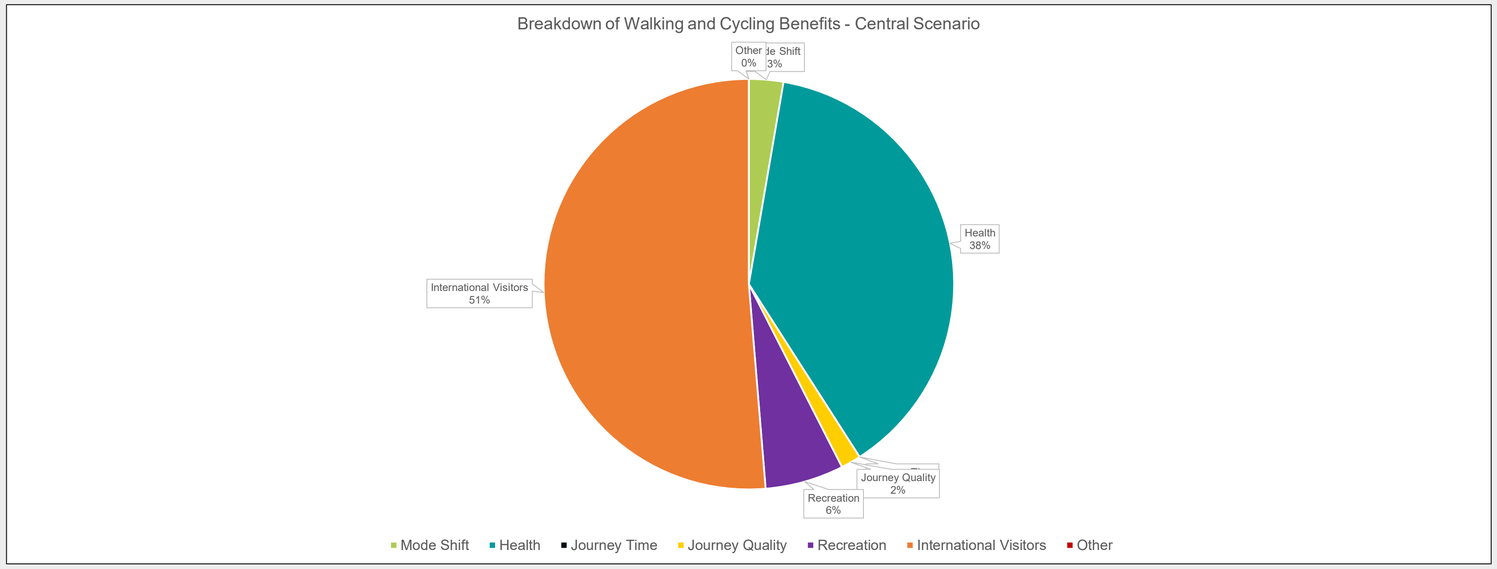
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€27,807**
☑	Vehicle Operating & Ownership Costs	€9,309
☑	Carbon	€13,656
☑	Air Quality	€497
☑	Noise	€323
☑	Congestion	€4,023
	Health	**€300,953**
☑	Reduced Mortality	€290,266
☑	Workplace Absenteeism	€10,687
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€6,010**
☑	**Recreation**	**€32,815**
☑	**International Visitors**	**€506,582**
	Other	**€0**
	Present Value of Benefits (PVB)	**€840,336**
	Present Value of Costs (PVC)	**€3,306,670**
	Net Present Value (NPV)	**-€2,466,334**
	Benefit-to-Cost Ratio (BCR)	**0.25**



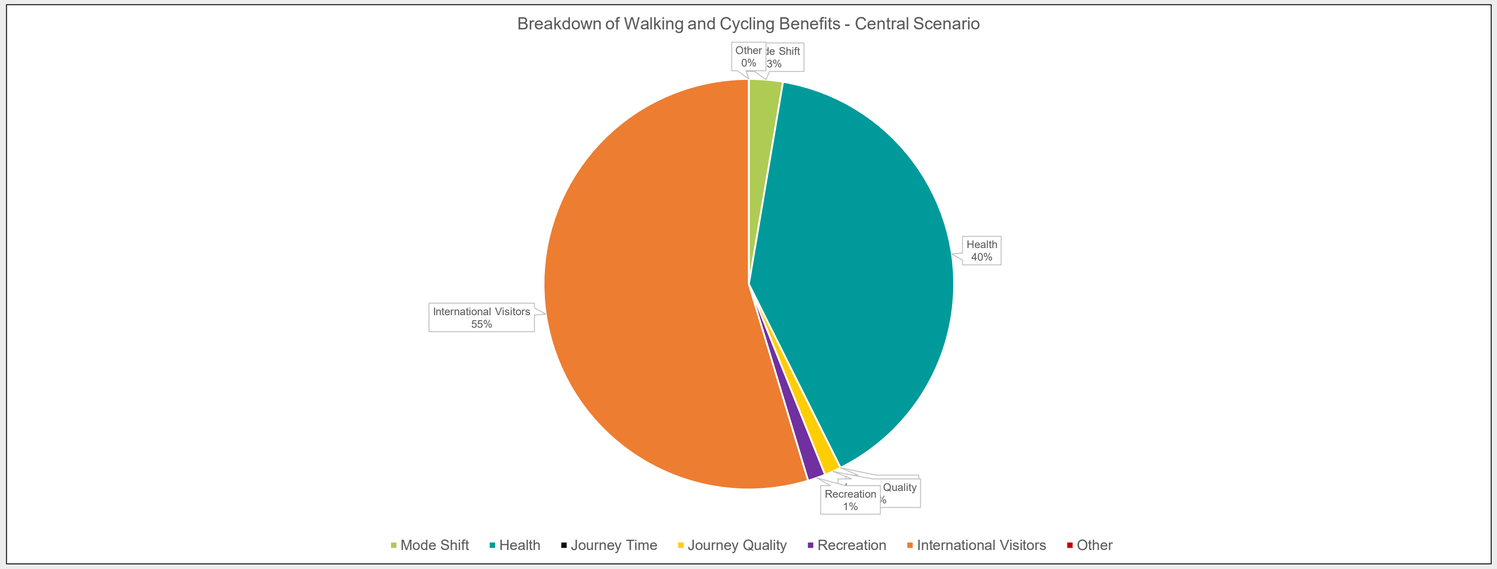
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€47,829**
☑	Vehicle Operating & Ownership Costs	€15,921
☑	Carbon	€23,625
☑	Air Quality	€850
☑	Noise	€553
☑	Congestion	€6,880
	Health	**€675,374**
☑	Reduced Mortality	€652,975
☑	Workplace Absenteeism	€22,399
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€27,831**
☑	**Recreation**	**€109,423**
☑	**International Visitors**	**€906,516**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,698,256**
	Present Value of Costs (PVC)	**€4,521,290**
	Net Present Value (NPV)	**-€2,823,034**
	Benefit-to-Cost Ratio (BCR)	**0.38**



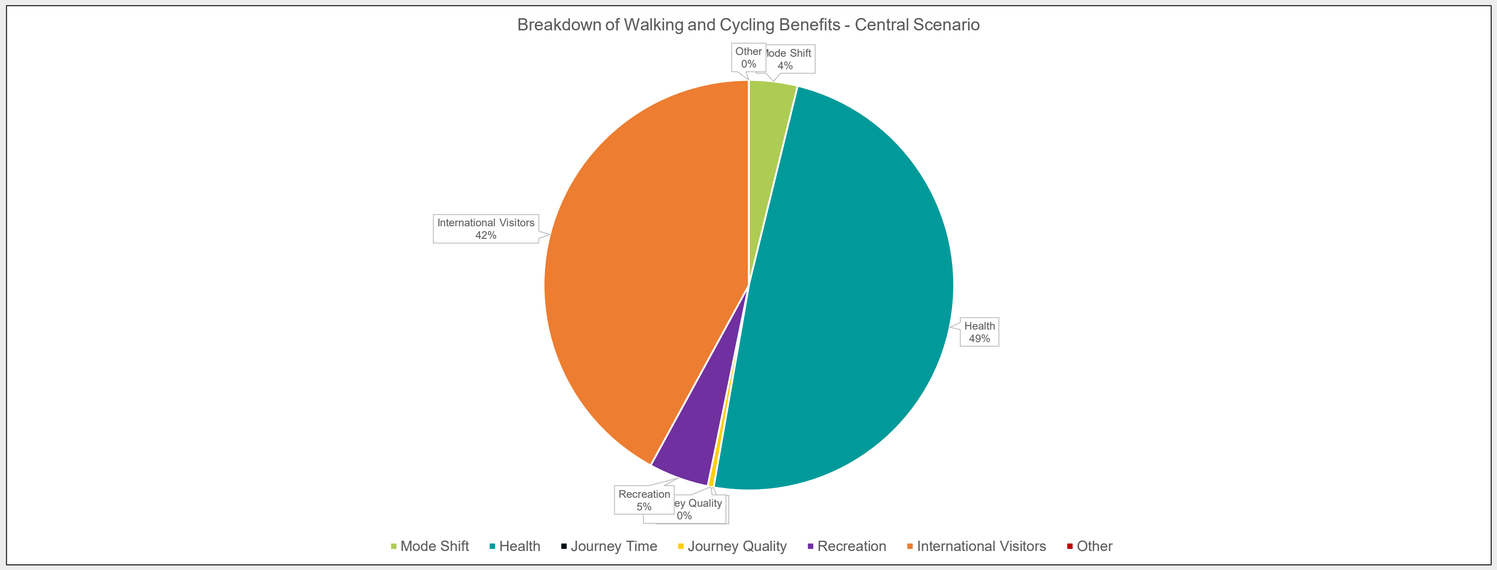
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€105,650**
☑	Vehicle Operating & Ownership Costs	€34,959
☑	Carbon	€52,504
☑	Air Quality	€1,866
☑	Noise	€1,214
☑	Congestion	€15,107
	Health	**€1,585,441**
☑	Reduced Mortality	€1,535,527
☑	Workplace Absenteeism	€49,914
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€52,165**
☑	**Recreation**	**€55,264**
☑	**International Visitors**	**€2,168,313**
	Other	**€0**
	Present Value of Benefits (PVB)	**€3,812,427**
	Present Value of Costs (PVC)	**€4,235,222**
	Net Present Value (NPV)	**-€422,795**
	Benefit-to-Cost Ratio (BCR)	**0.90**



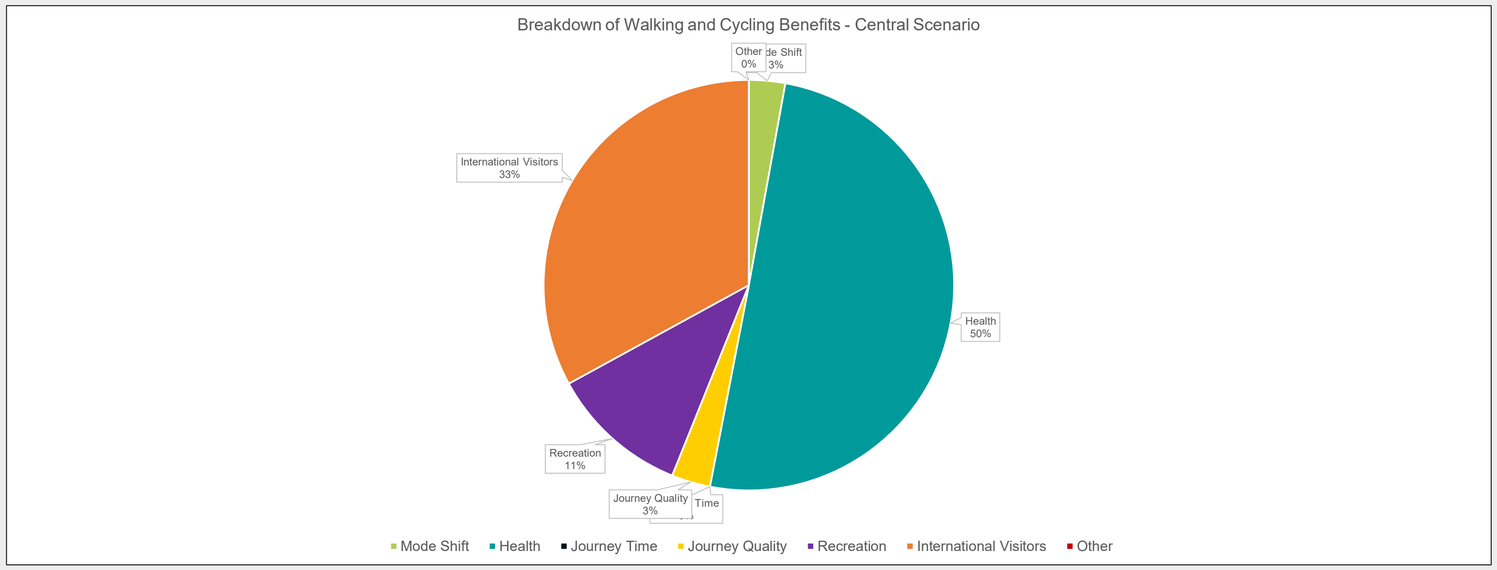
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€34,335**
☑	Vehicle Operating & Ownership Costs	€11,764
☑	Carbon	€16,452
☑	Air Quality	€627
☑	Noise	€408
☑	Congestion	€5,084
	Health	**€439,205**
☑	Reduced Mortality	€424,196
☑	Workplace Absenteeism	€15,009
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€4,206**
☑	**Recreation**	**€42,397**
☑	**International Visitors**	**€377,552**
	Other	**€0**
	Present Value of Benefits (PVB)	**€862,937**
	Present Value of Costs (PVC)	**€3,221,289**
	Net Present Value (NPV)	**-€2,358,351**
	Benefit-to-Cost Ratio (BCR)	**0.27**



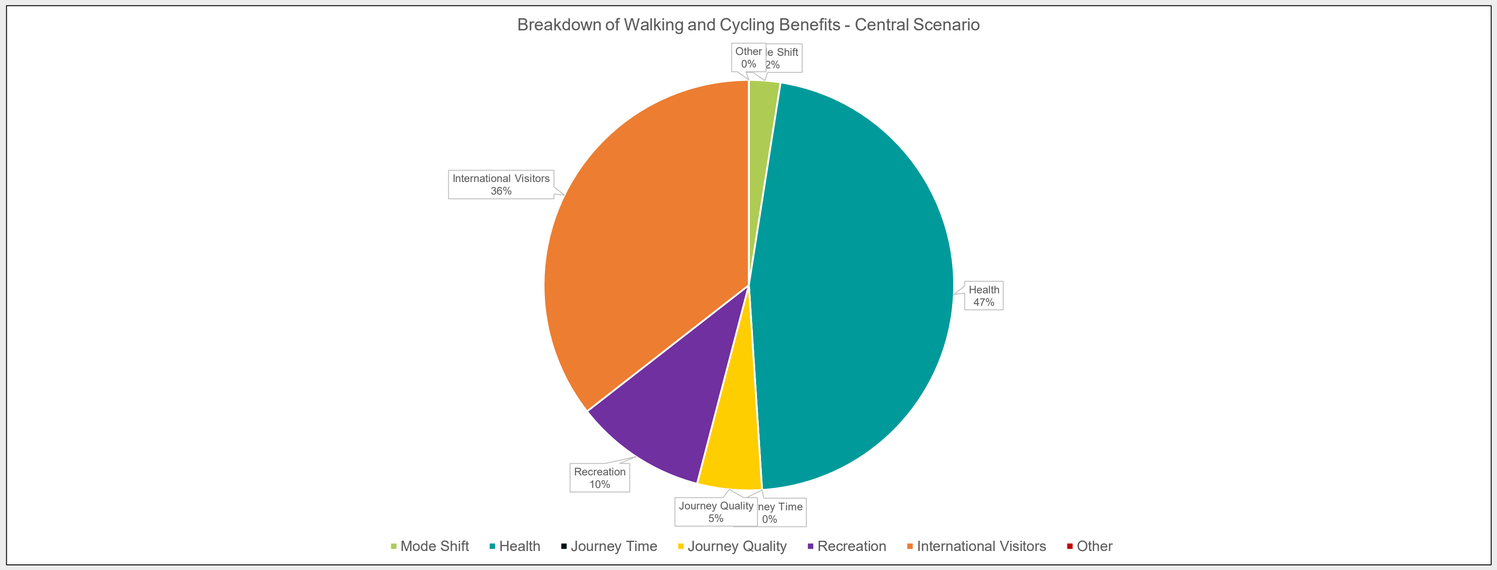
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€90,843**
☑	Vehicle Operating & Ownership Costs	€30,552
☑	Carbon	€44,398
☑	Air Quality	€1,630
☑	Noise	€1,060
☑	Congestion	€13,202
	Health	**€1,598,351**
☑	Reduced Mortality	€1,546,869
☑	Workplace Absenteeism	€51,482
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€97,273**
☑	**Recreation**	**€348,310**
☑	**International Visitors**	**€1,049,905**
	Other	**€0**
	Present Value of Benefits (PVB)	**€3,060,441**
	Present Value of Costs (PVC)	**€6,268,967**
	Net Present Value (NPV)	**-€3,208,526**
	Benefit-to-Cost Ratio (BCR)	**0.49**



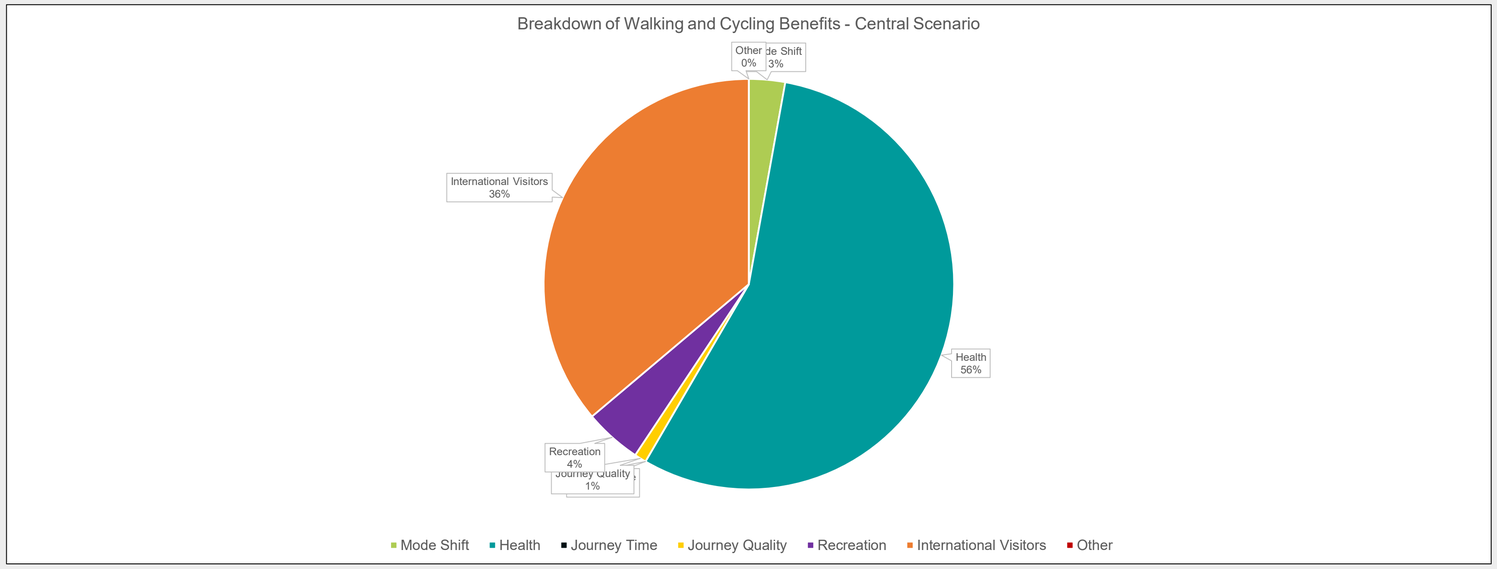
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€102,448**
☑	Vehicle Operating & Ownership Costs	€34,296
☑	Carbon	€50,312
☑	Air Quality	€1,830
☑	Noise	€1,190
☑	Congestion	€14,820
	Health	**€1,926,341**
☑	Reduced Mortality	€1,866,742
☑	Workplace Absenteeism	€59,599
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€210,595**
☑	**Recreation**	**€430,836**
☑	**International Visitors**	**€1,472,165**
	Other	**€0**
	Present Value of Benefits (PVB)	**€3,980,537**
	Present Value of Costs (PVC)	**€9,347,932**
	Net Present Value (NPV)	**-€5,367,395**
	Benefit-to-Cost Ratio (BCR)	**0.43**



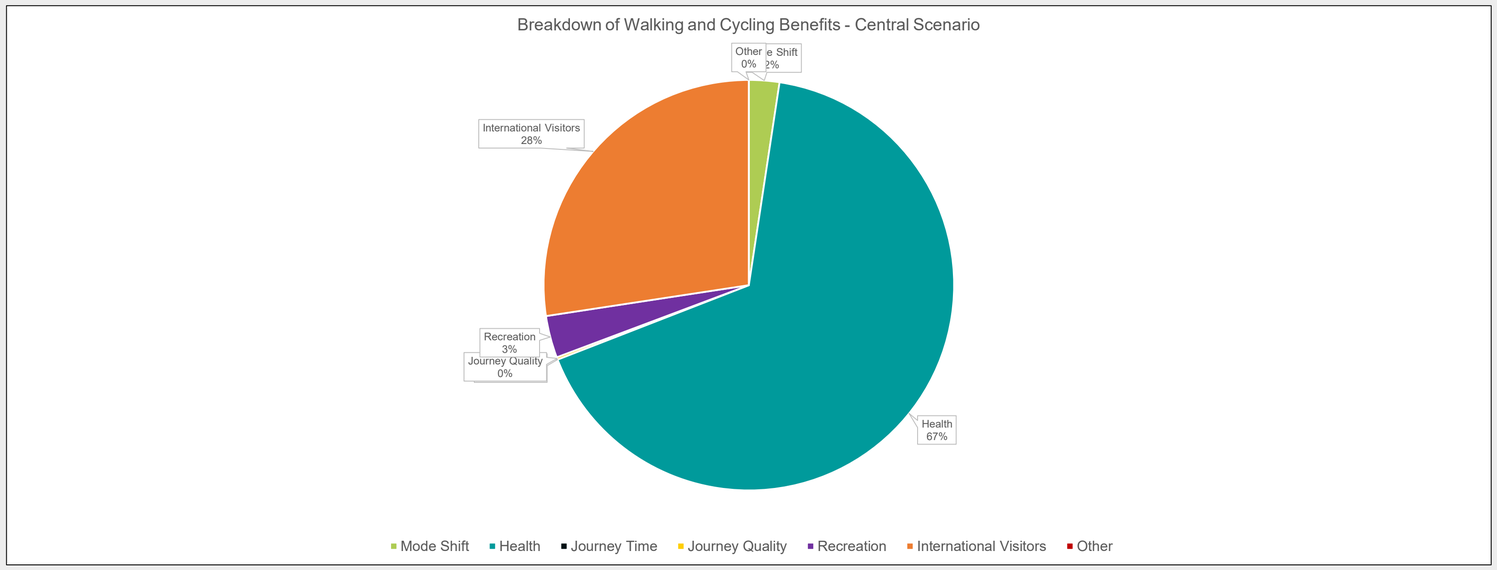
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€47,546**
☑	Vehicle Operating & Ownership Costs	€16,007
☑	Carbon	€23,213
☑	Air Quality	€854
☑	Noise	€555
☑	Congestion	€6,917
	Health	**€928,592**
☑	Reduced Mortality	€898,778
☑	Workplace Absenteeism	€29,814
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€15,722**
☑	**Recreation**	**€75,347**
☑	**International Visitors**	**€604,295**
	Other	**€0**
	Present Value of Benefits (PVB)	**€1,606,167**
	Present Value of Costs (PVC)	**€4,808,495**
	Net Present Value (NPV)	**-€3,202,328**
	Benefit-to-Cost Ratio (BCR)	**0.33**



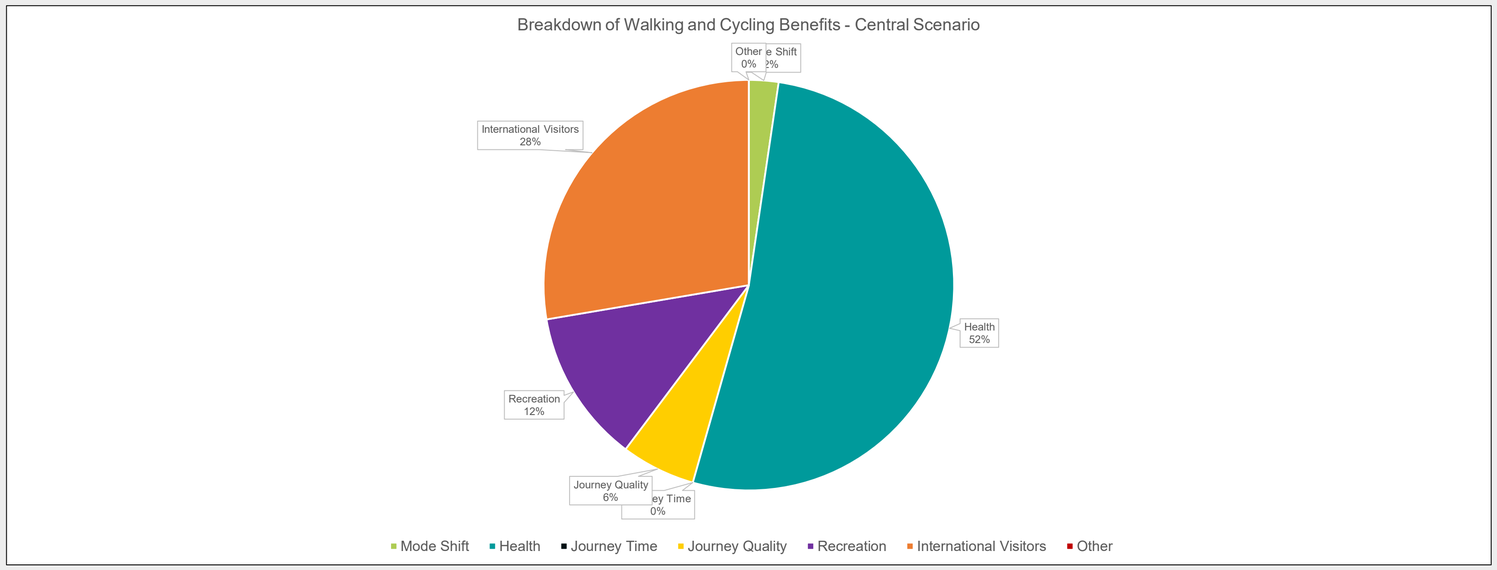
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€21,404**
☑	Vehicle Operating & Ownership Costs	€7,059
☑	Carbon	€10,673
☑	Air Quality	€377
☑	Noise	€245
☑	Congestion	€3,050
	Health	**€596,734**
☑	Reduced Mortality	€573,383
☑	Workplace Absenteeism	€23,351
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€1,674**
☑	**Recreation**	**€29,613**
☑	**International Visitors**	**€245,182**
	Other	**€0**
	Present Value of Benefits (PVB)	**€859,390**
	Present Value of Costs (PVC)	**€2,389,717**
	Net Present Value (NPV)	**-€1,530,327**
	Benefit-to-Cost Ratio (BCR)	**0.36**



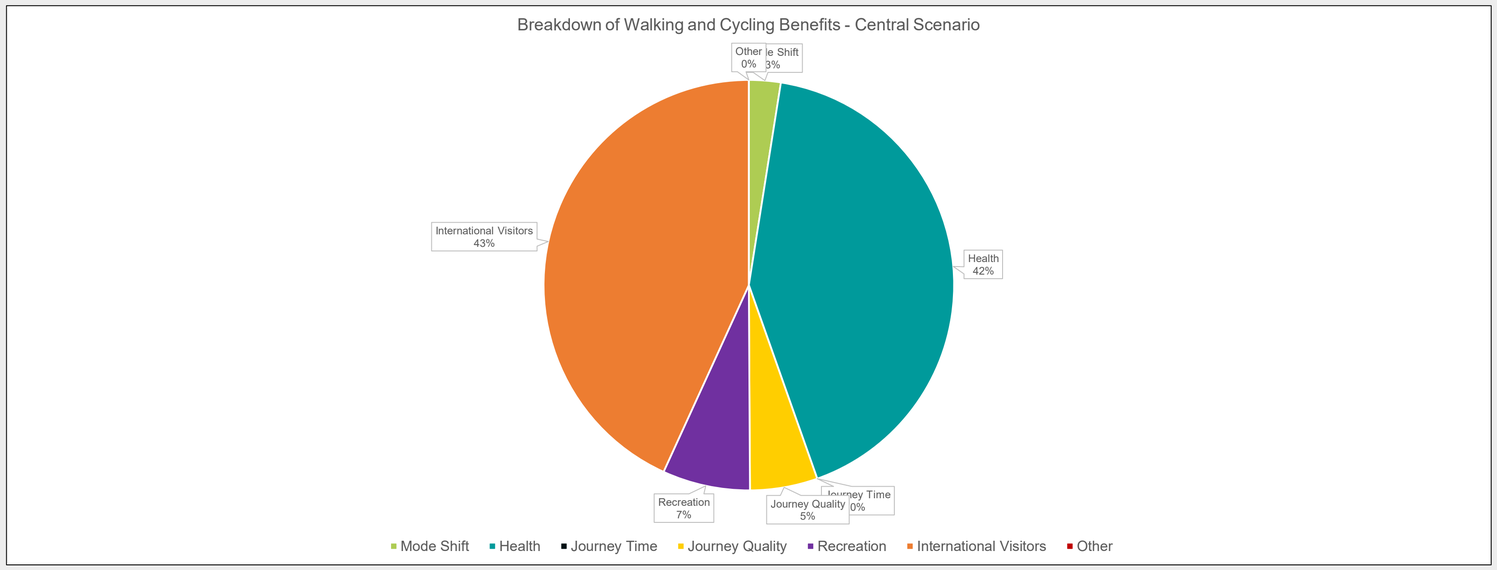
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€128,344**
☑	Vehicle Operating & Ownership Costs	€43,373
☑	Carbon	€62,409
☑	Air Quality	€2,314
☑	Noise	€1,505
☑	Congestion	€18,743
	Health	**€2,874,328**
☑	Reduced Mortality	€2,795,360
☑	Workplace Absenteeism	€78,968
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€322,700**
☑	**Recreation**	**€666,379**
☑	**International Visitors**	**€1,527,008**
	Other	**€0**
	Present Value of Benefits (PVB)	**€5,302,467**
	Present Value of Costs (PVC)	**€11,554,545**
	Net Present Value (NPV)	**-€6,252,078**
	Benefit-to-Cost Ratio (BCR)	**0.46**



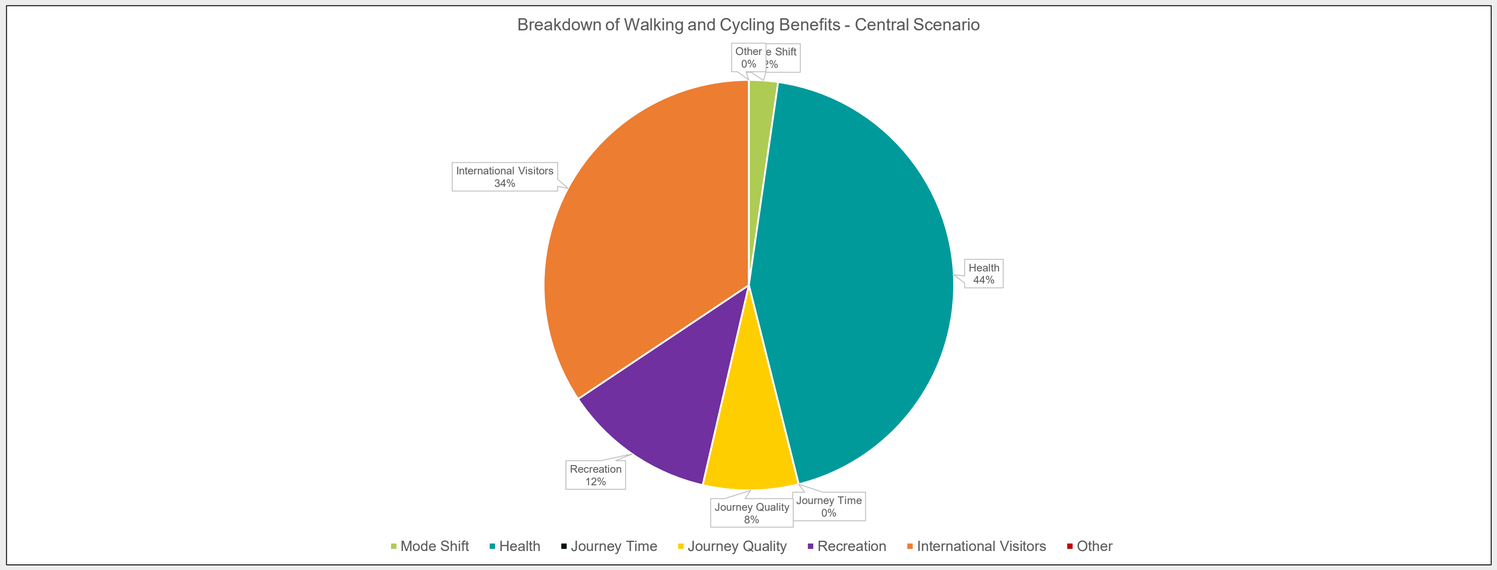
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€276,785**
☑	Vehicle Operating & Ownership Costs	€92,921
☑	Carbon	€135,527
☑	Air Quality	€4,959
☑	Noise	€3,224
☑	Congestion	€40,154
	Health	**€4,664,441**
☑	Reduced Mortality	€4,537,049
☑	Workplace Absenteeism	€127,392
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€589,048**
☑	**Recreation**	**€765,463**
☑	**International Visitors**	**€4,784,438**
	Other	**€0**
	Present Value of Benefits (PVB)	**€10,647,994**
	Present Value of Costs (PVC)	**€20,309,010**
	Net Present Value (NPV)	**-€9,661,016**
	Benefit-to-Cost Ratio (BCR)	**0.52**



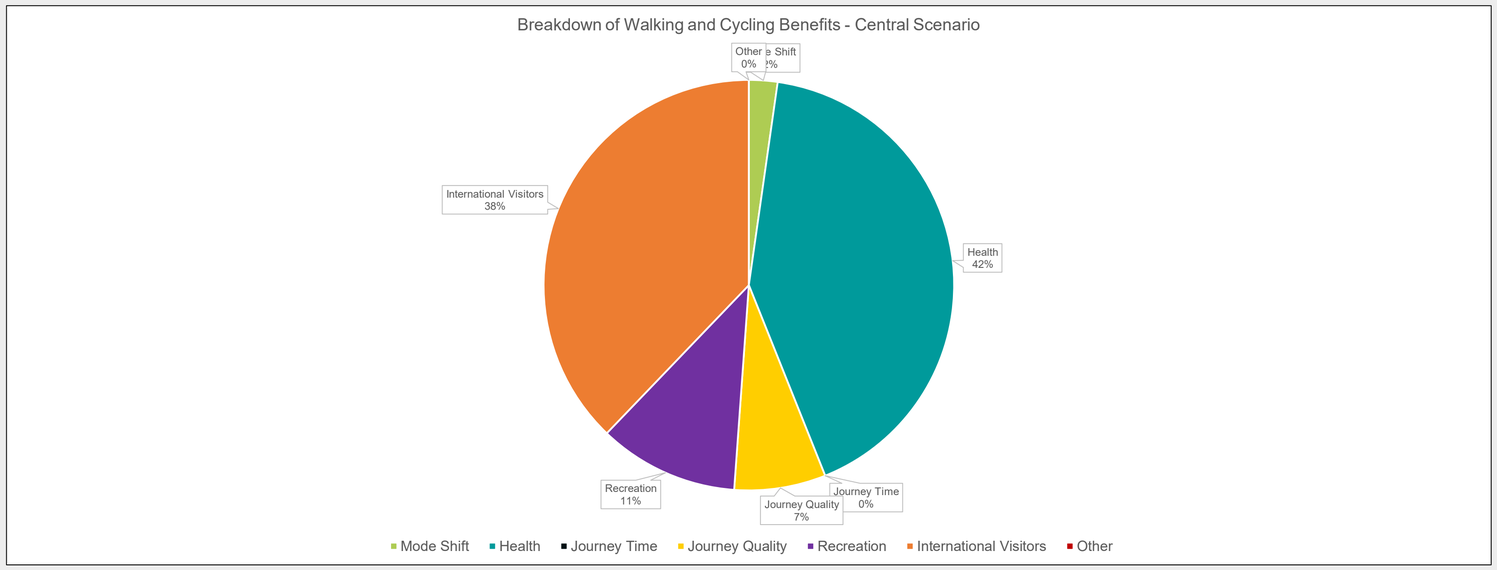
A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€295,447**
☑	Vehicle Operating & Ownership Costs	€99,666
☑	Carbon	€143,937
☑	Air Quality	€5,318
☑	Noise	€3,458
☑	Congestion	€43,069
	Health	**€5,672,250**
☑	Reduced Mortality	€5,523,998
☑	Workplace Absenteeism	€148,252
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€972,912**
☑	**Recreation**	**€1,557,563**
☑	**International Visitors**	**€4,447,338**
	Other	**€0**
	Present Value of Benefits (PVB)	**€12,439,440**
	Present Value of Costs (PVC)	**€19,693,153**
	Net Present Value (NPV)	**-€7,253,713**
	Benefit-to-Cost Ratio (BCR)	**0.63**



A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
☑	**Mode Shift**	**€232,859**
☑	Vehicle Operating & Ownership Costs	€78,164
☑	Carbon	€114,034
☑	Air Quality	€4,171
☑	Noise	€2,712
☑	Congestion	€33,777
	Health	**€4,317,523**
☑	Reduced Mortality	€4,201,306
☑	Workplace Absenteeism	€116,217
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€746,123**
☑	**Recreation**	**€1,142,046**
☑	**International Visitors**	**€3,917,874**
	Other	**€0**
	Present Value of Benefits (PVB)	**€9,951,778**
	Present Value of Costs (PVC)	**€18,116,886**
	Net Present Value (NPV)	**-€8,165,108**
	Benefit-to-Cost Ratio (BCR)	**0.55**



A. Cost Benefit Analysis - Central Scenario

Tick to include:		Present Value
	Mode Shift	**€584,195**
☑	Vehicle Operating & Ownership Costs	€156,242
☑	Carbon	€297,739
☑	Air Quality	€16,073
☑	Noise	€10,566
☑	Congestion	€103,576
	Health	**€33,315,198**
☑	Reduced Mortality	€32,613,829
☑	Workplace Absenteeism	€701,369
☑	**Journey Time**	**€0**
☑	**Journey Quality**	**€848,444**
☑	**Recreation**	**€7,210,116**
☑	**International Visitors**	**€1,492,734**
	Other	**€0**
	Present Value of Benefits (PVB)	**€43,450,688**
	Present Value of Costs (PVC)	**€34,411,083**
	Net Present Value (NPV)	**€9,039,604**
	Benefit-to-Cost Ratio (BCR)	**1.26**

