

*Analyze the trend of product characteristics by
the extraction of reviewing comments to
provide enterprises with concise Information*



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Outline

	Introduction
	Literature review
	Methodology
	Result
	Conclusion

Introduction



Innovation

improvement

Comments



Analyzing

Time Series

System

Introduction

Literature review

Methodology

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喔喔喔...終於..不需要任何技巧, Youtube最新版已經可以看1440p了..	27	basic	ho9442
閃亮亮的精品, SWAROVSKI(施華洛世奇) FOR NOTE4...金色閃亮開箱	14	basic	juillet07
不知道哪邊已經有A3 . A5展示機?	2	lulala	毛毛
又有免費Note 3 Neo可以拿?	1	toothless	toothless
韓流來襲, 三星推出時尚平台「K-JJANG 讚」	4	丹尼爾	毛毛
覺得你的NOTE4待機不夠省電嗎?Google服務在做怪...	12	basic	VinCent
NOTE 4 誇張的故障	5	lagong.yang	VinCent
Note4信號有問題,各位不知道有沒有	16	楊丁	紹楨
Samsung Note4 中國大陸版與台灣版的電池尺寸是否不同??	1	Max	Max
Samsung GALAXY A TVC分享欣賞	1	咕咕 G™	咕咕 G™

<http://www.eprice.com.tw/mobile/talk/4523/0/39/>

● 如何將iphone裡的相簿分類回傳至電腦?	1	2015-03-07 18:40	2015-03-31 00:02
● i6+接電腦(win8.1)如何正確存取相片?	9	2015-03-29 18:33	2015-03-30 23:06
● 今天跳出問我要不要付費訂閱app 不小心按到	5	2015-03-28 15:29	2015-03-30 22:52
● 請問關於iphone6+退出程式一問 > 2 3	21	2015-03-28 19:35	2015-03-30 18:32
● iphone 的遊戲通知出了問題....	1	2015-03-30 13:58	2015-03-30 16:28
● 「附圖」在中國買iphone6會內附Lightning 對 Micro USB 轉接器嗎 ...	2	2015-03-28 19:51	2015-03-30 16:23
● iphone 6 plus保護殼詢問	5	2015-03-30 00:17	2015-03-30 14:43
● 第一次用愛i6電池保養! > 2 3 4	32	2015-03-29 09:20	2015-03-30 09:45
● i6如何判斷有無泡水?	5	2015-03-29 12:30	2015-03-30 09:43
● iphone 5s的LED 來電及信息 都不會亮(手電筒會亮) / iOS 8.2 / LED...	6	2015-03-28 16:19	2015-03-30 04:40
● 有沒有其他品牌有出類似iphone的這款麥克風耳機?	2	2015-03-29 22:19	2015-03-30 22:23

<https://www.mobile01.com/topiclist.php?f=383>

批踢踢實業坊 > 看板 iPhone

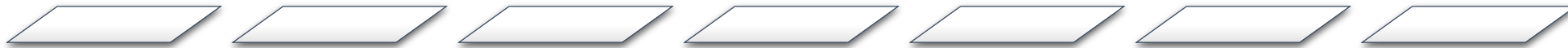
看板 精華區

- 1 [問題] Line備份除了iCloud之外的辦法?
1/08 jack1y1
- 4 (本文已被刪除) [op840906]
1/08 -
- 6 [問題] 6S原廠矽膠殼小問題
1/08 james925757
- 2 (本文已被刪除) [antjuice]
1/08 -
- 1 [問題] Yahoo mail app現在不能用嗎?
1/08 PrinceSteven
- 2 [問題] 同步google日曆的訂閱日曆
1/08 gn01958627
- 21 [iAPP] Send your location (Promo Codes)
1/08 ahungry
- 6 [問題] 想請問這支6 plus殘值還剩多少?
1/08 GOTWD
- 1 [問題] itunes回復備份line無法恢復
1/08 lazurite917

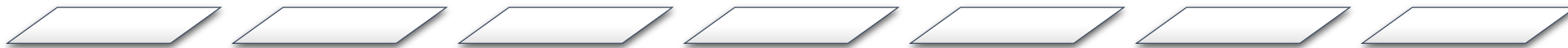
<https://www.ptt.cc/bbs/iPhone/index.html>

Literature Review

Text mining



Product Life



Introduction

Literature review

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Literature Review

- Text mining
 - ✓ Using sentiment analysis and text mining approaches to detect and predict the hotspot online forums.(N. Li and D. D. Wu, 2009)
 - ✓ proposed an extracting keywords method of multi-steps and extending TF weights.(B. Hong and D. Zhen, 2012)
 - ✓ proposed a NLP and Ontology Based Clustering TVC Algorithm to anylize the community platform's key words.(D. Shabina et al, 2016)



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Literature Review

- Product life
 - ✓ Based on the product life cycle theory, the influence of each stage of the whole life cycle on the maintainability of products is discussed in depth.(D. Melser and I. A. Syed, 2016)



Introduction

Literature review

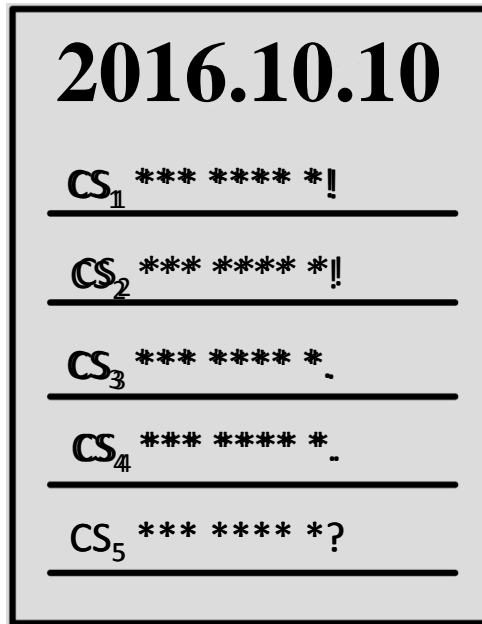
Methodology

Result

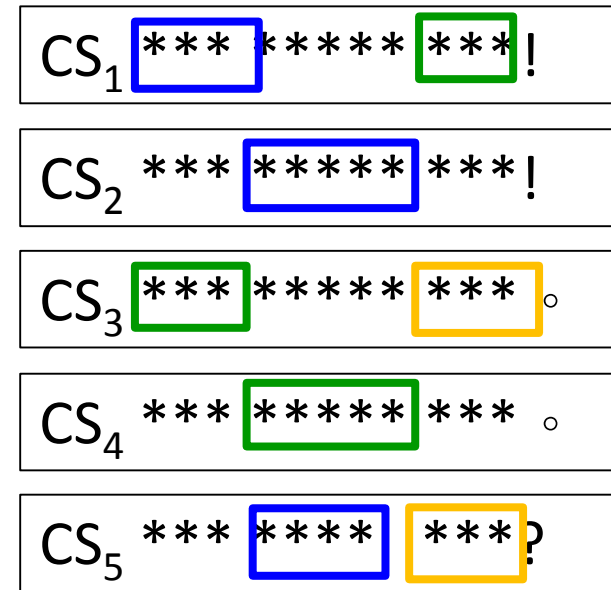
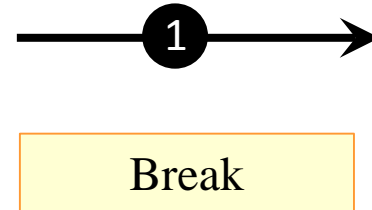
Conclusion

Methodology

- Step 1- Break the sentences



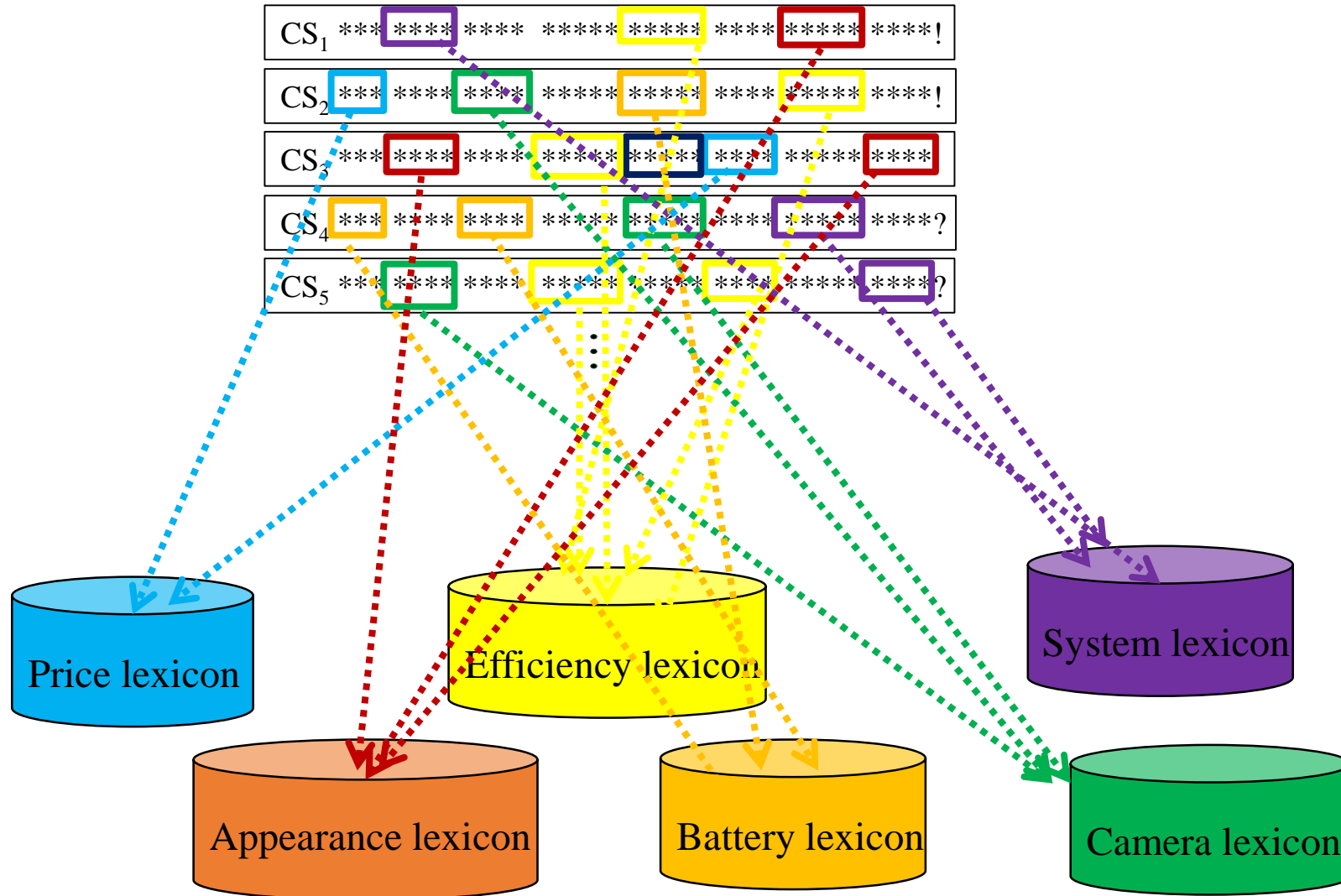
The content of comment



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Step 2- Characteristics capture

Complete sentence in the comment



Methodology

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User interface

Methodology

Step 1

評論特質趨勢分析模式

評論特質趨勢分析模式

評論特質擷取模組

- 評論內容匯入
- 關注點判定
- 登出
- 重新登入

(Upload successfully)
文件上傳成功
所上傳之檔案內容

編號	來源	發佈時間	評論內容
1	web	2014/12/02 10:20	保護貼並不是滿坑滿陷，離邊緣還有約0.5公分的距離，失望了
2	web	2014/12/22 10:30	NOTE4的SPEN真的很棒，可以看出三星在NOTE身上下了很多功夫
3	web	2014/12/22 11:19	沒辦法，三星之前的塑料材質一直為人所詬病，走向高檔精緻路線是一定要的
4	web	2014/12/23 13:55	NOTE4整體大小適中，跟IPHONE6+ 比起來，螢幕大，體積適中好拿

Step 2

評論特質趨勢分析模式

評論特質擷取模組

- 評論內容匯入
- 關注點判定
- 登出
- 重新登入

(characteristics show up times)
關注點出現狀況

	電池	效能	相機	作業系統	外觀	價格
評論內容 1					1	
評論內容 2		1				
評論內容 3					1	
評論內容 4					1	

Introduction

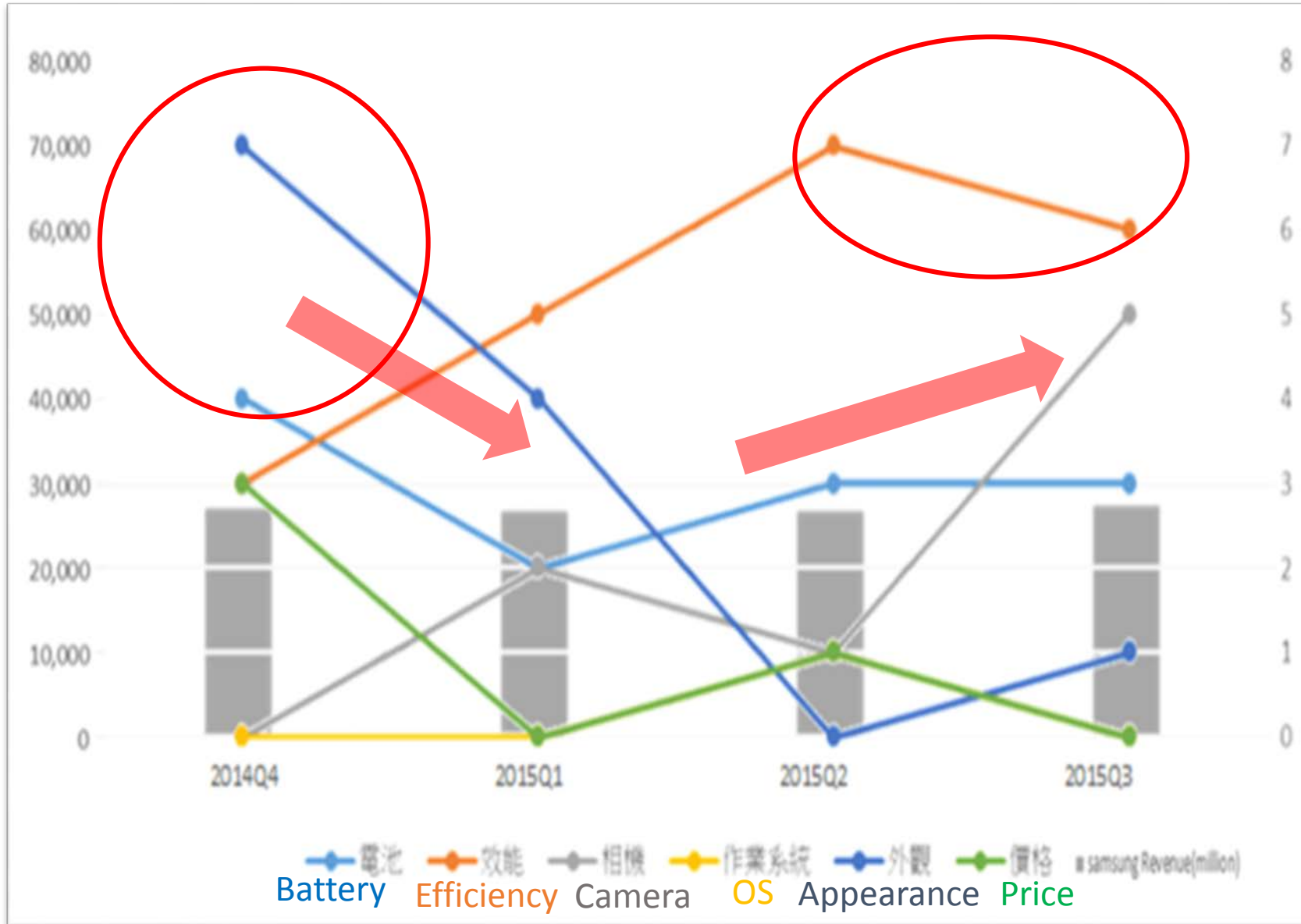
Literature review

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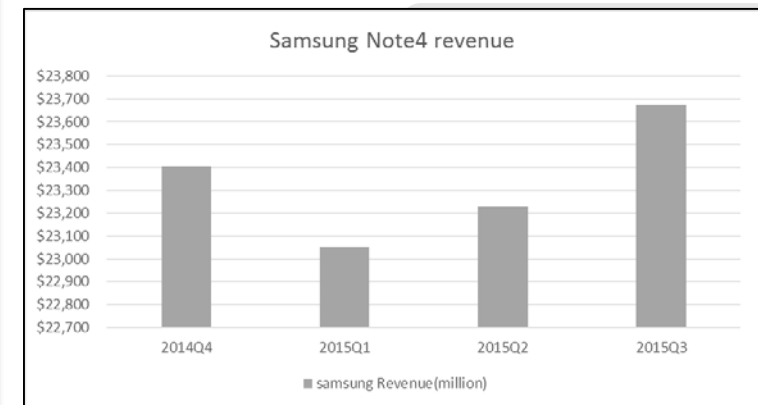
Conclusion

comment's characteristics trend (Samsung Note4)

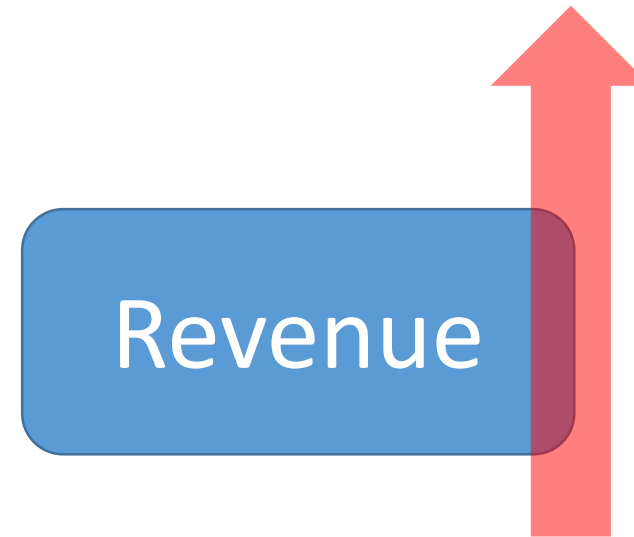
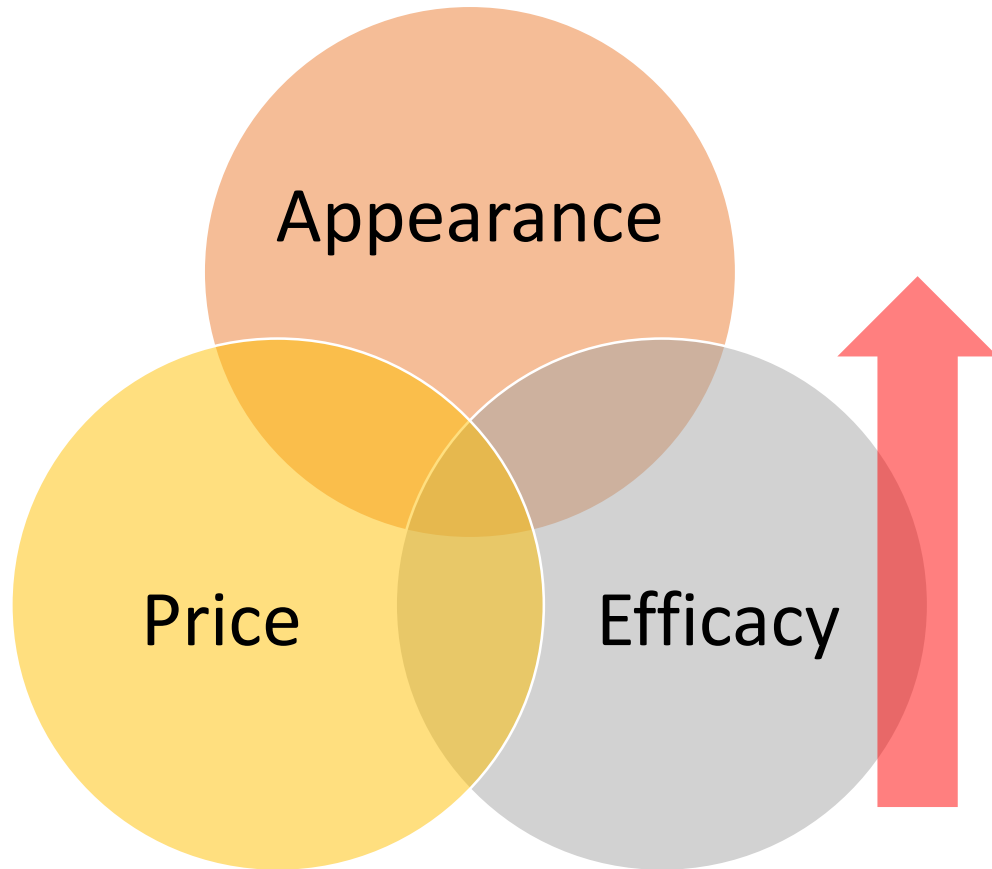


Result

- Introduction
- Literature review
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Three factors influence the revenue (Samsung Note4)



Reflected the customers' needs

Result

Introduction

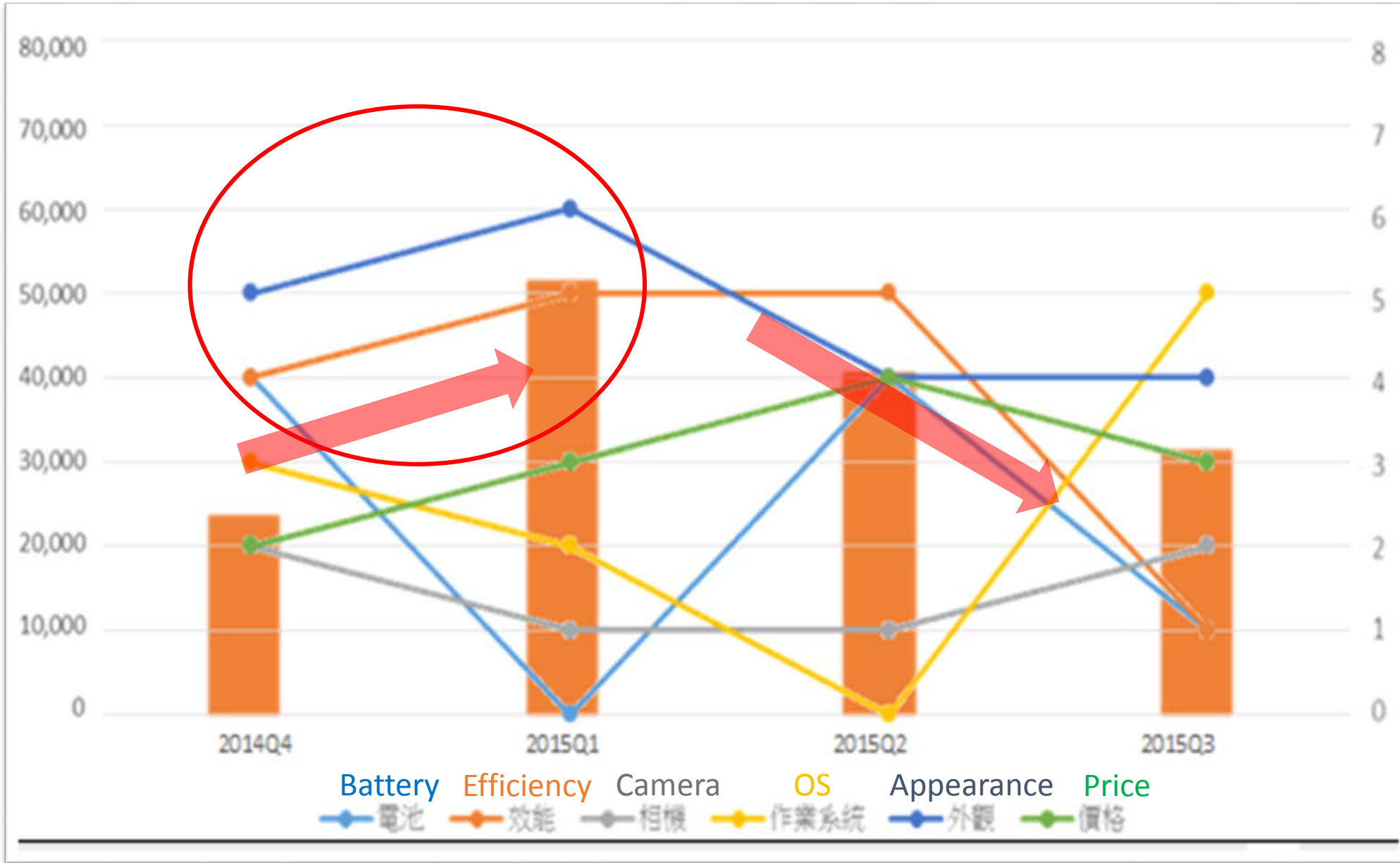
Literature review

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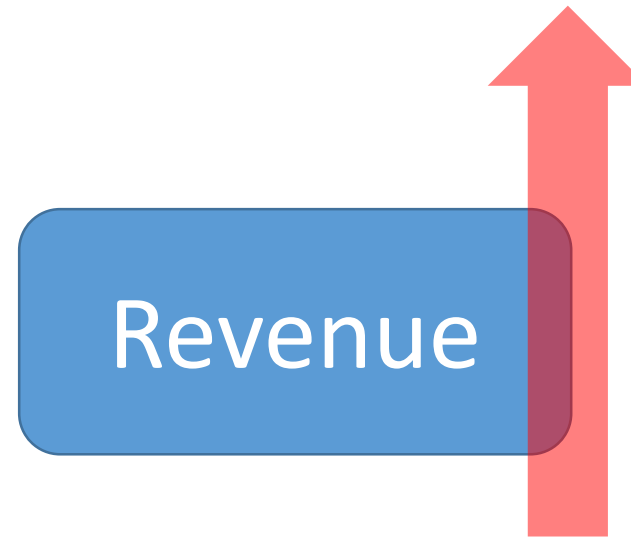
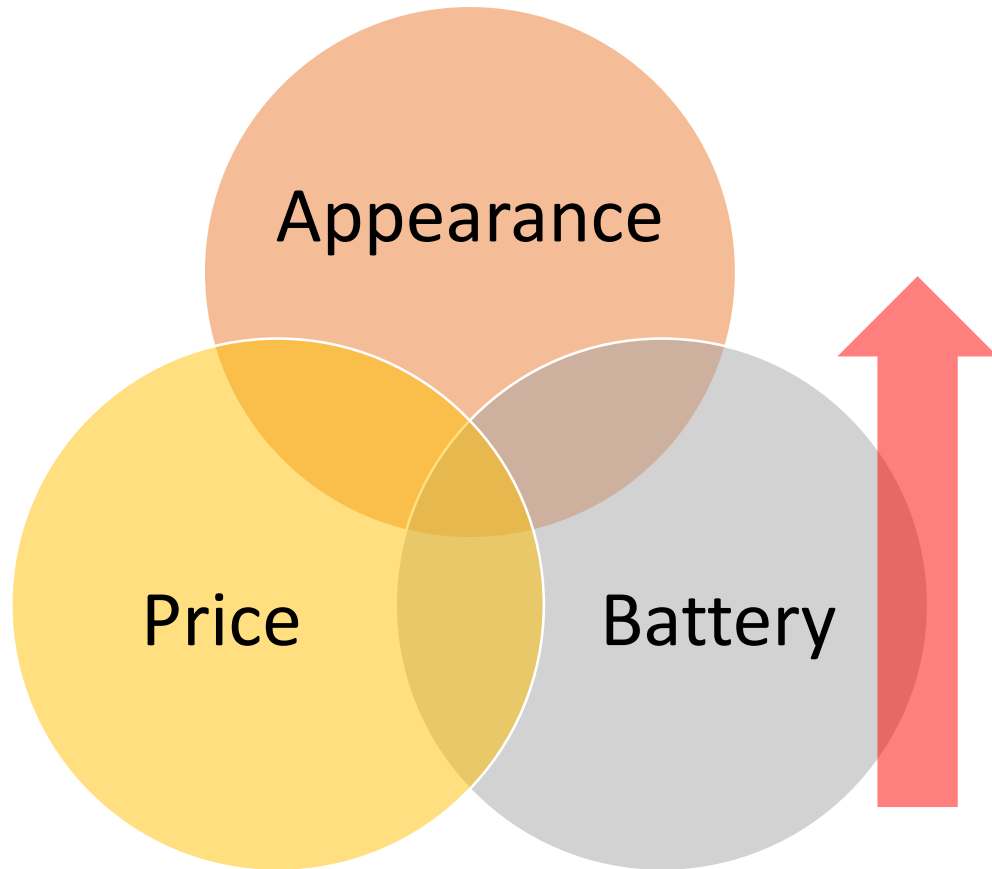
comment's characteristics trend (iPhone6)



Result

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Three factors influence the revenue (iPhone6)



Reflected the customers' needs

Result

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Conclusion

- Under the assumption that the reality of these comments
- Some characteristics would affect the revenue
- Save the time to read comments and reduce the labor costs
- Provides the new product with right information to meet customer needs.

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Conclusion

- Further improvement
- Develop a system can draw the trend picture automatically
- Adding positive and negative judgments
 - ✓ you can let the company refer to those marketing strategies to bring positive returns, those who may bring negative evaluation



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