

# **Apple Unveiled: Innovation, Sustainability, and Market Evolution**

# Apple's Groundbreaking Firsts: Product Launches and Their Stock Market Ripples

## June 2007: The First iPhone is Released

```
In[=]:= (*Define the date range for analysis*) startDate = DateObject[{2007, 6, 25}];  
endDate = DateObject[{2008, 1, 1}];  
  
(*Retrieve Apple's stock price data for the specified period*)  
appleStockData = FinancialData["AAPL", "Close", {startDate, endDate}];  
  
(*Create a line plot of Apple's stock price over time*)  
DateListPlot[appleStockData, PlotTheme → "Detailed", PlotStyle → Blue,  
PlotLabel → "Apple Stock Price (June 2007 - Jan 2008)",  
FrameLabel → {"Date", "Closing Price ($)"}, ImageSize → Large]
```

Out[=]=



The first iPhone was revealed in January 2007 and was released on June 29, 2007. The day of its release, Apple's stock rose 1.23% and surged **16%** within the next month. By the beginning of 2008, the price of Apple had reached an all time high.

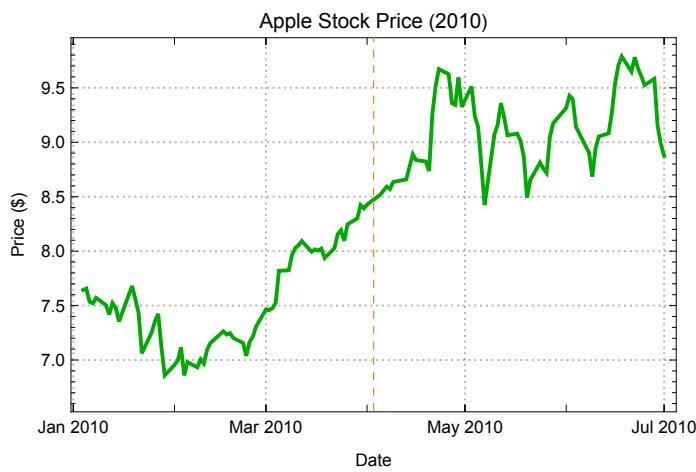
---

## April 2010: The First iPad is Released

```
In[°]:= (*Define dates and get stock data*)startDate = DateObject[{2010, 1, 1}];
endDate = DateObject[{2010, 7, 1}];
launchDate = DateObject[{2010, 4, 3}];
stockData = FinancialData["AAPL", "Close", {startDate, endDate}];

(*Create stock price plot*)
stockPlot = DateListPlot[stockData,
  PlotStyle -> Darker[Green], PlotLabel -> "Apple Stock Price (2010)",
  FrameLabel -> {"Date", "Price ($)"}, ImageSize -> Medium, PlotTheme -> "Detailed",
  Epilog -> {{Orange, Dashed, Line[{{launchDate, 0}, {launchDate, 300}}]},Text["iPad Launch", {launchDate, 280}]}}
```

Out[°]=



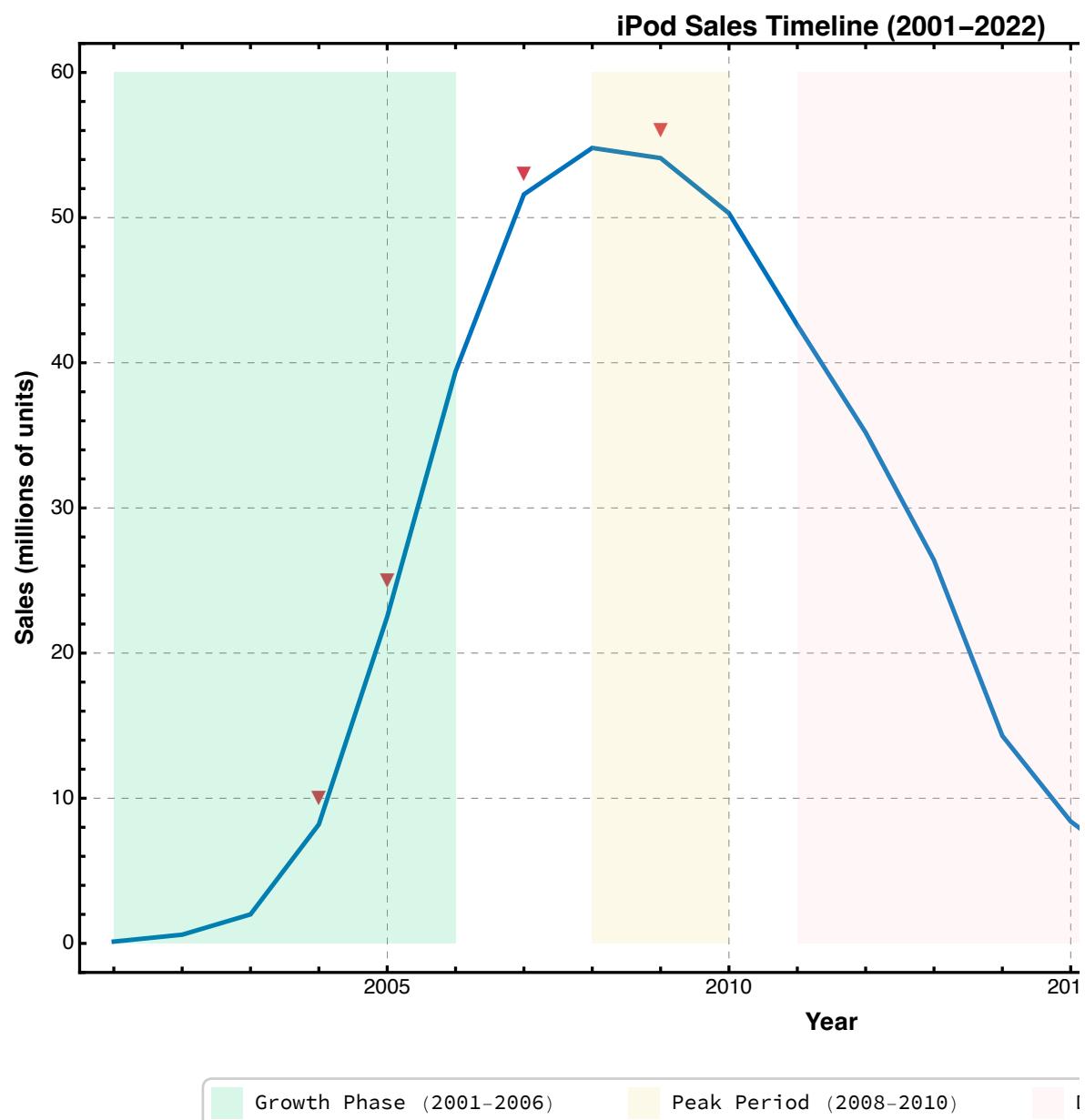
*Apple's stock price had a modest increase after the release of the first iPad in 2010. Initial reaction: Apple's stock price didn't react significantly when the market opened on April 5, 2010, the day after the iPad's release. By the end of April, Apple's stock price had increased by 13%*

# Legacy of the iPod

## Major time periods in the history of iPod

```
In[8]:= (sales = {{2001, 0.125`}, {2002, 0.6`}, {2003, 2}, {2004, 8.2`}, {2005, 22.5`},
{2006, 39.4`}, {2007, 51.6`}, {2008, 54.8`}, {2009, 54.1`},
{2010, 50.3`}, {2011, 42.6`}, {2012, 35.2`}, {2013, 26.4`},
{2014, 14.3`}, {2015, 8.4`}, {2016, 4.9`}, {2017, 2.7`}, {2018, 1.5`},
{2019, 0.8`}, {2020, 0.4`}, {2021, 0.2`}, {2022, 0.1`}});
(releases = {{2004, 10, "iPod Mini"}, {2005, 25, "iPod Nano"}, {2007, 53, "iPod Touch"}, {2009, 56, "Nano 5th Gen"}});
(tooltipData = (Tooltip[{#1[[1]], #1[[2]]}, Column[{"Year: " <> ToString[#1[[1]]], "Sales: " <> ToString[#1[[2]]] <> "M units"}]] &) /@ sales);
(plot = ListPlot[{tooltipData, ({#1[[1]], #1[[2]]} &) /@ releases},
Joined -> {True, False},
PlotStyle -> {{RGBColor[0, 0.447`, 0.741`], Thickness[0.003`]}, {RGBColor[0.835`, 0.243`, 0.31`], PointSize[0.015`]}},
PlotMarkers -> {None, {"▼", 15}}, Epilog -> {Opacity[0.15`],
{RGBColor[0, 0.8`, 0.4`], Rectangle[{2001, 0}, {2006, 60}]}, {RGBColor[0.95`, 0.85`, 0.4`], Rectangle[{2008, 0}, {2010, 60}]}, {RGBColor[1, 0.8`, 0.8`], Rectangle[{2011, 0}, {2022, 60}]}}},
Frame -> True, FrameLabel -> {Style["Year", Bold, 14], Style["Sales (millions of units)", Bold, 14]},
PlotLabel -> Style["iPod Sales Timeline (2001-2022)", Bold, 16],
GridLines -> {Automatic, Automatic},
GridLinesStyle -> Directive[Gray, Dashed],
PlotRange -> {{2000.5`, 2022.5`}, {-2, 62}}, ImageSize -> 900,
BaseStyle -> {FontFamily -> "Helvetica", FontSize -> 12},
Background -> White, FrameStyle -> Directive[Black, Thickness[0.002`]]]);
(legend = Framed[Grid[{{Graphics[{Opacity[0.15`], RGBColor[0, 0.8`, 0.4`],
Rectangle[{0, 0}, {1, 1}]}], ImageSize -> 20}, {Style["Growth Phase (2001-2006)", 12], Spacer[30], Graphics[{Opacity[0.15`], RGBColor[0.95`, 0.85`, 0.4`],
Rectangle[{0, 0}, {1, 1}]}], ImageSize -> 20}, {Style["Peak Period (2008-2010)", 12], Spacer[30], Graphics[{Opacity[0.15`], RGBColor[1, 0.8`, 0.8`], Rectangle[{0, 0}, {1, 1}]}], ImageSize -> 20}, {Style["Decline Phase (2011-2022)", 12]}]}, Alignment -> Center], FrameStyle -> GrayLevel[0.8`], Background -> White, RoundingRadius -> 5];
Column[{plot, Spacer[10], legend}], Alignment -> Center]
```

Out[5]=

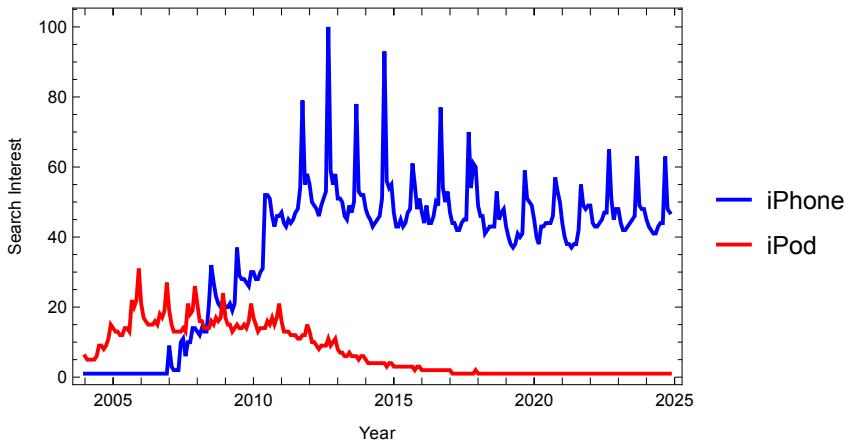
Null<sup>5</sup>

## iPhones vs iPod search interests worldwide

```
In[®]:= (*Import CSV*)
data = Import["/Users/akshitaarora/Documents/multiTimeline.csv", "CSV"];
numericData = Table[{DateObject[{ToExpression[StringTake[data[[i], 1], 4]],
ToExpression[StringTake[data[[i], 1], {6, 7}]]}],
ToExpression[data[[i], 2]], ToExpression[data[[i], 3]]}], {i, 2, Length[data]}];
```

```
(*Create plot*)
DateListPlot[{Transpose[{numericData[[All, 1]], numericData[[All, 2]]}],
Transpose[{numericData[[All, 1]], numericData[[All, 3]]}],
{Tooltip /@ Transpose[{numericData[[All, 1]], numericData[[All, 2]]}],
Tooltip /@ Transpose[{numericData[[All, 1]], numericData[[All, 3]]}]},
Joined → True, PlotLegends → {"iPhone", "iPod"}, PlotStyle → {Blue, Red},
FrameLabel → {"Year", "Search Interest"}]
```

Out[®]=



*The decreasing search interest in iPods over time, coinciding with the rising popularity of iPhones after their release in 2007. This reflects how the iPhone's multifunctionality gradually overshadowed the standalone appeal of the iPod, signaling a shift in consumer interest and priorities.*

# Nostalgia of the iPod users

```
url = "https://medium.com/@pupatc/the-ipod-nostalgia-81af981a1d55";
pageContent = Import[url, "Plaintext"];

textSections = TextCases[pageContent, "Paragraph"];

cleanedText = StringJoin[Riffle[textSections, " "]];
importantWords = DeleteStopwords[TextCases[cleanedText, "Word"]];
```



```

bigI400 = ImageResize[bigI, {Automatic, 400}];
whitebox = Image[Graphics[{}, ImageSize -> {500, 500}]];
bigI400Box = ImageCompose[whitebox, RemoveBackground[bigI400, "Salient"]];
newBigI = Binarize[bigI400Box];
wc = WordCloud[importantWords, newBigI, ImageSize -> {500, 500}];
ImageMultiply[wc, bigI400Box]

```

*Out*[•] =



*This word cloud captures the emotional resonance and nostalgic memories shared by users about Apple's iPod, using keywords extracted from reflections on its legacy. At the center, an image of the iPod symbolizes its iconic status, surrounded by words highlighting its cultural impact and personal significance. The visualization emphasizes how the iPod shaped music consumption and became a cherished device in modern tech history.*

# Tim Cook's Fifth Avenue Store visit: A Journey Through Human Emotions

In[®]:= **imageVisit** =



Out[®]=



In[®]:= **ImageCases[imageVisit]**

Out[®]=

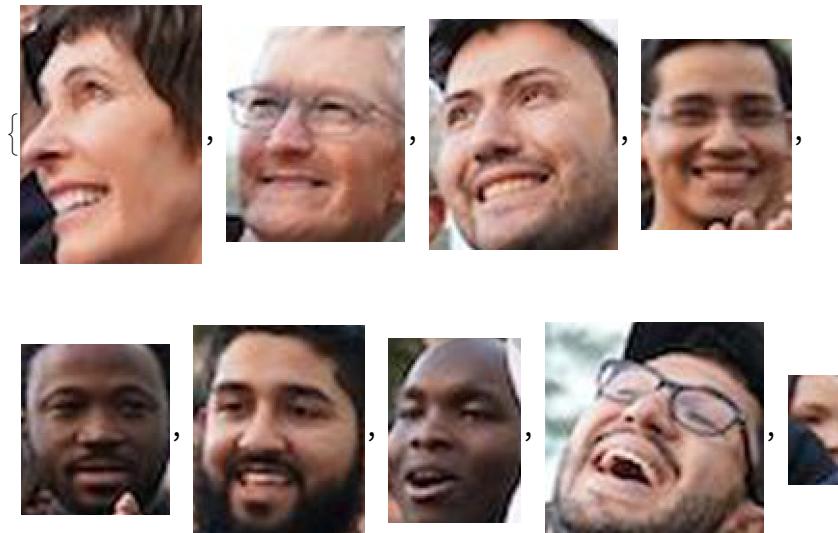
{| person →



```
In[®]:= FindFaces[imageVisit]
Out[®]= {Rectangle[{1081.5, 566.5}, {1175.5, 699.5}],
 Rectangle[{863.5, 621.5}, {955.5, 732.5}],
 Rectangle[{968.5, 645.5}, {1065.5, 764.5}],
 Rectangle[{43.5, 550.5}, {120.5, 648.5}],
 Rectangle[{293.5, 565.5}, {369.5, 653.5}],
 Rectangle[{143.5, 540.5}, {231.5, 648.5}],
 Rectangle[{494.5, 542.5}, {562.5, 637.5}],
 Rectangle[{712.5, 629.5}, {825.5, 741.5}],
 Rectangle[{417.5, 525.5}, {457.5, 581.5}]}
```

```
In[®]:= faces = FindFaces[imageVisit, "Image"]
```

```
Out[®]=
```



```
In[®]:= emotions = Classify["FacialExpression", faces]
```

```
Out[®]=
```

```
{happiness, happiness, happiness, happiness,
happiness, happiness, Indeterminate, fear, happiness}
```

```
In[®]:= gender = Classify["FacialGender", faces]
```

```
Out[®]=
```

```
{Female, Male, Male, Female, Male, Male, Male, Male}
```

```
In[®]:= genderandEmotion = Thread[{gender, emotions}]
```

```
Out[®]=
```

```
{Female, happiness}, {Male, happiness}, {Male, happiness},
{Female, happiness}, {Male, happiness}, {Male, happiness},
{Male, Indeterminate}, {Male, fear}, {Male, happiness}}
```

```
In[®]:= ResourceFunction["CrossTabulate"] [genderandEmotion]
```

```
Out[®]=
```



*Tim Cook's annual visits to Apple's Fifth Avenue store in New York City during product launches, such as new iPhone releases, symbolize Apple's connection with its customers and its commitment to innovation. These visits hold significance for fans, fostering a sense of community and excitement around Apple's ecosystem.*

## Analyzing User Sentiments on iPad's Controversial Ad

***Long seen as the gold standard in marketing, the tech giant did a face-plant with its ad for the new iPad Pro tablet. The 60-second spot shows a massive hydraulic press literally crushing an array of objects – including a record player, a piano, a guitar, an old TV set, cameras, a typewriter, books, paint cans and tubes, and a classic arcade machine – and compressing them into (voilà!) the ultrathin iPad Pro.***

```
In[®]:= textSentencesS = {"the destruction of the human experience.",  
"Apple's iPad ad is ugly and crushing",  
"Apple's iPad Crush Ad Is Bleak, Ominous and Threatening",  
"I had a really disturbing reaction to the ad",  
"Hideous images. What's wrong with them.", "crushes the arts"}  
TableForm[{textSentencesS,  
Classify["Sentiment", textSentencesS]}]
```

```
Out[®]=
```

```
{the destruction of the human experience.,  
Apple's iPad ad is ugly and crushing,  
Apple's iPad Crush Ad Is Bleak, Ominous and Threatening,  
I had a really disturbing reaction to the ad,  
Hideous images. What's wrong with them., crushes the arts}
```

```
Out[®]//TableForm=  
the destruction of the human experience. Apple's iPad ad is ugly and crushing  
Neutral Negative
```

```
In[•]:= posSentences =
  Length[Cases[Classify["Sentiment", textSentencesS], "Positive"]];
negSentences =
  Length[Cases[Classify["Sentiment", textSentencesS], "Negative"]];
totalSentences = Length[textSentencesS];
headers =
 {"quantity of positive sentences", "quantity of negative sentences",
  "total sentences", "ratio of positive words to total sentences",
  "ratio of negative words to total sentences"};
values = {posSentences, negSentences, totalSentences,
  N[posSentences / totalSentences], N[negSentences / totalSentences]};
results = Transpose[{headers, values}];
TextGrid[results, Frame → All]
```

Out[•]=

quantity of positive sentences	1
quantity of negative sentences	4
total sentences	6
ratio of positive words to total sentences	0.166667
ratio of negative words to total sentences	0.666667

The above analysis shows how users mostly reacted negatively on social media regarding the controversial ad after Apple made an apology stating that “We missed the mark with this video, and we’re sorry.”

## Apple leaders and their influence

**Apple Inc ., an icon of innovation and design, owes much of its success to the contrasting leadership styles of Steve Jobs and Tim Cook . Both leaders have left indelible marks on the company and the tech industry, steering Apple to become one of the world’s most valuable brands .**



## Steve Jobs : The Visionary Innovator :

Steve Jobs, Apple's co - founder, transformed the company through revolutionary products like the Macintosh, iPod, iPhone, and iPad . Known for his perfectionism and charisma, Jobs pushed the boundaries of design and functionality, redefining industries and setting new benchmarks . His leadership, from Apple's founding in 1976 to 1985 and his return in 1997, marked periods of groundbreaking innovation . Jobs led Apple from near - bankruptcy to unparalleled success .

**Apple Stock Price during the tenure of Steve Jobs as CEO and not as CEO post its IPO on December 12, 1980 till end of 2011:**

```
In[]:= firstdate = DateObject[{1980, 12, 12}]; (*Define Dates*)
enddate = DateObject[{2011, 12, 31}];
applestock = FinancialData["AAPL", "Price", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Stock Price*)
line1 = {Red, Dashed,
  Line[{{DateObject[{1983, 6, 4}], 0}, {DateObject[{1983, 6, 4}], 10}}]}
(*Create a line at that time frame*)
label1 = {Red, Inset["1983 - Stock hits high price points",
  {DateObject[{1983, 6, 4}], 11}]} (*Name the line*)
line2 = {Black, Dashed,
  Line[{{DateObject[{1985, 9, 16}], 0}, {DateObject[{1985, 9, 16}], 10}}]}
label2 = {Black,
  Inset["1985 - Jobs steps down as CEO", {DateObject[{1985, 9, 16}], 12}]}
line3 = {Brown, Dashed,
  Line[{{DateObject[{1997, 1, 1}], 0}, {DateObject[{1997, 1, 1}], 10}}]}
label3 = {Brown,
  Inset["1997 - Jobs returns as Interim CEO", {DateObject[{1997, 1, 1}], 13}]}
line4 = {Blue, Dashed,
  Line[{{DateObject[{2011, 10, 5}], 0}, {DateObject[{2011, 10, 5}], 10}}]}
label4 = {Blue, Inset[
  "2011 - Jobs steps down CEO of Apple", {DateObject[{2011, 10, 5}], 14}]}
applestockchart =
DateListPlot[{applestock}, PlotTheme -> {"Business", "LargeLabels"},
 PlotStyle -> Green, PlotLabel -> "Apple Stock with Jobs as CEO",
 (*Plot the Graph with Title,Axis and legends*)
 FrameLabel -> {"Years", "$ Stock_Price"},
 PlotRange -> All, PlotLegends -> {"Apple Stock Price"},
 Epilog -> {{line1, label1}, {line2, label2}, {line3, label3}, {line4, label4}}]

Out[=]={{■, Dashing[{Small, Small}], Line[{{Sat 4 Jun 1983, 0}, {Sat 4 Jun 1983, 10}}]}}

Out[=]={{■, Inset[1983 - Stock hits high price points, {Sat 4 Jun 1983, 11}]}}
```

Out[=]={{■, Dashing[{Small, Small}], Line[{{Mon 16 Sep 1985, 0}, {Mon 16 Sep 1985, 10}}]}}

```

Out[=] =
{█, Inset[1985 - Jobs steps down as CEO, {Mon 16 Sep 1985, 12}]}

Out[=] =
{█, Dashing[{Small, Small}], Line[{{Wed 1 Jan 1997, 0}, {Wed 1 Jan 1997, 10}}]}

Out[=] =
{█, Inset[1997 - Jobs returns as Interim CEO, {Wed 1 Jan 1997, 13}]}

Out[=] =
{█, Dashing[{Small, Small}], Line[{{Wed 5 Oct 2011, 0}, {Wed 5 Oct 2011, 10}}]}

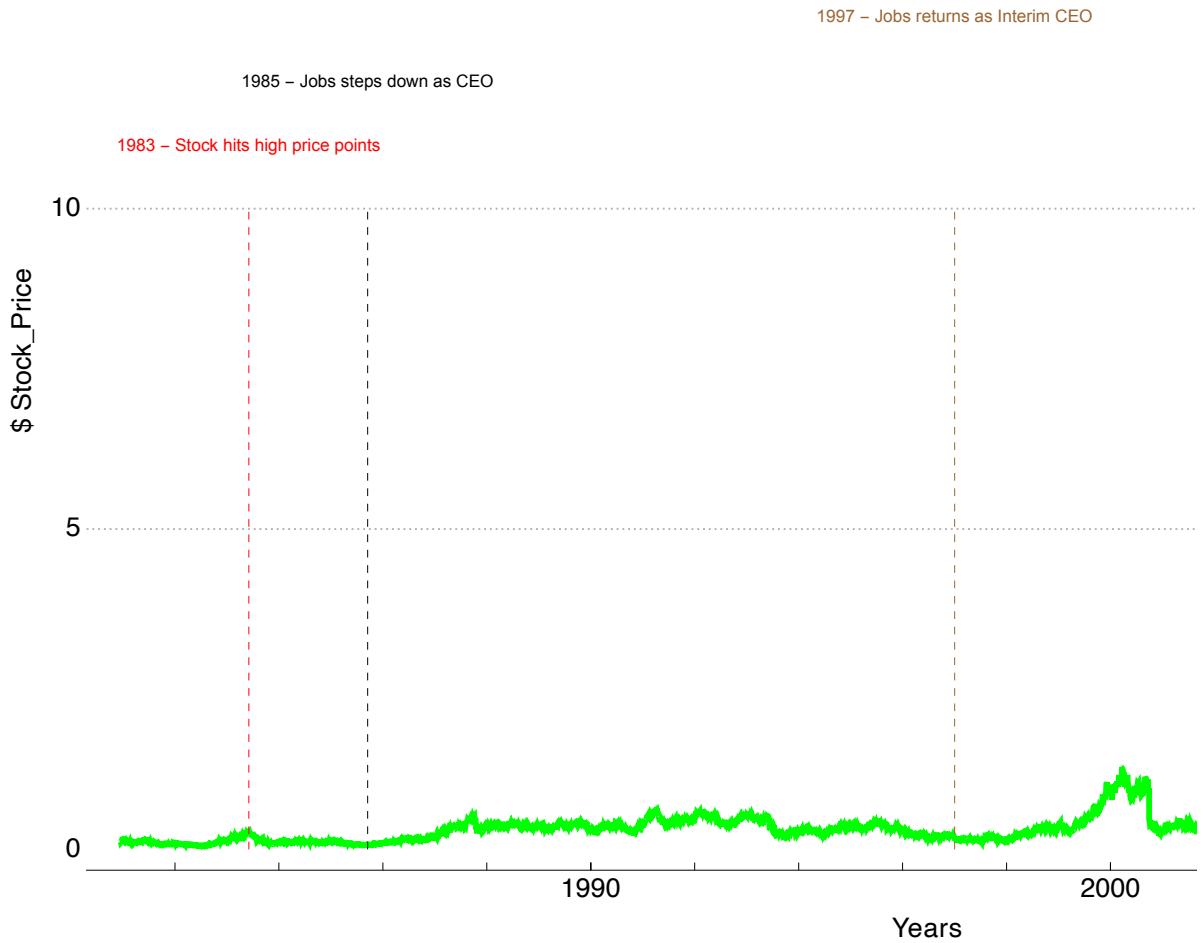
Out[=] =
{█, Inset[2011 - Jobs steps down CEO of Apple, {Wed 5 Oct 2011, 14}]}

Out[=] =

```

### Apple Stock with Jobs as CEO

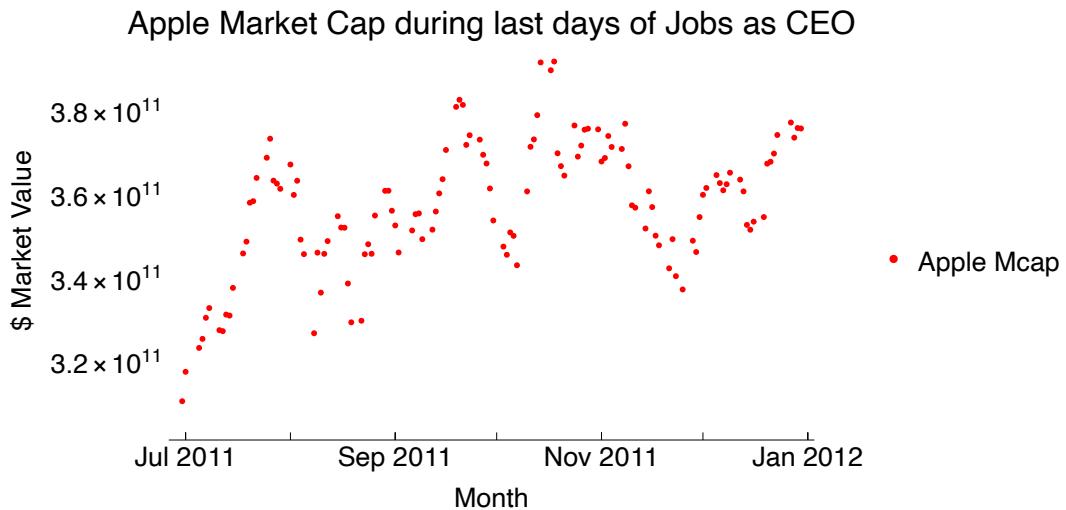
15



**Apple Market Capitalization during the tenure of Steve Jobs as CEO and not as CEO post its IPO on December 12, 1980 till end of 2011:**

```
In[=]:= firstdate = DateObject[{1980, 12, 12}]; (*Define Dates*)
enddate = DateObject[{2011, 12, 31}];
applemcap = FinancialData["AAPL", "MarketCap", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Market Cap*)
applemcapchart =
ListPlot[{applemcap}, PlotTheme -> {"Web", "LargeLabels"}, PlotStyle -> Red,
PlotLabel -> "Apple Market Cap during last days of Jobs as CEO",
FrameLabel -> {"Month", "$ Market Value"}, PlotRange -> All,
PlotLegends -> {"Apple Mcap"}] (*Plot the Graph with Title,Axis and legends*)
```

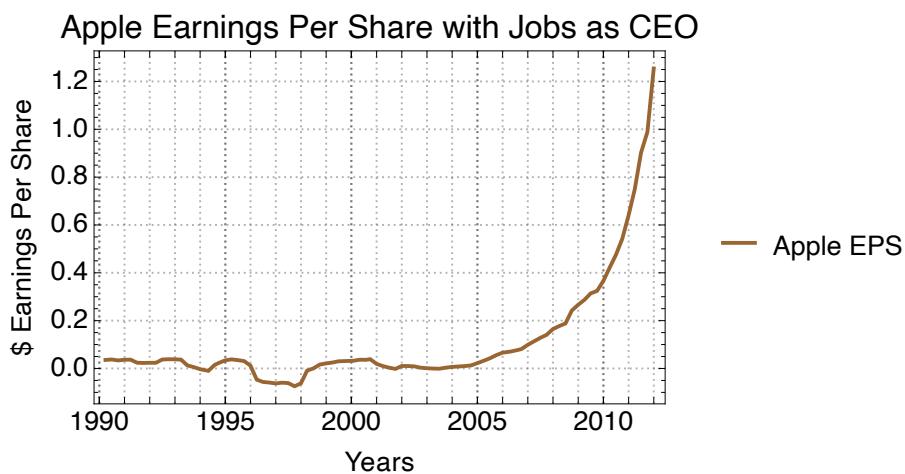
Out[=]=



**Apple Earnings Per Share during the tenure of Steve Jobs as CEO and not as CEO post its IPO on December 12, 1980 till end of 2011:**

```
In[=]:= firstdate = DateObject[{1980, 12, 12}]; (*Define Dates*)
enddate = DateObject[{2011, 12, 31}];
appleeps = FinancialData["AAPL", "EarningsPerShare", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Earnings Per Share*)
appleepschart =
ListLinePlot[{appleeps}, PlotTheme -> {"Detailed", "LargeLabels"},
PlotStyle -> Brown, PlotLabel -> "Apple Earnings Per Share with Jobs as CEO",
FrameLabel -> {"Years", "$ Earnings Per Share"}, PlotRange -> All,
PlotLegends -> {"Apple EPS"}] (*Plot the Graph with Title, Axis and legends*)

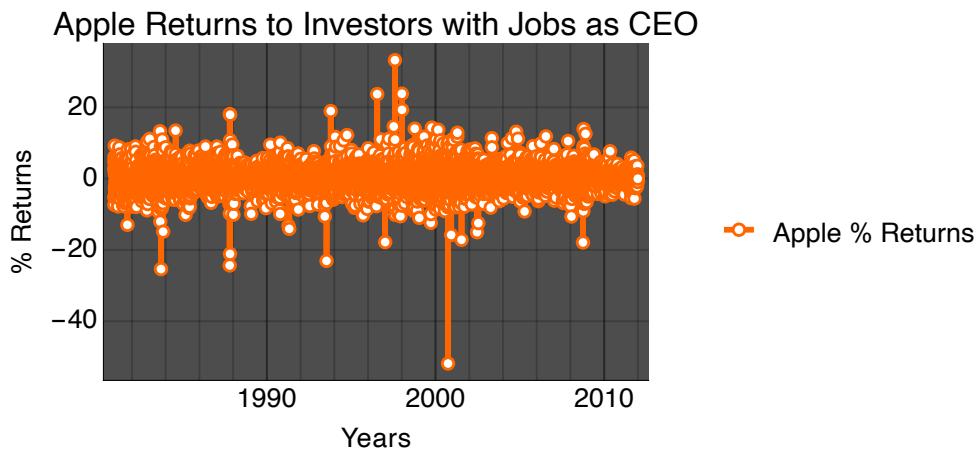
Out[=]=
```



**Apple Returns Over the Years since IPO till last days of Jobs :**

```
In[=]:= firstdate = DateObject[{1980, 12, 12}]; (*Define Dates*)
enddate = DateObject[{2011, 12, 31}];
applereturns = FinancialData["AAPL", "Return", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Returns on Stock*)
applereturnschart =
ListLinePlot[{applereturns}, PlotTheme -> {"Marketing", "LargeLabels"},
PlotLabel -> "Apple Returns to Investors with Jobs as CEO",
FrameLabel -> {"Years", "% Returns"}, PlotRange -> All, PlotLegends -> {"Apple % Returns"}]
(*Plot the Graph with Title, Axis and legends*)
```

Out[=]=

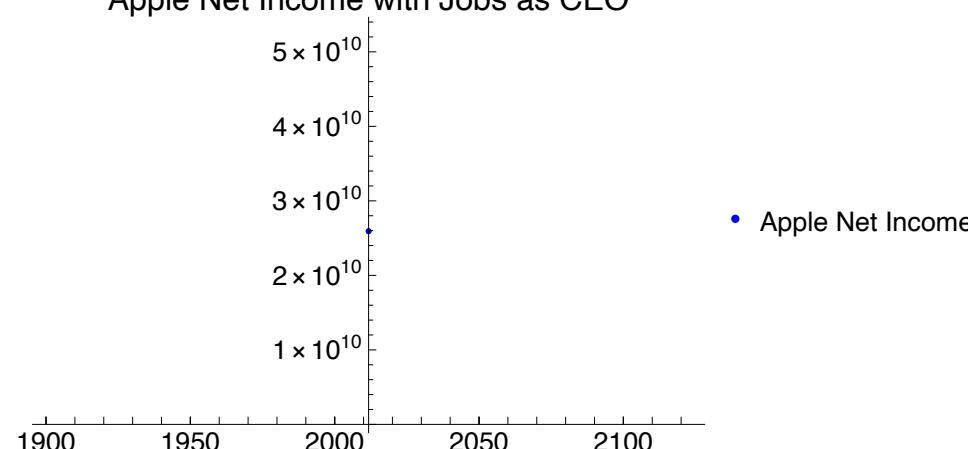


**Apple Net Income's Over the Years since IPO till last days of Jobs :**

```
In[1]:= applecompany = Interpreter["Company"]["Apple"]
(*Use Company Data of Wolfram and in this
case for Apply and deine its Entity for Net Income*)
applecompanystats =
Apple COMPANY [EntityProperty["Company", "NetIncome", {"CurrencyType" → "USD",
"Date" → Interval[{DateObject[{2011}], DateObject[{2012}]}], "TimeSeriesType" → "Annual"}]]
ListPlot[{applecompanystats}, PlotTheme → {"Classic", "LargeLabels"}, PlotStyle → Blue, PlotLabel → "Apple Net Income with Jobs as CEO", FrameLabel → {"Years", "$ Net Income"}, PlotRange → All, PlotLegends → {"Apple Net Income"}]
(*Plot the Graph with Title,Axis and legends*)

Out[1]= Apple

Out[2]=
TimeSeries[ Time: 00:00:00.000 GMT-6 to 00:00:00.000 GMT-6
Data points : 1]

Out[3]=
Apple Net Income with Jobs as CEO

```

## A. Financial Performance :

1. ***Under Jobs' leadership, Apple's market capitalization surged from \$5 billion in 2000 to over \$300 billion by 2011.***
2. ***This explosive growth was fueled by iconic product innovations like the iPod, iPhone, and iPad, which redefined industries and consumer expectations .***

## B. Leadership Style :

3. ***Jobs was a visionary leader, deeply involved in every aspect of product development.***

- 4. Known for his charisma, high standards, and ability to inspire, he demanded excellence and creativity from his teams.**

### C. Legacy :

- 5. Jobs transformed Apple into a global symbol of innovation and creativity.**
- 6. His bold leadership defined Apple's culture, prioritizing groundbreaking ideas and aesthetic excellence.**
- 7. His relentless focus on “thinking differently” left an indelible mark on the tech industry.**

## Tim Cook : The Pragmatic Strategist :

Tim Cook succeeded Jobs in 2011, shifting focus toward operational excellence, sustainability, and corporate social responsibility. Under his guidance, Apple expanded its ecosystem with products like the Apple Watch and AirPods, and services such as Apple Music and Apple TV+. Cook emphasized incremental innovation and global market expansion, driving Apple's continued growth.

**Apple Stock Price post Steve Jobs and Cook taking over the drivers seat as CEO since August, 2011 to mid 2024:**

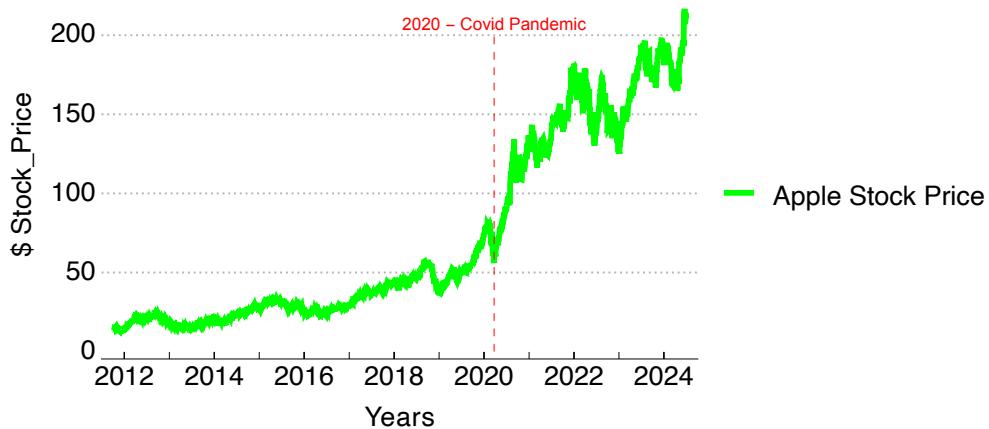
```
In[®]:= firstdate = DateObject[{2011, 10, 05}]; (*Define Dates*)
enddate = DateObject[{2024, 6, 30}];
applestock = FinancialData["AAPL", "Price", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Stock Price*)
line1 = {Red, Dashed,
  Line[{{DateObject[{2020, 3, 23}], 0}, {DateObject[{2020, 3, 23}], 205}}]}
(*Create a line at that time frame*)
label1 =
{Red, Inset["2020 - Covid Pandemic", {DateObject[{2020, 3, 23}], 207}]}
(*Name the line*)
applestockchart =
DateListPlot[{applestock}, PlotTheme -> {"Business", "LargeLabels"},
 PlotStyle -> Green, PlotLabel -> "Apple Stock with Cook as CEO",
 FrameLabel -> {"Years", "$ Stock_Price"}, PlotRange -> All,
 PlotLegends -> {"Apple Stock Price"}, Epilog -> {line1, label1}]
(*Plot the Graph with Title,Axis and legends*)

Out[®]=
{█, Dashing[{Small, Small}], Line[{{Mon 23 Mar 2020, 0}, {Mon 23 Mar 2020, 205}}]}

Out[®]=
{█, Inset[2020 - Covid Pandemic, {Mon 23 Mar 2020, 207}]}
```

Out[<sup>8</sup>] =

### Apple Stock with Cook as CEO

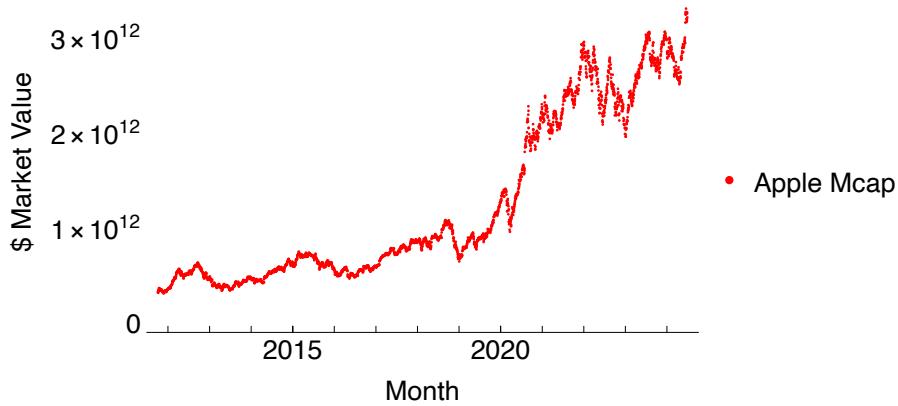


### Apple Market Capitalization during the tenure of Cook as CEO since 2011 to mid 2024:

```
In[9] := firstdate = DateObject[{2011, 10, 05}]; (*Define Dates*)
enddate = DateObject[{2024, 6, 30}];
applemcap = FinancialData["AAPL", "MarketCap", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Market Cap*)
applemcapchart = ListPlot[{applemcap}, PlotTheme -> {"Web", "LargeLabels"},
PlotStyle -> Red, PlotLabel -> "Apple Market Cap with Cook as CEO",
FrameLabel -> {"Month", "$ Market Value"}, PlotRange -> All,
PlotLegends -> {"Apple Mcap"}] (*Plot the Graph with Title,Axis and legends*)
```

Out[<sup>9</sup>] =

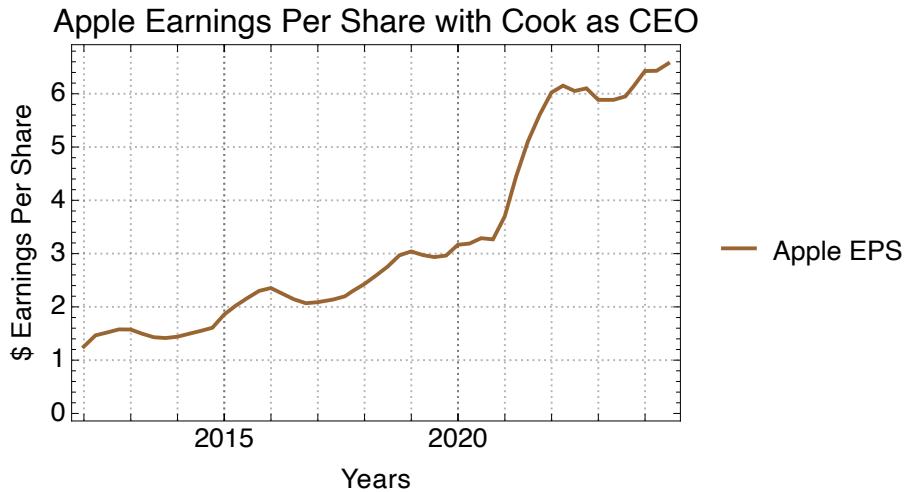
### Apple Market Cap with Cook as CEO



### Apple Earnings Per Share during the tenure of Cook as CEO since 2011 to mid 2024:

```
In[10] := firstdate = DateObject[{2011, 10, 05}]; (*Define Dates*)
enddate = DateObject[{2024, 6, 30}];
appleeps = FinancialData["AAPL", "EarningsPerShare", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Earnings Per Share*)
appleepschart =
ListLinePlot[{appleeps}, PlotTheme -> {"Detailed", "LargeLabels"},
PlotStyle -> Brown, PlotLabel -> "Apple Earnings Per Share with Cook as CEO",
FrameLabel -> {"Years", "$ Earnings Per Share"}, PlotRange -> All,
PlotLegends -> {"Apple EPS"}] (*Plot the Graph with Title,Axis and legends*)
```

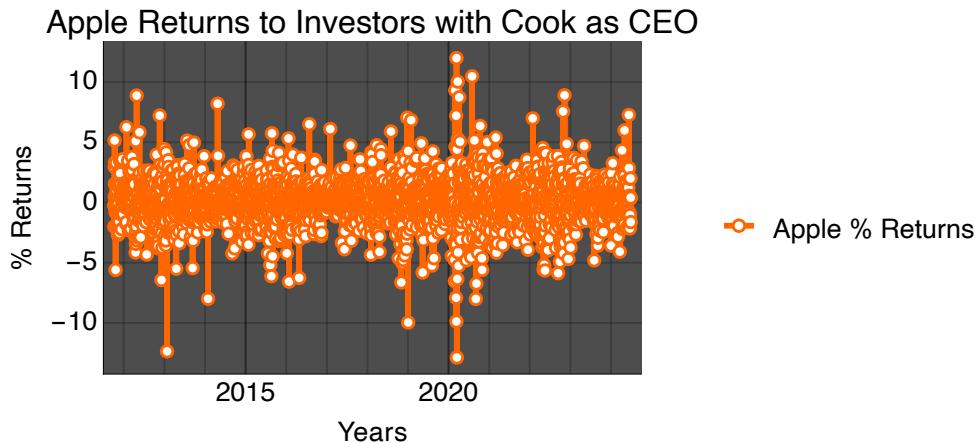
Out[•] =



**Apple Returns over the Years with Cook as CEO since 2011 to mid 2024:**

```
In[•]:= firstdate = DateObject[{2011, 10, 05}]; (*Define Dates*)
enddate = DateObject[{2024, 6, 30}];
applereturns = FinancialData["AAPL", "Return", {firstdate, enddate}];
(*Use Financial Data of Wolfram and in this case Stock Returns*)
applereturnschart =
ListLinePlot[{applereturns}, PlotTheme -> {"Marketing", "LargeLabels"},
PlotLabel -> "Apple Returns to Investors with Cook as CEO",
FrameLabel -> {"Years", "% Returns"},
PlotRange -> All, PlotLegends -> {"Apple % Returns"}]
(*Plot the Graph with Title,Axis and legends*)
```

Out[•] =



**Apple Net Income's Over the Years since 2011 post Cook took over as its CEO:**

```
In[®]:= applecompany = Interpreter["Company"]["Apple"]
(*Use Company Data of Wolfram and in this case
for Apply and deine its Entity for Total Revenue*)

applecompanystats = Apple COMPANY [
  EntityProperty["Company", "TotalRevenue", {"CurrencyType" → "USD",
    "Date" → Interval[{DateObject[{2011}], DateObject[{2024}]}],
    "TimeSeriesType" → "Annual"}]]
ListPlot[{applecompanystats}, PlotTheme → {"Classic", "LargeLabels"},
  PlotStyle → Blue, PlotLabel → "Apple Total Revenue with Cook as CEO",
  FrameLabel → {"Years", "$ Net Income"}, 
  PlotRange → All, PlotLegends → {"Apple Total Revenue"}]
(*Plot the Graph with Title,Axis and legends*)
```

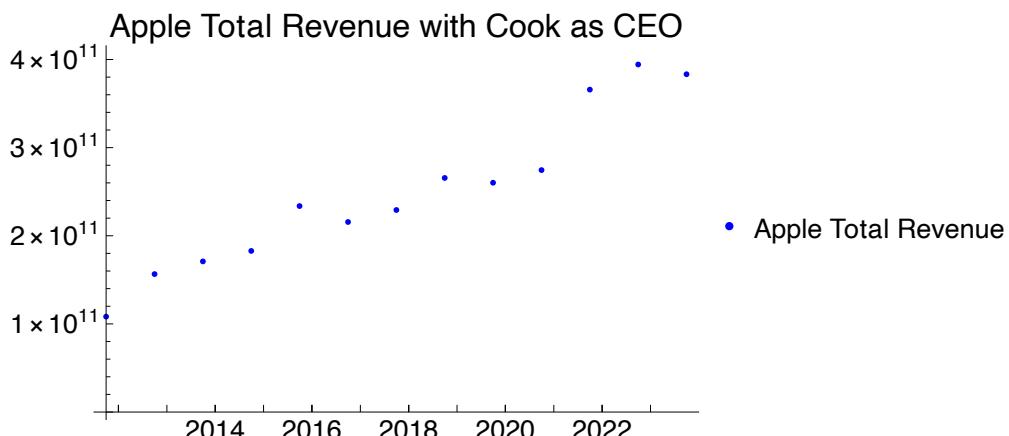
Out[®]=

**Apple**

Out[®]=

TimeSeries [  Time: 30 Sep 2011 to 30 Sep 2023 ]  
 Data points : 13

Out[®]=



**Apple Total Revenues Over the Years since 2011 post Cook took over as its CEO :**

```
In[1]:= applecompany = Interpreter["Company"] ["Apple"]
(*Use Company Data of Wolfram and in this case
for Apply and deine its Entity for Total Revenue*)

applecompanystats = Apple COMPANY [
  EntityProperty["Company", "TotalRevenue", {"CurrencyType" → "USD",
    "Date" → Interval[{DateObject[{2011}], DateObject[{2024}]}],
    "TimeSeriesType" → "Annual"}]]
ListPlot[{applecompanystats}, PlotTheme → {"Classic", "LargeLabels"},
  PlotStyle → Blue, PlotLabel → "Apple Total Revenue with Cook as CEO",
  FrameLabel → {"Years", "$ Net Income"}, 
  PlotRange → All, PlotLegends → {"Apple Total Revenue"}]
(*Plot the Graph with Title,Axis and legends*)

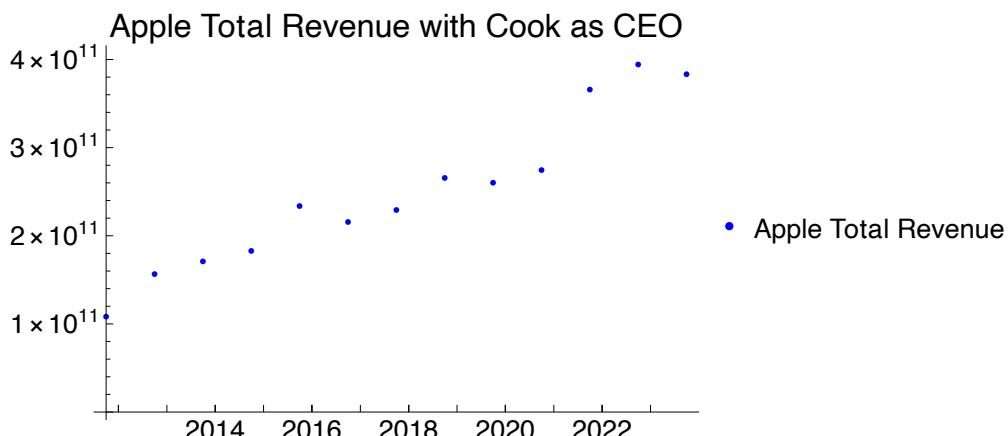
Out[1]=
```

Apple

Out[1]=

TimeSeries [  Time: 30 Sep 2011 to 30 Sep 2023 ]  
Data points : 13

Out[1]=



## A. Financial Performance :

1. **Cook led Apple to surpass a market value of \$1 trillion, cementing its position as one of the most valuable companies in history.**
2. **He shifted focus toward steady revenue growth, driven by services such as the App Store, iCloud, and Apple Music.**
3. **Cook expanded Apple's footprint in emerging markets like China and India, capturing new growth opportunities.**

## B. Leadership Style :

4. **Cook is an analytical and inclusive leader, emphasizing strategic thinking and delegation.**

5. ***He is known for ethical business practices, operational discipline, and fostering a collaborative corporate culture.***

### C. Legacy :

6. ***Cook has navigated modern challenges like market saturation, regulatory scrutiny, and global competition.***
7. ***His pragmatic approach has ensured Apple's sustainability and adaptability in an ever-changing market.***
8. ***Cook's leadership has balanced innovation with operational efficiency, solidifying Apple's role as a global powerhouse.***

### Final Takeaway from the Leaders of Apple :

***Steve Jobs and Tim Cook represent two sides of Apple's leadership legacy : bold innovation paired with steady growth . Jobs laid the foundation with his visionary ideas, while Cook expanded and sustained the company through operational mastery . Together, their contributions have made Apple an enduring symbol of excellence and inspiration .***

## Path to Sustainability: Analyzing Apple's Journey to Carbon Neutrality

*Apple wants to make a difference as a company and with the products it brings to market. Apple Watch is the first carbon-neutral product that Apple launched, the first step towards its goal to have all Apple products be carbon-neutral by 2030. Below is an illustration of how seriously they are progressing towards their goals.*

```
In[ ]:= html = Import["https://www.apple.com/environment/", "HTML"];
rawText = ImportString[ExportString[html, "Text"], "Text"];
cleanText = StringTrim[rawText];
cleanText = StringReplace[cleanText, {"\n" → " ", "\t" → " ", "\r" → " "}];
cleanText = StringReplace[cleanText, WhitespaceCharacter .. → " "];
```

In[ ]:= %184



```
In[1]:= wordList = TextWords[cleanText]
Out[1]= {...} +
```

```
In[2]:= targetWords = Select[wordList, StringContainsQ["renewable"]]
numResult = Length[targetWords]
```

```
Out[2]= {renewable, renewable, renewable, renewable, renewable, renewable, renewable,
renewable, renewable, renewable, renewables, renewables, renewable,
renewable, renewable, renewable, renewable, renewable, renewable,
renewable, renewable, renewable, renewable, renewable}
```

```
Out[3]= 25
```

```
In[4]:= targetWords1 = Select[wordList, StringContainsQ["carbon"]]
numResult1 = Length[targetWords1]
```

```
Out[4]= {low-carbon, carbon, carbon, carbon, low-carbon, carbon, carbon, carbon,
carbon, low-carbon, low-carbon, carbon, carbon, low-carbon, carbon,
carbon, carbon, carbon, low-carbon, carbon, carbon, carbon}
```

```
Out[5]= 23
```

```
In[6]:= targetWords2 = Select[wordList, StringContainsQ["recycle"]]
numResult2 = Length[targetWords2]
```

```
Out[6]= {recycled, recycled, recycled, recycled, recycled, recycled,
recycled, recycled, recycles, recycled, recycled, recycled,
recycled, recycled, recycled, recycled, recycled, recycled,
recycle, recycle, recycled, recycle, recyclers, recycled, recycled,
recycled, recycled, recycled, recycled, recycled, recycled}
```

```
Out[7]= 33
```

```
In[8]:= targetWords3 = Select[wordList, StringContainsQ["clean"]]
numResult3 = Length[targetWords3]
```

```
Out[8]= {clean, clean, clean, clean, clean, clean, cleaner, cleaner, clean}
```

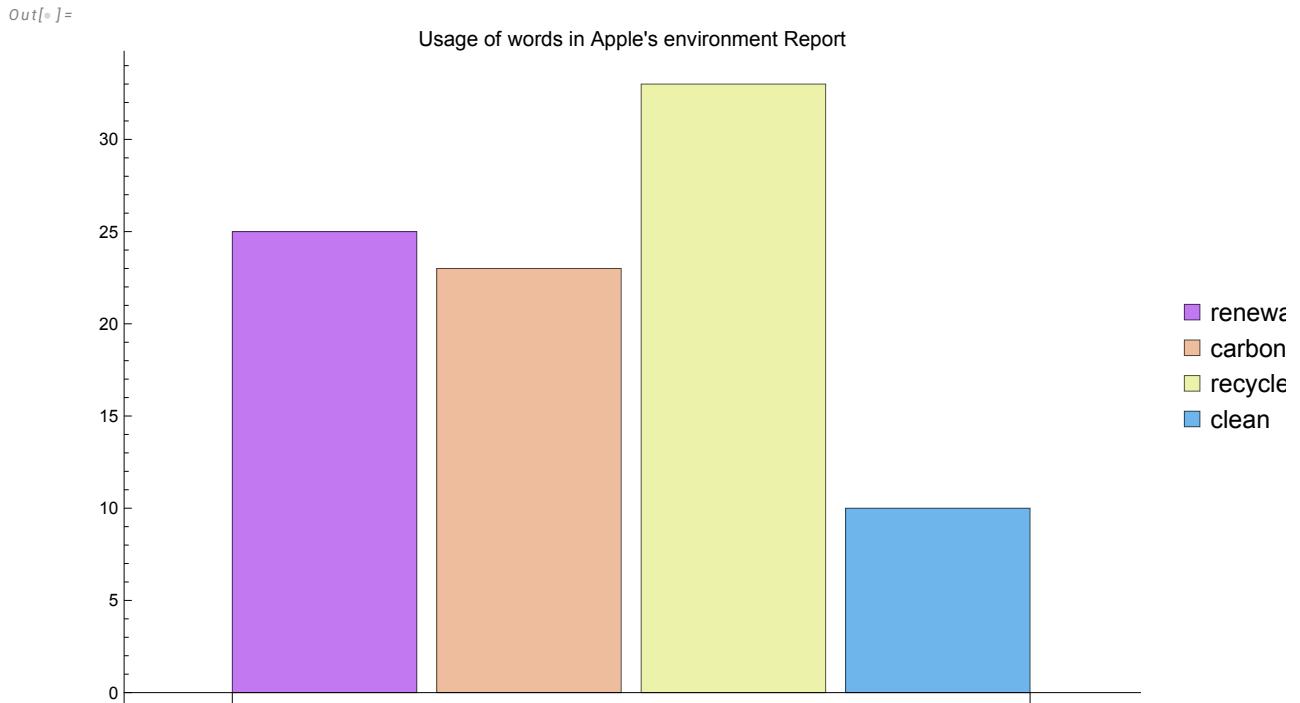
  

```
Out[9]= 10
```

```
In[10]:= results = {numResult, numResult1, numResult2, numResult3}
Out[10]= {25, 23, 33, 10}
```

```
In[8]:= BarChart[results, ChartStyle -> "Pastel",
  ChartLegends -> {"renewable", "carbon", "recycle", "clean"},
  AxesLabel -> {None},
  PlotLabel -> "Usage of words in Apple's environment Report"]
```



*The graph shows the frequent usage of words like ‘renewable’, ‘carbon’, ‘recycle’ and ‘clean’ in their sustainability report. The technology giant is anticipating the needs of the consumer and our planet, steering the industry towards a future grounded in responsibility and forward-thinking. It’s not just about crafting groundbreaking products anymore; it’s about shaping a sustainable future through conscious technology.*