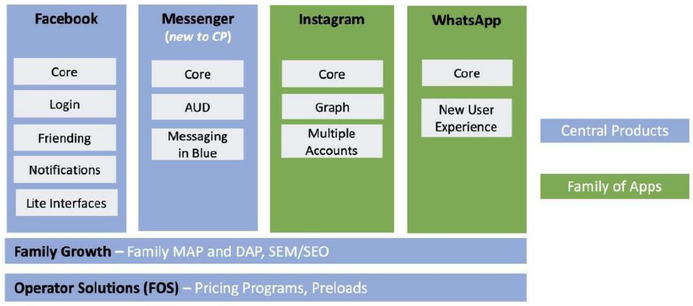
H2 2019 - Central Products: Growth

A cross-family Growth update in collaboration with Facebook, Messenger, Instagram, and WhatsApp Growth teams.

Our Strategy is to Grow the Family of Apps to **achieve 3B Family MAP by 2020** through addressing barriers for:

1. **People coming online**
2. **People online but not using** our Apps (or using them less often), and
3. **People aging up** into our Apps



Top of Mind

Important, but have under relative control

1. US & Developed Markets FB Growth stabilizing Q/Q
2. Family External Reporting incl. WA survey
3. Defending Operator Programs like SMS and hardening Preloads and Headers against potential criticism

Important and worried (H2 Focuses per below)

1. FB Older Cohorts in US & Developed Markets continue to have a declining DAP/MAP trend
2. Messenger Growth not on a great trajectory nor staffed well yet
3. Teens: (a) FB/MSGR losing fit even when they age up, and (b) Lack of solid understanding outside US
4. India: (a) Family-wide new user slowdown post Jio effect, and (b) FB&IG fit given WA&YT (+TikTok for teens)

H1 Summary

H1 2019 Goals

Note: MAP (vs. MAU) is now only used for the People-level Family methodology where proper de-duplication is done.

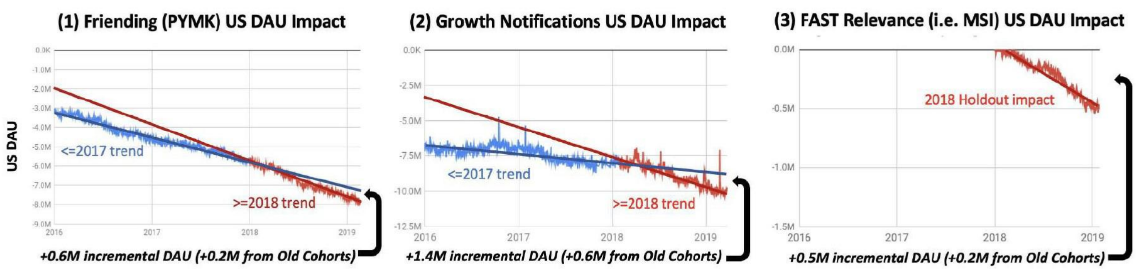
Goal	H1 Start	Est. H1 Finish	H1 Goal	Est. H1 Finish Y/Y
Family				
Global MAP	2.75B	2.87B	2.88B	+305M
Global DAP	2.12B	2.24B	2.24B	+268M
App People-level (using de-duplicated Family methodology; except for WhatsApp)				
Facebook (incl. MSGR) MAP	2.05B	2.13B	2.13B	+162M
Facebook (incl. MSGR) DAP	1.45B	1.52B	1.51B	+135M
Instagram MAP	0.95B	1.02B	1.03B	+146M
Instagram DAP	0.63B	0.69B	0.68B	+130M
WhatsApp MAU	1.76B	1.89B	1.87B	+279M
WhatsApp DAU	1.36B	1.44B	1.44B	+207M
Facebook				
Global MAU	2,320M	2,415M	2,419M	+181M
Global DAU (7d)	1,528M	1,598M	1,589M	+124M
US&CA MAU	242M	245M	244M	+4M
US&CA DAU (30d)	186M	187M	186M	+2M
US Friend Accepts/day	32M	34M	34M	+5M
Messenger				
US MAU	172M	172M	171M	+4M
US DAU	97M	95M	99M	+1M
Global MAU	1,508M	1,545M	1,563M	+104M
WhatsApp				
Global MAU	1,762M	1,883M	1,883M	+282M
Global DAU	1,361M	1,449M	1,449M	+212M
Instagram				
FCI MAU	395M	432M	435M	+67M
FCI DAU	264M	290M	290M	+54M
Global MAU	1,150M	1250M	1,255M	+200M
Global DAU	720M	788M	788M	+149M
Operator Solutions				
Incremental FB MAU	0	26M	26M	+6M

Family

- **MAP expected to end slightly behind forecast while DAP expected to end slightly ahead.** MAP is below forecast from less IG abusive accounts (good) & under-forecasting IG SUMA. US&CA Q1 MAP was flat as Apps grew reach into each other and we expect modest incremental MAP growth in H2 (i.e. +3-5M Y/Y).
- **Regional Family Reporting on track for Q4'19 earnings (Jan '20) but remains risky.** Delayed from Q2'19 target due to WA survey delays and methodology updates. We expect a large MAP decrease (could be >100M) from WA SUMA deduplication. Methodology is complex and impacted by user data changes or removals.
- **India MAP Growth slowing Family-wide as *"Jio affordability effect"* subsides.** Family-wide decrease in new users after 2016 data pricing and 2018 phone pricing affordability impacts.
- **Teen usage continues solidly on IG in Developed Markets, and WhatsApp in Developing Markets.** No signs of trend reversal on FB/MSGR, especially not in Developed Markets. Messenger Kids (1.4M US MAU) shows potential.

Facebook

- **MAU expected to end -4M vs. aggressive +10M stretch goal, while DAU expected to end +9M vs. goal.** MAP Y/Y growth slowing to +181M from +190M. Overall, we feel good about our work in H1 driving 10's of millions of incremental MAP/yr given the known ~10M in headwinds. DAP/MAP flat since 2018 from mix shift to Developing markets and declining DAP/MAP ratio in Developed Markets.
- **US DAU Growth stabilized from product work, but teens and older cohorts continue to be negative trends across Developed Markets.** Investments since early 2018 in Friending, Notifications, and MSI have driven an estimated +2.5M incremental US DAU (with +1M from older cohorts), but not reversed these negative trends.



- **India DAU Growth slowing in addition to Family-wide MAP slowdown.** India DAU Growth slowed in Sept'18 from a decline in DAU/MAU ratio with growing usage of other Apps (YouTube, TikTok, WhatsApp) as leading hypothesis.
- **Operator Solutions driving >+55M incremental MAP/yr (~30% of total!).** Impact still growing, but at a slower rate as we approach saturation (>65% of opportunity live). Preloads cover >1B FB MAU. However, scrutiny on these programs is growing, and our reliance on SMS is a risk as mobile operators growingly want to monetize it.

Messenger

- **Global MAU expected to end -18M vs. forecast, while DAU expected to end -25M vs. forecast.** We can explain ~33% of the gap in DAU from intentional product changes with the rest being aggressive forecasting and unknowns.
- **US MAU is on track vs. forecast, but US DAU is -3.6M behind.** The gap in DAU is partially explained by intentional product changes and country flux with the rest being aggressive forecasting and unknowns.
- **US Messenger Teen DAU continues to decline.** Down to 6M (-20% Y/Y) while adult DAU is up to 92M (+5% Y/Y). For comparison, IG Direct teen senders are up to 12M (+15% Y/Y).

WhatsApp

- **MAU and DAU growth are slightly ahead of goal primarily driven by continued growth in India (+106M MAU Y/Y).** Expect growth to decelerate in H2 as we hit saturation on KaiOS (JioPhone) and lap a year since its launch last September.
- **Core Countries (IN, BR, ID) continue to drive 49% of MAU growth Y/Y (+139M):** MAU is -1M behind forecast primarily due to Indonesia's slower adoption of smartphones, and India DAU/MAU % has plateaued at 77% after years of steady growth driven by lower engagement on KaiOS partially due to feature phone form factor.
- **Specialized Countries (GB, FR, PK, RU, EG, IE) MAU is +39M Y/Y, but are -0.8M behind forecast:** This is primarily due to Pakistan's recent mobile data tax change. iMessage countries are ahead of forecasts and France is growing the fastest at 22% MAU Y/Y growth.

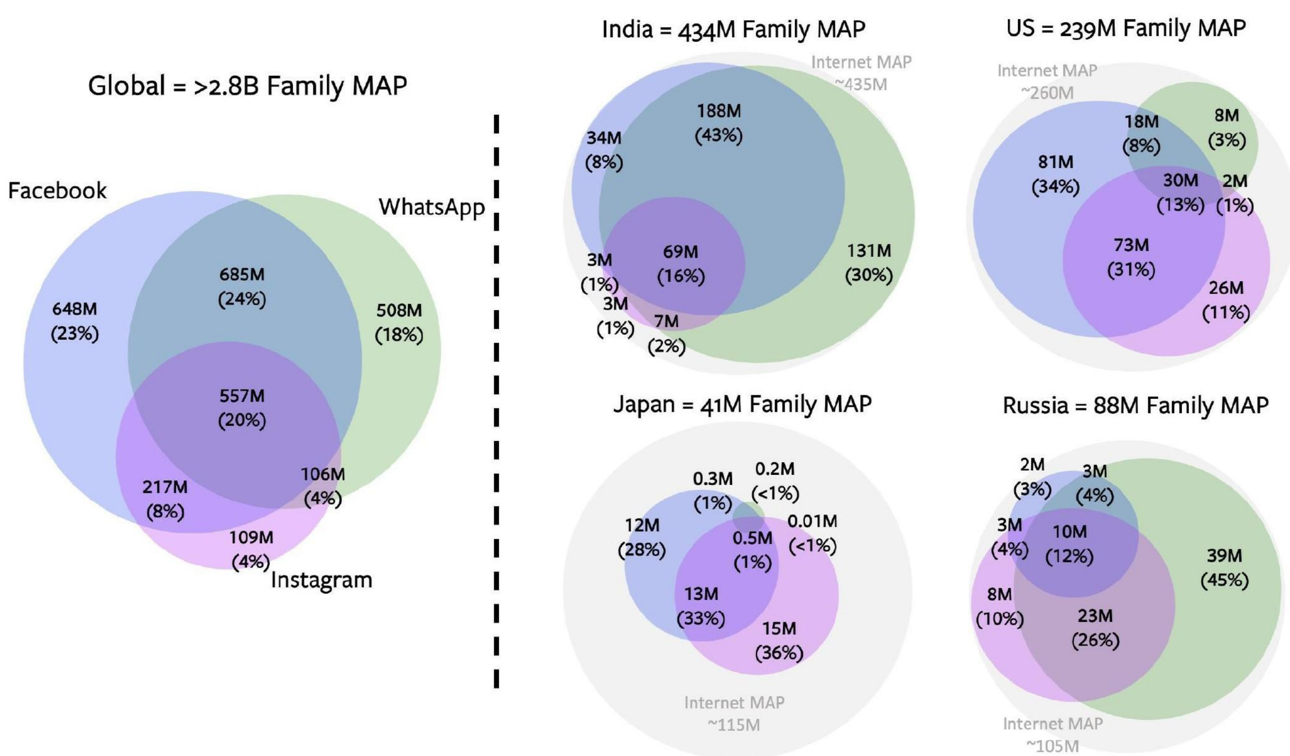
Instagram

- **FCI MAU expected to end -3M against goal while FCI DAU is on track.** Global MAU expected to end -5M against forecast and Global DAU expected to end +5M against forecast. Growth decelerated in Q1 due to less abusive accounts and re-accelerated during Q2 mostly from real people growth and a slight rise in new abusive accounts.
- **IG SUMA is increasing as a % of total accounts.** This may be masking people-level growth saturation among early adopter target cohort (younger people, newer devices) in most FCI markets (i.e. US, UK, AU, CA, DE, FR).
- **Operationalizing the Real World Closeness to achieve FB-IG Graph Differentiation:** Central Products Platform will operationalize this work so we can execute on FB and IG only overlapping with the closest friends and family.

H2 Strategy

Family: *Execute on Q4'19 External Reporting Plan and Grow with Country and Teen Focuses*

- **Report on Family "People" metrics for Q4'19 Earnings (Jan '20):** WA survey and deduplication is on track, but still with high execution risk. Methodology is necessarily complex and improves quarterly. There will be changes from better ground-truth, upstream FB/IG/WA/model updates, or factors like data policy limits and Interop account linking. We mitigate risk but can't eliminate Q/Q variance to 1M precision. Integrity estimates ~2.2% of Family MAP are "undesirable", but WA-only is not covered and the IG methodology will improve and likely increase over time.
- **Grow the Family with appropriate Country and Teen focuses:** Continue to execute on the 2019 cross-family country strategy to win primarily-Feed and primarily-Messaging with the best Apps. We should also be deliberate about cross-family Teen focuses. First, we will work to improve our age collection and modeling across the Family to better understand how we're doing - especially in Developing Markets. In the meantime, for IG they will continue to focus on FCI (i.e. US) and double down on what's working well (i.e. multiple accounts), invest in messaging and video, as well as explore building for Tweens as part of the Messenger Kids "age up" strategy. IG should also better understand India given the TikTok threat and consider making it an FCI country in 2020. Facebook in Developed Markets will play defense with teens while trying to catch them at college age, while exploring how to improve fit with teens in Developing Markets before it's too late.



Facebook: ***Strengthen Friending & Engagement for Old Cohorts and Remove Barriers in India***

- **Double down on Developed Markets (i.e. US) with what's working while also finding new levers.** For Friending we will help people maintain a "healthy graph" over the long term maximizing the value of new friendships. We will also continue to invest in optimizing Notifications as well as partnering with the FB App team on opportunities for both Sharing (i.e. IG→FB cross-posting of Stories) and Feed Ranking (i.e. more friend content). Lastly, we will seek new levers through research focused on older cohorts and explore how to better leverage products like Groups and Marketplace given relatively higher adoption by older cohorts.
- **Address Relevance, Usability, and Safety as top growth barriers beyond Affordability in India.** For Relevance, we will work with the FB App team to increase public, video, and local language content. We will also focus on more seamless flows between WA<->FB starting with Share-to-WA and WA→FB Stories cross-posting. Longer term, as Interop progresses, we should make moving between these Apps even more seamless. For Usability, we will improve the KaiOS experience by moving to the FB Lite-based App, prepare for Google's new AFP device launch, and continue to make progress on language barriers as MAP growth is now mostly coming from non-English users and Tier 3 cities. For Safety, we will continue to invest in "Locked Profile" as it is showing safety sentiment lifts in early test. This product allows people to set posts to 'friends only' and doesn't let non-friends to see your full profile photo.
- **Continue to invest in account access, both short and long term, in a safe and robust way.** Passwords continue to be a major barrier for new users globally. We will invest in simplifying the existing ways to authenticate while also working to make them more secure. Over the longer term we are exploring new authentication methods that are simpler, more secure, and reduce our reliance on SMS as that becomes a growing risk with mobile operators.

Messenger: ***Focusing on US Levers and Key Defense Work While Building Team Capacity***

- **Leverage FB App to help Messenger on path to primacy in the US.** Partnering with FB App team to: (1) drive more messaging engagement and reach from FB App, and then (2) transition this engagement to the Messenger app. Collaboration has improved and are now working through initial round of tests.
- **Play defense to allow Messenger to focus on path to primacy in the US.** MAU and DAU growth have slowed considerably and we expect more headwinds in H2 (i.e. forced upgrades for E2EE, potential deprecation of bumps). We will focus on mitigating these headwinds within the capacity constraints we have as we uncover them.
- **Build up team capacity from near zero and do Understand.** We've reallocated headcount across CP Growth (without sacrificing FB Growth investment) to be setup by end of 2019. We are focused on hiring, setting up processes, and doing Understand work to help identify areas of opportunity to help drive the Messenger strategy to achieve primacy in the US.

WhatsApp: ***Focus on Specialized Markets in Addition to Continued Developing Market Growth***

- **Specialized Countries: Build a Playbook for iMessage Countries starting with France:** The execution plan includes product improvements (optimizing Invite flows and improving low-Whatsapp-able contacts experience), on and off-FB marketing, FB Bookmark integrations, and identifying relevant telco and media partnership deals. In the other 5 countries, we will continue partnership deals and identifying product gaps.
- **Improve Registration and New User Experience and Minimize SMS Cost**: In H1, we reduced costs with minimal effect on user registration success by optimizing our SMS routing algorithm, renegotiating vendor agreements and on-boarding cheaper vendors. We will continue to invest here by improving registration success by reducing churn from the registration flow, reducing re-registration attempts, and optimizing retries.
- **Maintain New User Growth in Developing Markets:** KaiOS (JioPhone) growth has slowed in H1 as we hit saturation in India. Global release for KaiOS was released in H1, but engineering is still improving support for low-end KaiOS. In September, we will lap a year since the India KaiOS (JioPhone) launch and so India MAU Y/Y growth is forecasted to slow. We will continue to focus on improving crash rates and the user experience.

Instagram: ***Focus on FCI Growth, Lean into Multiple Accounts, and Building a Healthy Graph***

- **Focus on FCI with Investments in Notifications, Access & Top of Funnel.** In H1, our biggest FCI wins have come from Account Recovery and Connections as well as improvements to Push targeting. We will continue to focus on levers with outsized impact on FCI growth and expanding reachability and top of funnel channels (SEO & Embeds).

- **Lean into Multiple Accounts.** We've seen that Multiple Account creation encourages people who are privacy-concerned, especially teens and Japan, to share more so we will improve the ease and clarity of creating, logging in, and switching between these accounts.
- **Evolving our Graph Health strategy to also optimize for Graph Management and Differentiation.** We will continue to build people's initial graph as quickly as possible as well as giving people the tools they need to evolve their graphs (including pruning) to align with the graph differentiation strategy of Interests + Close Friends.
- **Invest in Understanding for Indian Teens/Creators and late adopter cohorts in the FCI.** To unblock IG's growth beyond the early adopter FCI cohort, we will be looking into older users and older Android devices within the existing FCI, as well as Indian teens and creators (including celebrities).

Operator Solutions (FOS): *Mitigate the Scrutiny of our Programs While Driving More Impact*

Overall, we expect growing scrutiny of our Partnership programs and will ensure they remain secure, avoid unintended data use, include appropriate transparency and control, and have proper proactive internal and external narratives.

- **Free Basics/Flex:** We have 65% of FB MAU opportunity live and our focus is increasingly on sustaining this impact and unlocking remaining large markets. We plan to update Free Basics to an improved version (renamed "Discover"), which sustainably allows access to all sites on the internet and helps win support of previous net neutrality detractors. We'll also continue to invest in Messenger and WhatsApp through both zero-rating and special priced products.
- **Headers:** This program, where operators provide phone numbers to help us pre-fill fields in registration and login, drives >+24M FB MAU/yr. We are working on improving transparency and control (opt out), removing server data retention, limiting to only approved use cases, and working on more proactive comms. Even with this work, in Indonesia there is growing risk to this program with recent regulations.
- **SMS Binds:** Across the Family we spend $550M/yr on SMS and send another $900M/yr worth over free binds with operators. Operators increasingly intend to monetize the SMS we rely for Account Confirmation and Recovery, which has led to large price increases (i.e. 6x in India) and shutdowns of free binds that drive >20M MAP. We are investing in solutions to ensure we responsibly use these binds and exploring ways to reduce long term reliance on SMS.
- **Preloads:** The program is now on 9 of 10 new Android devices (excl. China) covering 73% of FB revenue and 66% FB MAU. Preloads drive ~9M FB MAU/yr and ~12M Messenger MAU/yr and we will drive additional growth through frictionless installs (i.e. installing Messenger from FB). The program continues to be sustained by Actionable Insights and our App Quality program, however flattening Neko rev share is increasing pressure on sustainability.

People

Team	Current ENG (BIS)	2019 Budget ENG HC
Facebook Growth	109	143
Messenger Growth	0	11
WhatsApp Growth	4	7
Instagram Growth	44	61
Operator Solutions	44	51
Facebook Lite Interfaces	70	88
TOTAL	**271**	**361**

CP Growth H1 Pulse: Participation at 98% (up from 97%) with Manager Favorability of 80% (+1%), Company Dimension Favorability of 71% (+1%), and Personal Experience Dimension Favorability of 63% (-2%).

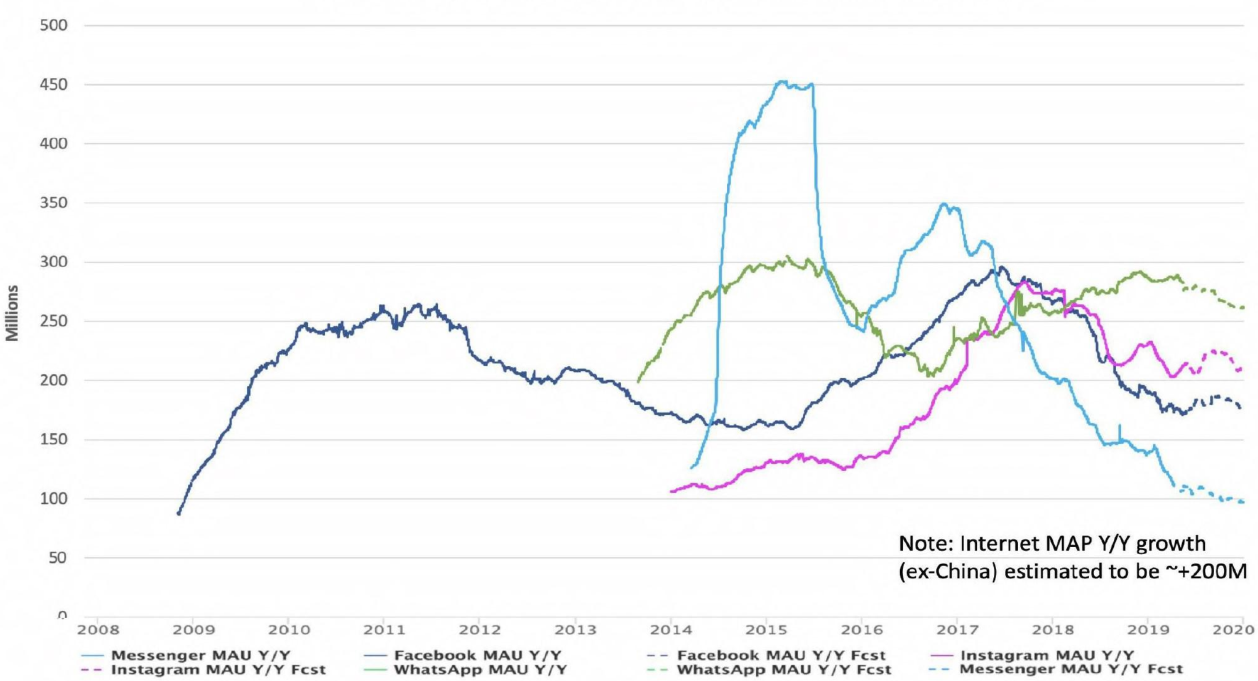
Discussion Topics

1. Do we feel we're doing enough to win with Teens across the Family?

H2 2019 Goals (*tentative*)

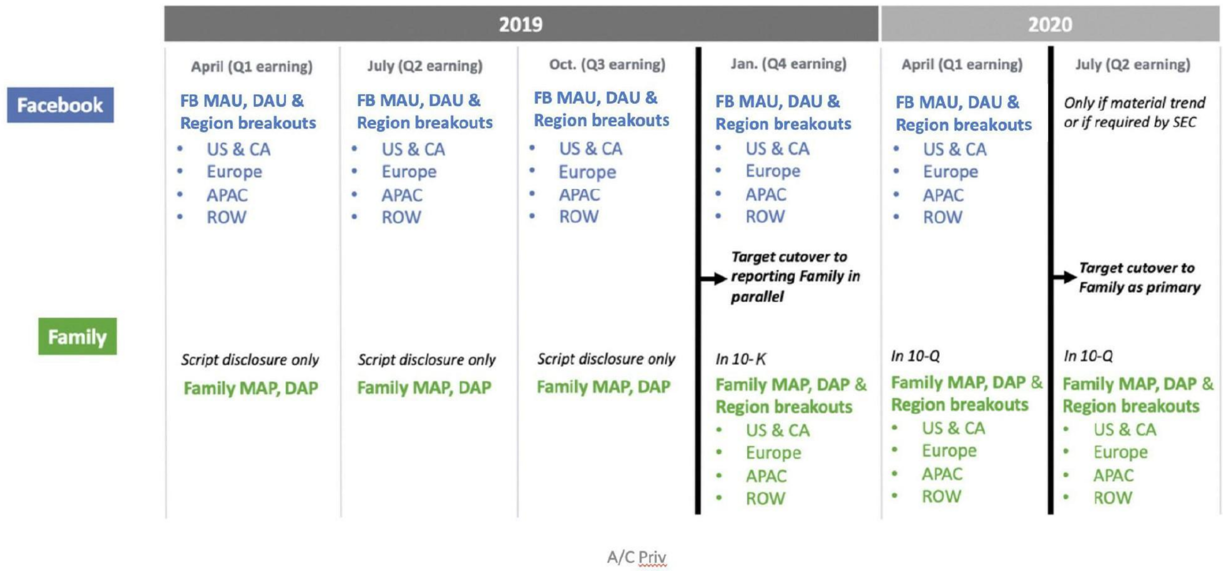
Goal	Est. H2 Start	H2 Goal (tentative)	H2 Y/Y
Family			
Global MAP	2.87B	3.00B*	+288M*
Global DAP	2.24B	2.40B*	+275M*
**will drop (could be >-100M MAP) in Q4 with WA survey and WA de-duplication*			
App People-level (using de-duplicated Family methodology; except for WhatsApp)			
Facebook (incl. MSGR) MAP	2.13B	2.20B	+151M
Facebook (incl. MSGR) DAP	1.52B	1.56B	+105M
Instagram MAP	1.02B	1.10B	+160M
Instagram DAP	0.69B	0.74B	+110M
WhatsApp MAU	1.89B	2.02B	+260M
WhatsApp DAU	1.45B	1.58B	+212M
Facebook			
Global MAU	2,415M	2,496M	+176M
Global DAU (7d)	1,598M	1,644M	+116M
US&CA MAU	245M	246M	+4M
US&CA DAU (30d)	187M	188M	+2M
US Friend Accepts/day	34M	36M	+4M
Messenger			
US MAU	172M	174M	+3M
US DAU	95M	98M	flat
Global MAU	1,545M	1,590M	+97M
WhatsApp			
Global MAU	1,886M	2,022M	+260M
Global DAU	1,450M	1,575M	+212M
Instagram			
FCI MAU	432M	462M	+67M
FCI DAU	290M	312M	+49M
Global MAU	1,250M	1,351M	+201M
Global DAU	788M	856M	+136M
Operator Solutions			
Incremental FB MAU	0	28M	+5M

Family of Apps MAU Y/Y Growth (+ tentative H2 2019 Goals)

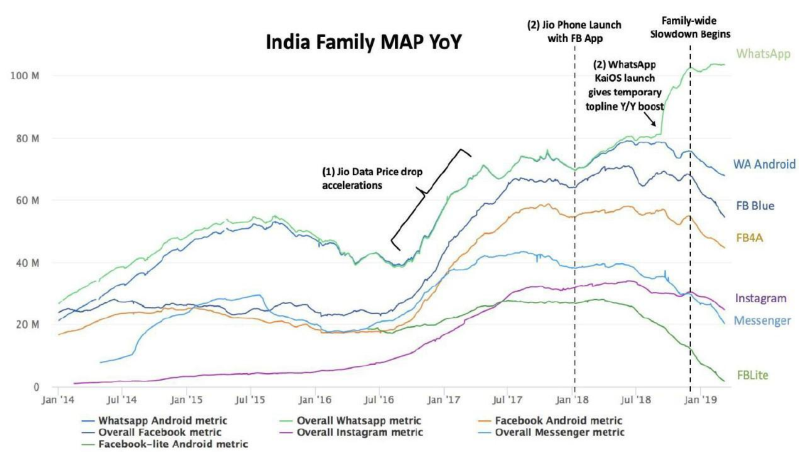


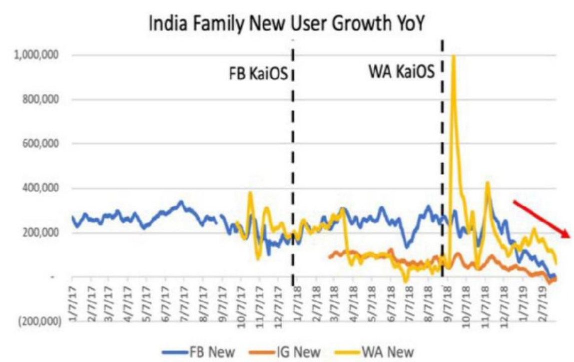
Appendix

Family External Reporting Timeline



India Family-wide MAP Growth Slowing Due to Less New Users post "Jio Affordability Effect"



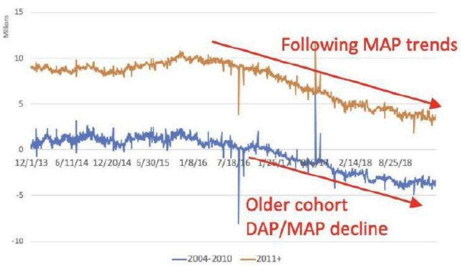


Facebook H1 Growth Known Headwinds (not MECE)

Categories (Not MECE)	Global MAP	Global DAP	Notes
1. New Headwinds in H1			
Temporary icon placement issue on JioPhone	-2M	-1.7M	moved to 3rd screen from 1st for some time
Infinite Loop SEV	-3M	N/A	
Compromised Account SEV (S176800)	-1.3M	N/A	
Pakistan Mobile Data Tax	-0.2M	-0.6M	
Decrease in Abusive MAP (detected)	-3M	-0.7M	
2. Intentional Product Changes			
Privacy and Security Changes	-2M	-0.6M	Bypass Login, SMS/Call Log permission removal
Messenger Bump Changes	unknown	-0.5M	Can't size for MAP due to data retention
Improved Fake Account Detection	< -1M	N/A	

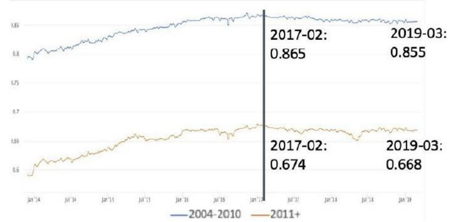
Facebook US Growth Trends

US FB DAU Y/Y by Cohort

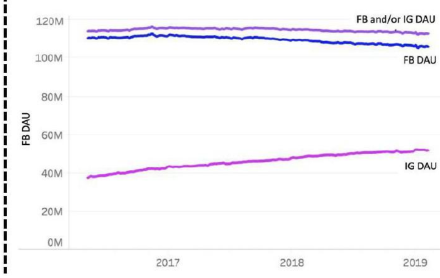


Note: charts are account level, not people level

US FB DAU/MAU Ratio by Cohort



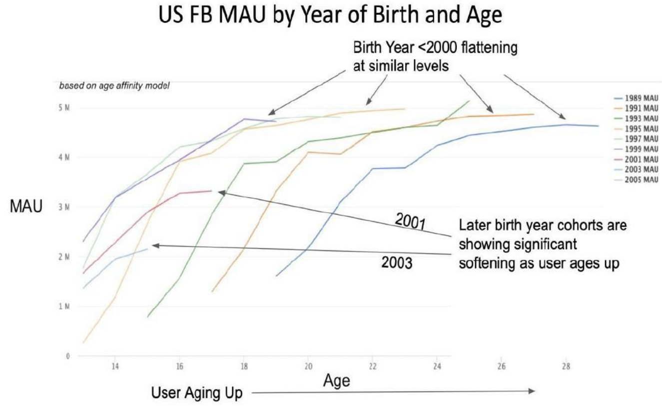
~50% of the lost FB DAU in US&CA from Older pre-2011 Cohorts appear as IG DAU



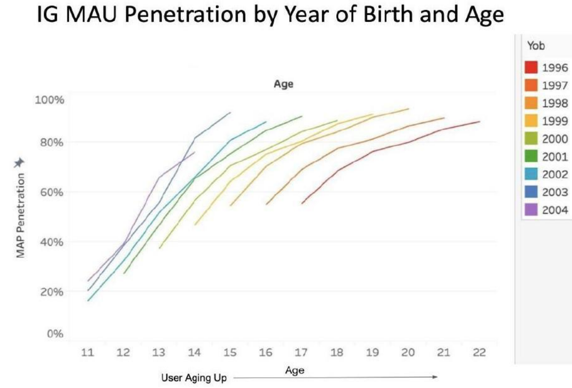
Facebook Q2 Developed Markets Projections

US Teens: FB Continuing to Lose Fit While IG Appears to be Maintaining It

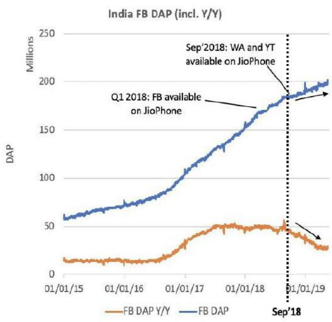
US FB MAU by Year of Birth and Age

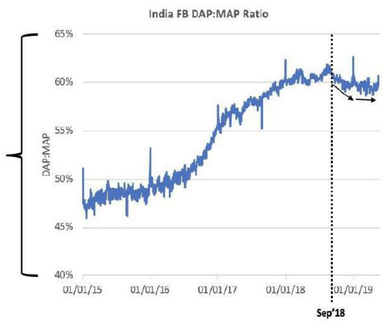


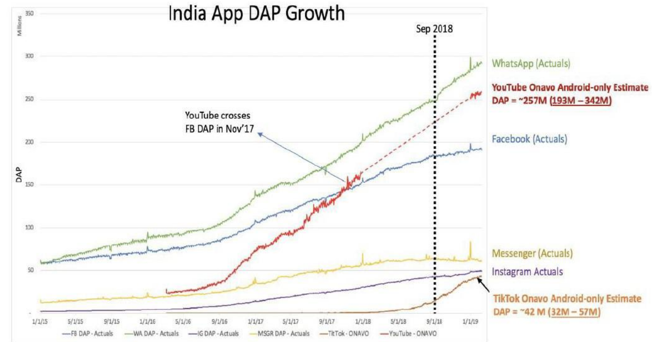
IG MAU Penetration by Year of Birth and Age



Facebook India DAP Growth Slowed in Sept, 2018 due to a Declining DAP/MAP Ratio





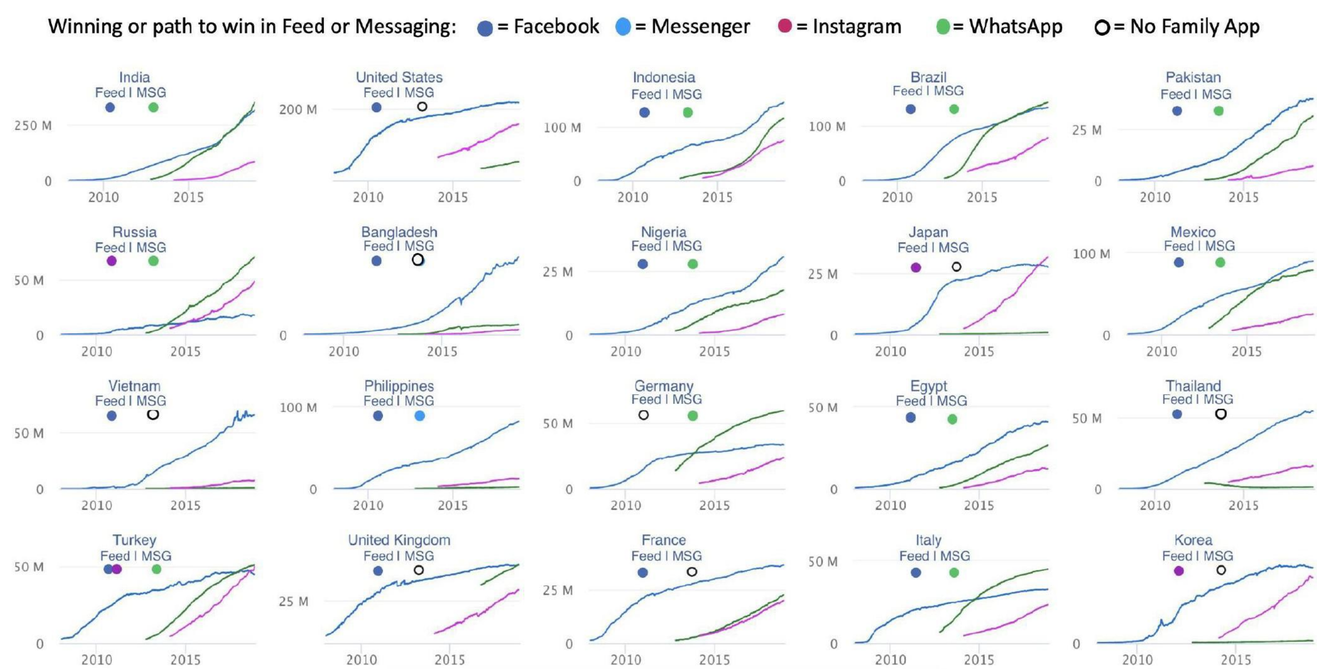


Messenger H1 Growth Known Headwinds (not MECE)

Categories (Not MECE)	Global MAP	Global DAP	Notes / Next Steps
1. New Headwinds			
Google SMS read-only permission change	neutral	-1.3M	
2. Intentional Product Changes			
Bump changes (NFB algorithm & turn of YFJJ)	unknown	-6M	Can't size for MAP due to data retention
Feed Ranking Changes (link)	neutral	-0.3M	
FB=C White Chrome (link)	tbd	-0.4M	Removing entry point on tabs except Feed

2019 Country Focuses by Family of Apps (Top 30 Countries)

Context: Family of Apps MAU Trends by Country (with winners or on path to win in Feed or Messaging)



Note: Facebook includes Messenger, and MAU not de-duplicated

Being deliberate with how each of our Apps focus on countries helps put the right focus and resourcing.

- Specialized Countries: pick the best apps to establish clear path to messaging and feed primacy
- Core Countries: maintain messaging and feed primacy with the winning apps
- Monitor Countries: track w/w trends closely due to unique characteristics (e.g. FB in Japan)

Note: Instagram has Focus Countries (FCI) based on Revenue, Competition (Snapchat), and Family incrementality.

Country	Facebook	Instagram	Messenger	WhatsApp	Notes
India	**Specialized**	Understand*		**Core**	- IG exploring India with growth of TikTok
United States	**Specialized**	Focus	**Specialized**		- P1 for MSGR and strategy here will be leveraged for other iMessage mkts
Indonesia	Core			**Core**	
Brazil	Core	Focus		**Core**	
Pakistan	Core			**Specialized**	
Russia	Monitor	Understand		**Specialized**	- IG continuing Understand work in H2
Bangladesh	Core		Specialized		- Messenger lagging imo
Nigeria	Core			Core	
Japan	Monitor	Focus			- LINE has won Messaging
Mexico	Core			Core	
Vietnam	Core		Specialized		
Philippines	Core		Core		
Iran	Blocked		Blocked	Specialized	- Telegram blocked
Germany	Monitor	Focus		Core	
Egypt	Core			**Specialized**	
Thailand	Core		**Specialized**		
Turkey	Monitor			Core	
United Kingdom	Core	Focus		**Specialized**	
France	Core	Focus	**Specialized**	**Specialized**	
Italy	Core			Core	
Korea	Monitor	Focus			- Kakao has won Messaging
Myanmar	Core		Specialized		
South Africa	Core			Core	
Ukraine	Core		Specialized		
Colombia	Core			Core	
Spain	Core			Core	
Poland	Core		**Specialized**		
Argentina	Core			Core	
Canada	**Specialized**	Focus	**Specialized**		
Australia	Core	Focus	**Specialized**		

** denotes changes from H1/19 to H2/19; bold remains the focus Specialized countries for Messaging.*