LIBERTY GLOBAL PLC
INVESTOR CALL | Q3 2019

November 7, 2019

“SAFE HARBOR”

Forward-Looking Statements + Disclaimer

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements with respect to our strategies, future growth prospects and opportunities; expectations with respect to our rebased OCF growth, our Adjusted pro forma FCF, including guidance with respect to its components, our P&E additions, our annual corporate opex and our central cost reductions including TSA revenue, underlying costs and recharges to retained assets; expectations with respect to Belgium (including revenue, adjusted FCF and dividends), Switzerland (including revenue, OCF, OFCF and subscriber additions) and the Dutch JV (including OCF and distributions); decisions regarding our capital allocation; expectations with respect to the development, launch and benefits of our innovative and advanced products and services, including the rollout of Gigabit broadband; the strength of our balance sheet and tenor of our third-party debt; and other information and statements that are not historical fact. These forward-looking statements involve certain risks and uncertainties that could cause actual results to differ materially from those expressed or implied by these statements. These risks and uncertainties include events that are outside of our control, such as the continued use by subscribers and potential subscribers of our and our affiliates’ services and their willingness to upgrade to our more advanced offerings; our and our affiliates’ ability to meet challenges from competition, to manage rapid technological change or to maintain or increase rates to subscribers or to pass through increased costs to subscribers; the effects of changes in laws or regulation; general economic factors; our and our affiliates’ ability to obtain regulatory approval and satisfy regulatory conditions associated with acquisitions and dispositions; our and affiliates’ ability to successfully acquire and integrate new businesses and realize anticipated efficiencies from acquired businesses; the availability of attractive programming for our and our affiliates’ video services and the costs associated with such programming; our and our affiliates’ ability to achieve forecasted financial and operating targets; the outcome of any pending or threatened litigation; the ability of our operating companies and affiliates to access cash of their respective subsidiaries; the impact of our operating companies' and affiliates’ future financial performance, or market conditions generally, on the availability, terms and deployment of capital; fluctuations in currency exchange and interest rates; the ability of suppliers, vendors and contractors to timely deliver quality products, equipment, software, services and access; our and our affiliates’ ability to adequately forecast and plan future network requirements including the costs and benefits associated with network expansions; and other factors detailed from time to time in our filings with the Securities and Exchange Commission, including our most recently filed Form 10-K/A and Forms 10-Q. These forward-looking statements speak only as of the date of this presentation. We expressly disclaim any obligation or undertaking to disseminate any updates or revisions to any forward-looking statement contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

Presentation of Continuing & Discontinuing Operations:

On July 31, 2018, we sold our operations in Austria. On May 2, 2019, we sold our UPC DTH operations, which provide direct-to-home satellite services in Hungary, the Czech Republic, Romania and Slovakia. On July 31, 2019, we sold our operations in Germany, Hungary, Romania and the Czech Republic. Our operations in Germany, Hungary, Romania and the Czech Republic, along with our former UPC DTH operations and operations in Austria are collectively referred to herein as the “Discontinued Operations” and have all been accounted for as discontinued operations in our September 30, 2019 Form 10-Q.

On February 27, 2019, we entered into a share purchase agreement (the SPA) to sell our operations in Switzerland (UPC Switzerland) to Sunrise Communications Group AG (Sunrise), which was amended on October 22, 2019. The amended SPA provides our company the right to terminate the SPA at any time, except if we have requested Sunrise to convene a new Extraordinary General Meeting (EGM) to approve an associated capital increase and entitles Sunrise to terminate the SPA at any time after November 11, 2019, except if we have requested Sunrise to convene a new EGM. In light of the fact that the SPA remains in effect as of the date of this release and the fact that we originally provided our 2019 guidance for OCF, Adjusted FCF and property and equipment additions excluding our operations in Switzerland, we are continuing to provide certain metrics on an "excluding Switzerland" basis. The term "excluding Switzerland" represents our continuing operations excluding UPC Switzerland and certain holding companies within the UPC Holding borrowing group (together, the "Switzerland Disposal Group"), including the UPC Holding borrowing group’s existing senior and senior secured notes (the "UPC Notes"), associated derivatives and certain other debt items.

Additional Information Relating to Defined Terms:

Please refer to the Appendix at the end of this presentation, as well as our press release dated November 6, 2019 and our SEC filings, for the definitions of the following terms which may be used herein, including: Rebased Growth, Operating Cash Flow (“OCF”), Adjusted Free Cash Flow (“FCF”), Operating Free Cash Flow (“OFCF”), Revenue Generating Units (“RGUs”), Average Revenue per Unit (“ARPU”), as well as non-GAAP reconciliations, where applicable.

Q3 2019 HIGHLIGHTS

1 Group Financial & Operating Results

- Tracking to OCF and FCF guidance
- Rebased OFCF up 42% YTD; +80% ex-Switzerland
- Central opex scaling down

2 Virgin Media

- Declining capital intensity; strong OFCF growth
- Cable impacted by weak macro and price rise
- FMC driving record mobile adds; new MVNO deal
- Lightning results solid & economics improving
- Exploring further expansion with Liberty Networks

3 Switzerland

- Sunrise EGM to authorize equity financing canceled
- Regulatory approval and SPA valid until Feb 27
- Turnaround plan in full swing
- UPC remains fulcrum asset in a converging market

4 Other Operations

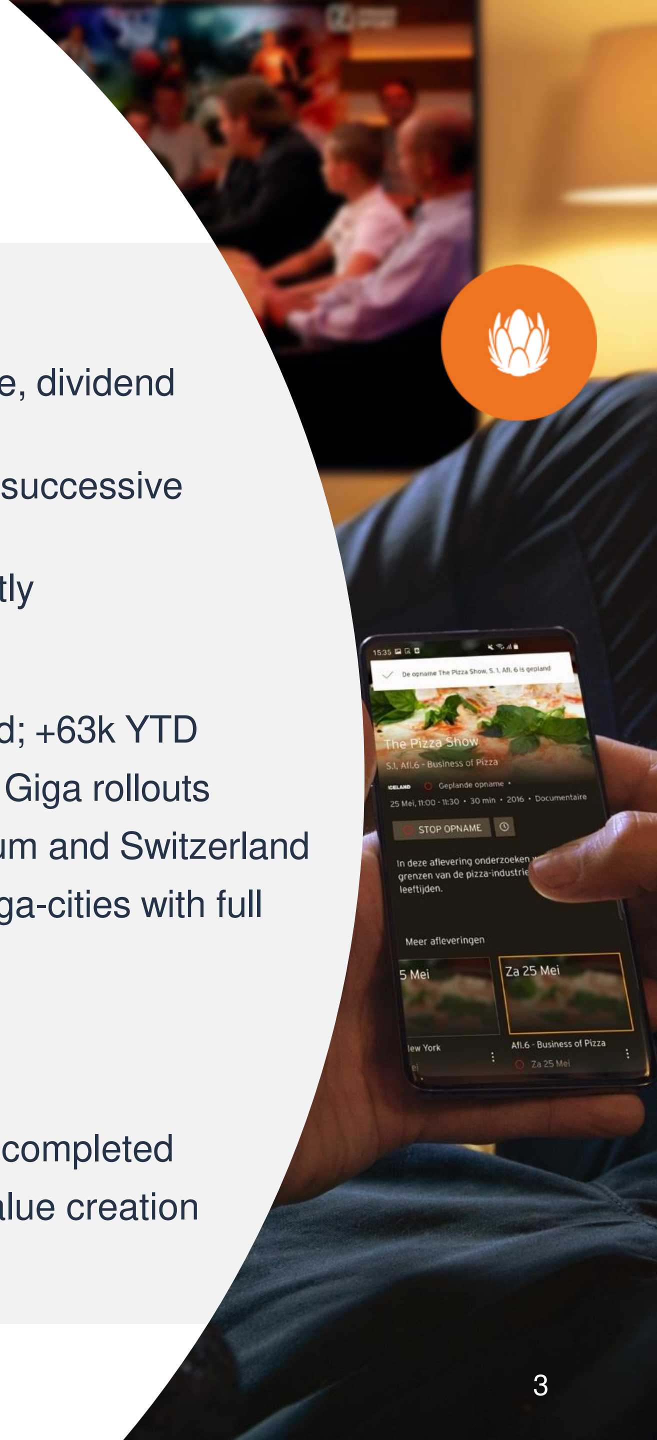
- Belgium on track for FY guidance, dividend announced
- Netherlands JV delivers second successive quarter of revenue growth
- Poland/Slovakia growing modestly

5 Broadband

- Continued demand for broadband; +63k YTD
- Extending speed leadership with Giga rollouts
- Footprint-wide launches in Belgium and Switzerland
- UK & Netherlands launch first Giga-cities with full rollout by 2021

6 Capital Allocation

- Total liquidity at Q3 of ~$10bn
- $2.7bn tender offer successfully completed
- Patient approach to long-term value creation



Q3 2019 OPERATING UPDATE

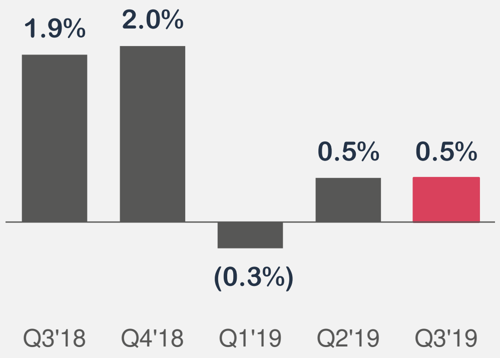
Significant OFCF growth through efficient deployment of capital; successfully implementing mid-term growth plan

VIRGIN MEDIA

KEY OPERATING RESULTS[1]

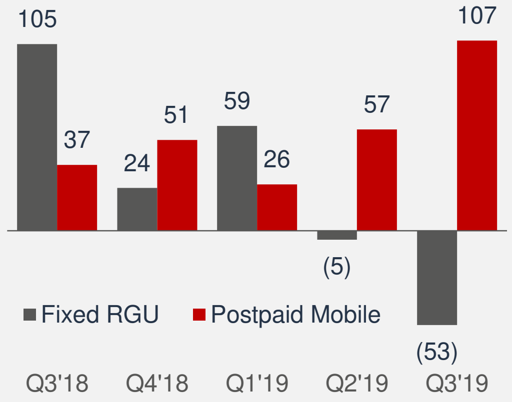
Q3	YTD	
(53k)	+2k	FIXED NET ADDS
+107k	+191k	POSTPAID MOBILE NET ADDS
+0.1%	+0.1%	REVENUE
(4.1%)	(2.4%)	OCF
+15%	+31%	OFCF

CUSTOMER ARPU GROWTH YOY



- **Price Rise 2019** effective Sep/Oct underpinned a 50 bps improvement in rental ARPU[2]
- **Rental ARPU**[2] up 1.7% YoY
- **Subscription ARPU** continues to be impacted by lower PPV and phone usage

SUBSCRIBER NET ADDS (000s)



- **Q3 fixed additions** impacted by earlier U.K. price rise and more disciplined retentions
- **Brexit and softer U.K. macro** impacting RGU and ARPU trends
- **FMC bundles driving** record postpaid adds

STRATEGIC UPDATE

- **Gigabit broadband** rollout underway; network-wide completion by 2021
- **Access to 5G products and better economics** with new Vodafone MVNO deal
- **Project Lightning** delivering compelling returns
- **Liberty Networks created** to explore expansion in greenfield areas
- **Restructured B2B**
  - Small Office business moved to Consumer
  - Maximizing B2B wholesale and large enterprise opportunities

(1) Revenue, OCF and OFCF growth rates presented on a rebased basis as applicable.
(2) Rental ARPU is subscription ARPU less out-of-bundle telephony and pay-per-view usage

Q3 2019 OPERATING UPDATE (1,2)

Regional champions driving FMC, extending network superiority and generating significant adjusted Free Cash Flow

BELGIUM

Significant OFCF growth and FCF generation

(36k) FIXED NET ADDS

+31k MOBILE NET ADDS

(2.0%) REVENUE

(2.3%) OCF

+44% OFCF

- 1Gbps launched across 3+mm homes & businesses
- FMC penetration increased to 44% in Q3
- Successful price rise of ~2% landed
- Improved revenue guidance at Q3 earnings for 2019
- Adj. FCF[3] guidance of €380 – 400mm
- Gross intermediate dividend of €63mm[5] expected by YE '19

SWITZERLAND

Turnaround plan in full swing; sub trends improving

(14k) FIXED NET ADDS

+16k MOBILE NET ADDS

(3.3%) REVENUE

(11.9%) OCF

+(26)% OFCF

- 1 Gbps launched; UPC now has largest 1 Gbps network in Switzerland
- FMC penetration increased to 18% in Q3
- Continued deployment of Horizon 4 set-tops; ~20% of total video base already penetrated
- Q3 2019 OCF impacted by strategic investments in growth initiatives including digitization
- Expect 2019 revenue, OCF, OFCF and subscriber additions to be in-line with 2019 targets

DUTCH JV (50%)

Strong operating trends fuels return to growth

(29k) FIXED NET ADDS

+53k MOBILE NET ADDS

+0.8% REVENUE

+1.7% OCF

+(14)% OFCF

- Announced national rollout of 1Gbps starting in 2019
- Milestone achievement of 2mm converged SIMs
- ~4% price rise implemented in July successfully
- Approximately €160mm run-rate synergies now realized
- OCF guidance now ~3%, high end of original range
- Expect to distribute ~€600mm[4] to parents in 2019

(1) We own a 50% noncontrolling interest in the VodafoneZiggo JV in the Netherlands and all results are as disclosed and as reported by the JV. Results are not consolidated by Liberty Global.
(2) Revenue, OCF and OFCF growth rates presented on a rebased basis as applicable.
(3) Under IFRS reporting.
(4) 50% of 2018 & 2019 cash returns are attributable to Liberty Global. Includes dividends and principal and interest payments on shareholder loans.
(5) 60% of dividend is attributable to Liberty Global.

EXECUTIVE SUMMARY

FINANCIAL RESULTS

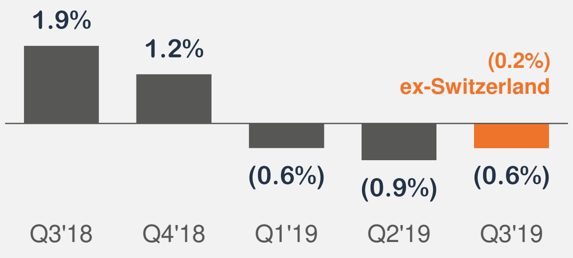
APPENDIX

GROUP OVERVIEW

Stable top line; OCF growth impacted by U.K. headwinds; ~$10bn liquidity

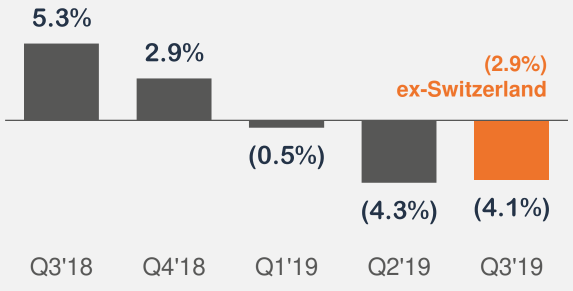
REVENUE GROWTH(1)

(Continuing Operations including Switzerland)



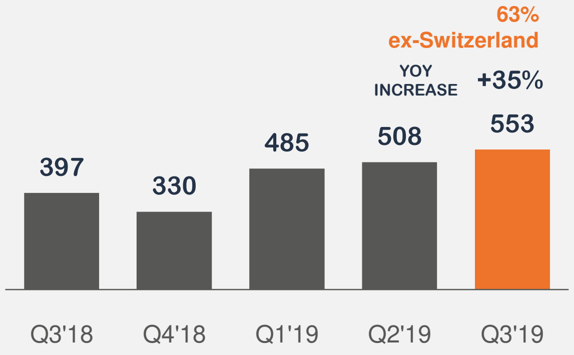
OCF GROWTH(1)

(Continuing Operations including Switzerland)



OFCF(1) ($mm)

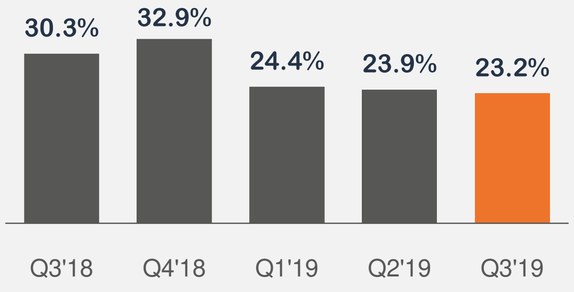
(Continuing Operations including Switzerland)



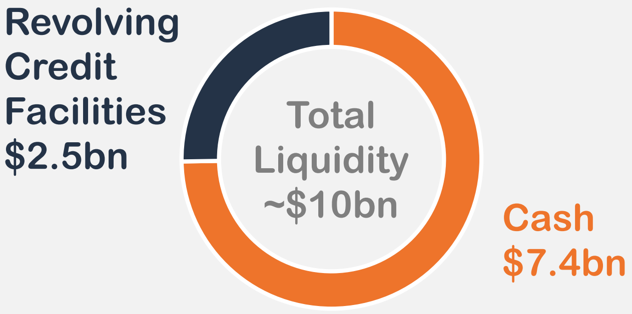
P&E ADDITIONS

(Continuing Operations including Switzerland)

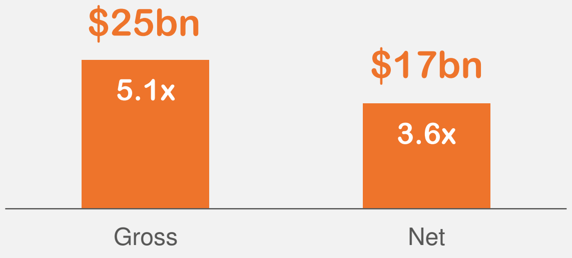
AS A % OF REVENUE



LIQUIDITY(2)



LEVERAGE(3)



(1) Revenue, OCF and OFCF growth rates presented on a rebased basis before internal recharges
(2) Liquidity refers to our consolidated cash and cash equivalents plus the maximum undrawn commitments under our subsidiaries' borrowing facilities without regard to covenant compliance calculations
(3) Debt balances presented on swapped basis, taking into account derivative positions

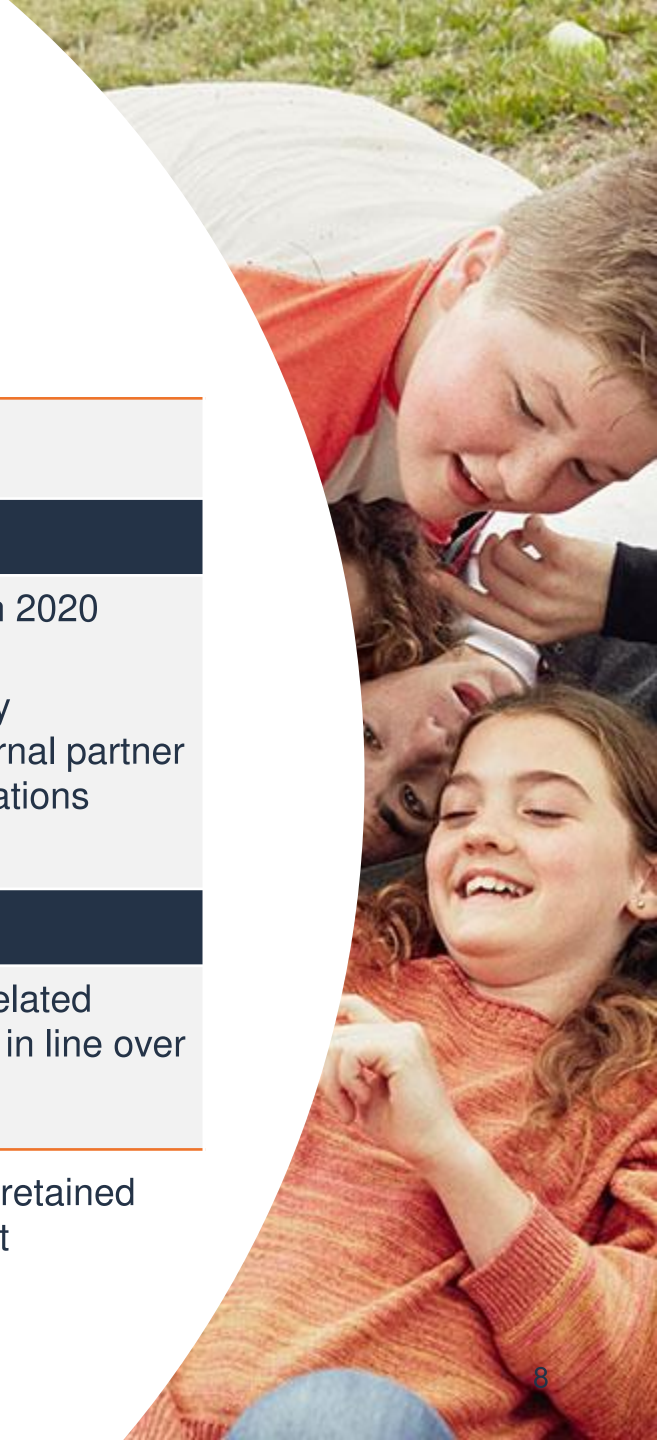
CENTRAL UPDATE

Cost reductions are on track, T&I OFCF fully attributed

$m	Q1 2019	Q2 2019	Q3 2019	COMMENTS
Total Opex & Capex	($206)	($200)	($201)	
Split as follows:				
Corporate Opex	($55)	($53)	($44)	On track for ~$200mm in 2020
T&I Opex	($71)	($70)	($74)	Central T&I costs are fully attributable to either external partner markets or retained operations
T&I Capex	($80)	($77)	($83)	
Total T&I	($151)	($147)	($157)	
Revenue from:				
TSAs (DE, AT, HU, RO, CZ, LLA)[1]	$50	$49	$51	Total TSA revenue and related costs will decline broadly in line over time
FSA (NL)[2]	$32	$29	$31	
Total Revenue	$82	$77	$82	
Net T&I OFCF	($69)	($70)	($75)	Net OFCF attributable to retained assets to remain constant

(1) For assets disposed to Vodafone this includes recharges pre (pro forma) and post (actual) completion.

(2) Excludes low-margin sales of CPE



DIVISIONAL OVERVIEW YTD

Strong OFCF conversion post Central cost attributions

For the 9 months ended Sep 30, 2019 (in millions)	U.K. & IRELAND			BELGIUM	POLAND AND SLOVAKIA	SWITZERLAND	CENTRAL	Continuing Operations (4)	50-50 DUTCH JV (5,6)
	PROJECT LIGHTNING (1)	REST OF BUSINESS (2)	TOTAL						
REVENUE	$215	$4,670	$4,885	$2,147	$355	$943	$231	$8,559	$3,275
OCF	$114	$1,972	$2,086	$1,047	$173	$501	($222)	$3,586	$1,482
% Revenue	53%	42%	43%	49%	49%	53%	n.m.	42%	45%
P&E ADDITIONS	($355)	($774)	($1,129)	($398)	($66)	($207)	($240)	($2,040)	($680)
% Revenue	n.m.	17%	23%	19%	19%	22%	n.m.	24%	21%
OFCF PRE CENTRAL COST ALLOCATION	($241)	$1,198	$957	$649	$107	$294	($462)	$1,546	$802
% Revenue	n.m.	26%	20%	30%	30%	31%	n.m.	18%	24%
PRO FORMA TSA REVENUE (7)	-	-	-	-	-	-	$89	$89	-
CENTRAL COST ATTRIBUTION (3)	-	($146)	($146)	-	($30)	($66)	$242	-	-
PRO FORMA OFCF	($241)	$1,052	$811	$649	$77	$228	($131)	$1,635	$802
% Revenue	n.m.	23%	17%	30%	22%	24%	n.m.	19%	24%

(1) Revenue, OCF and OFCF represent incremental impacts of Project Lightning and exclude allocations of certain costs including, broadband network taxes, general corporate costs and administrative, general network operations, information technology, facilities, commercial and general sales and marketing costs. Please see the appendix for additional information
(2) Rest of business includes B2B and mobile, among other businesses
(3) For Virgin Media and Central and Eastern Europe, the amounts represent attributed costs (operating and capital) incurred by our Central and Corporate segment on behalf of these operating segments, assuming Virgin Media and Central and Eastern Europe directly incurred and paid these costs in the period. For Switzerland, the amounts represent attributable amounts based on the transition services agreement (TSA) we agreed with Sunrise. This approach differs from the charges and allocation methodologies we use for our related-party transactions as recorded in the statements of operations shown by our operating segments, principally in that the statements of operations reflect costs allocated and charged over the period in which the operating subsidiary benefits from the expense or the use of our centrally owned capital. The related-party charges and allocations in the operating segments' statements of operations may be based on (i) our estimated share of the underlying costs, (ii) our estimated share of the underlying costs plus a mark-up or (iii) commercially-negotiated rates and differs from the presentation in the table above as this presentation is based on actual costs or agreed TSAs and assumes cash payment in the period the charges and allocations are incurred
(4) LG continuing operations includes Intersegment Eliminations
(5) Represents 100% of the non-consolidated Dutch JV
(6) OCF for the Dutch JV as shown in the table above includes $92 million of FSA charges from Liberty Global with the corresponding amount recognized as revenue within our Central segment.
(7) Represents our preliminary estimate of revenue we would have received from transitional services agreements if the sale of the Discontinued Operations had occurred on January 1, 2019. The estimates include incremental costs that we expect to incur to provide such transitional services. As a result, the pro forma adjustments during the nine months ended September 30, 2019 include $88.2 million related to our discontinued operations in Germany, Hungary, Romania and the Czech Republic, respectively, and $1.0 million related to our discontinued DTH business

PRO FORMA ADJUSTED FCF

Flat YTD due to working capital phasing, strong underlying FCF generation

$m		Q1 2019		Q2 2019		Q3 2019	Q4 2019	FY GUIDANCE (1)
OCF (2)		1,078		1,078		1,078		
P&E		(640)		(605)		(587)		~$2.7bn
OFCF (2)		438		473		491		
INTEREST / DERIVS (2)		(561)		82		(573)		Interest bullets in Q1 and Q3
CASH TAX		(181)		(70)		(16)		Q4 will include ~$70m related to US payment
VODZIGGO JV		-		25		81	~110	~€200m dividend & interest
		(304)		510		(17)		
Working Capital	(270)		23		(4)			Expect to be broadly flat for these working capital categories in aggregate for 2019
Operational Finance	(17)		13		55			
Restructuring & Other	(35)		(1)		(50)			
		(322)		35		1		
ADJUSTED FCF exc CH(2)		(626)		546		(16)	~650	$550-600m
UPC Switzerland(3)		67		46		(22)	~60	~$150m
ADJUSTED FCF inc CH		(559)		592		(38)	>700	$700-750m

(1) A reconciliation of our Adjusted FCF guidance for 2019 to a U.S. GAAP measure is not provided as not all elements of the reconciliation are projected as part of our forecasting process, as certain items may vary significantly from one period to another.
(2) Pro forma Adjusted FCF excluding Switzerland incorporates our preliminary estimate of (i) interest and related derivative payments that were made by the UPC Holding continuing operations during the period and (ii) the net cash flows that we would have received from transitional services agreements if the sale of the Discontinued Operations and the Switzerland Disposal Group had occurred on January 1, 2019.
(3) Represents the net impact of (i) the Adjusted FCF of the Switzerland Disposal Group (ii) an increase related to assumed interest and related derivative payments made by the UPC Holding borrowing group associated with its discontinued operations and (iii) a decrease related to the net cash flows that we would have received from the transitional services agreement related to the Switzerland Disposal Group.

CONCLUSIONS

Key focus remains OFCF & FCF delivery; ahead of expectations on both metrics

- Strong underlying OFCF & FCF generation, despite ~$350mm Lightning investment
- Focused on long-term value creation; significant cash position
- Reinforcing speed leadership with 1 Gig deployments
- Swiss turnaround gathering momentum
- Providing additional guidance to include Switzerland

	GUIDANCE (excluding Switzerland)	GUIDANCE (including Switzerland)
Rebased OCF	Flat to down	Modest decline
P&E Additions(1)	~$2.7bn	~$2.8 - $2.9bn
Pro Forma Adjusted FCF(1-3)	~$550 - $600mm	~$700 - $750mm

(1) Current P&E and FCF guidance, excluding Switzerland, based on EUR/USD 1.13; GBP/USD 1.30. Secondary guidance, including Switzerland, based on EUR/USD 1.12; GBP/USD 1.26. A reconciliation of our Adjusted FCF guidance for 2019 to a U.S. GAAP measure is not provided as not all elements of the reconciliation are projected as part of our forecasting process, as certain items may vary significantly from one period to another.

(2) Guidance of $550-$600 million gives effect to (i) the removal of the Adjusted FCF of the Switzerland Disposal Group, including 100% of the interest and related derivative payments made during the applicable periods associated with the UPC Notes, (ii) the addition of our estimate of interest and related derivative payments that were made by UPC Holding associated with our continuing operations in Poland and Slovakia during the respective period and (iii) the net cash flows that we would have received from transitional services agreements if the sale of the Discontinued Operations and the Switzerland Disposal Group had occurred on January 1, 2019.

(3) Guidance of $700-$750 million gives effect to (i) the removal of our estimate of interest and related derivative payments that were made by the UPC Holding borrowing group associated with its discontinued operations during the applicable periods and (ii) the net cash flows that we would have received from transitional services agreements if the sale of the Discontinued Operations had occurred on January 1, 2019.

EXECUTIVE SUMMARY

FINANCIAL RESULTS

APPENDIX

REBASE INFORMATION

For purposes of calculating rebased growth rates on a comparable basis for all businesses that we owned during 2019, we have adjusted our historical revenue, OCF and OFCF for the three and nine months ended September 30, 2018 to (i) include the pre-acquisition revenue, OCF and P&E additions of entities acquired during 2019 in our rebased amounts for the three and nine months ended September 30, 2018 to the same extent that the revenue, OCF and P&E additions of these entities are included in our results for the three and nine months ended September 30, 2019, (ii) include revenue and costs for the temporary elements of transitional and other services provided to the VodafoneZiggo JV, Vodafone, Deutsche Telekom (the buyer of UPC Austria), Liberty Latin America and M7 Group (the buyer of UPC DTH), to reflect amounts related to these services equal to those included in our results for the three and nine months ended September 30, 2019 and (iii) reflect the translation of our rebased amounts for the three and nine months ended September 30, 2018 at the applicable average foreign currency exchange rates that were used to translate our results for the three and nine months ended September 30, 2019. We have reflected the revenue, OCF and P&E additions of these acquired entities in our 2018 rebased amounts based on what we believe to be the most reliable information that is currently available to us (generally pre-acquisition financial statements), as adjusted for the estimated effects of (a) any significant differences between U.S. GAAP and local generally accepted accounting principles, (b) any significant effects of acquisition accounting adjustments, (c) any significant differences between our accounting policies and those of the acquired entities and (d) other items we deem appropriate. We do not adjust pre-acquisition periods to eliminate nonrecurring items or to give retroactive effect to any changes in estimates that might be implemented during post-acquisition periods. As we did not own or operate the acquired businesses during the pre-acquisition periods, no assurance can be given that we have identified all adjustments necessary to present the revenue, OCF and OFCF of these entities on a basis that is comparable to the corresponding post-acquisition amounts that are included in our historical results or that the pre-acquisition financial statements we have relied upon do not contain undetected errors. The adjustments reflected in our rebased amounts have not been prepared with a view towards complying with Article 11 of Regulation S-X. In addition, the rebased growth percentages are not necessarily indicative of the revenue, OCF and OFCF that would have occurred if these transactions had occurred on the dates assumed for purposes of calculating our rebased amounts or the revenue, OCF and OFCF that will occur in the future. The rebased growth percentages have been presented as a basis for assessing growth rates on a comparable basis, and are not presented as a measure of our pro forma financial performance.

The following table provides adjustments made to the 2018 amounts to derive our rebased growth rates for our continuing operations:

	Revenue		OCF		OFCF	
	Three months ended September 30, 2018	Nine months ended September 30, 2018	Three months ended September 30, 2018	Nine months ended September 30, 2018	Three months ended September 30, 2018	Nine months ended September 30, 2018
	in millions					
Acquisitions	$ 24.7	$ 56.2	$ 1.8	$ 5.5	$ 28.9	$ 28.3
Dispositions[(i)]	36.0	54.3	29.6	43.6	—	—
Foreign Currency	(133.7)	(502.7)	(53.2)	(204.0)	(17.1)	(56.6)
Total decrease	$ (73.0)	$ (392.2)	$ (21.8)	$ (154.9)	$ 11.8	$ (28.3)

(i) Includes rebase adjustments related to agreements to provide transitional and other services to the VodafoneZiggo JV, Vodafone, Liberty Latin America, Deutsche Telekom and M7 Group. These adjustments result in an equal amount of fees in both the 2019 and 2018 periods for those services that are deemed to be temporary in nature. The net amount of these adjustments resulted in increases in revenue of $36.5 million and $54.8 million and OCF of $30.5 million and $45.9 million for the three and nine months ended September 30, 2018, respectively.

GLOSSARY

10-Q or 10-K: As used herein, the terms 10-Q and 10-K refer to our most recent quarterly or annual report as filed with the Securities and Exchange Commission on Form 10-Q or Form 10-K, as applicable.

Adjusted Free Cash Flow (FCF): net cash provided by our operating activities, plus (i) cash payments for third-party costs directly associated with successful and unsuccessful acquisitions and dispositions and (ii) expenses financed by an intermediary, less (a) capital expenditures, as reported in our condensed consolidated statements of cash flows, (b) principal payments on amounts financed by vendors and intermediaries and (c) principal payments on finance leases (exclusive of the portions of the network lease in Belgium and the duct leases in Germany that we assumed in connection with certain acquisitions), with each item excluding any cash provided or used by our discontinued operations. We believe that our presentation of Adjusted Free Cash Flow provides useful information to our investors because this measure can be used to gauge our ability to service debt and fund new investment opportunities. Adjusted Free Cash Flow should not be understood to represent our ability to fund discretionary amounts, as we have various mandatory and contractual obligations, including debt repayments, which are not deducted to arrive at this amount. Investors should view Adjusted Free Cash Flow as a supplement to, and not a substitute for, U.S. GAAP measures of liquidity included in our condensed consolidated statements of cash flows.

The following table provides a reconciliation of our net cash provided by operating activities from continuing operations to Adjusted Free Cash Flow for the indicated periods. In addition, in order to provide information regarding our Adjusted Free Cash Flow that excludes the Discontinued Operations and the Switzerland Disposal Group, we also present Adjusted Free Cash Flow on a pro forma basis for the three and nine months ended September 30, 2019 as if the sale of the Discontinued Operations and the Switzerland Disposal Group had been completed on January 1, 2019.

	Three months ended		
	March 31, 2019	June 30, 2019	September 30, 2019
		in millions	
Continuing operations:			
Net cash provided by operating activities	$ 306.3	$ 1,322.2	$ 591.7
Cash payments for direct acquisition and disposition costs	12.4	5.6	5.5
Expenses financed by an intermediary(i)	564.0	522.1	553.1
Capital expenditures, net	(331.3)	(301.6)	(267.2)
Principal payments on amounts financed by vendors and intermediaries	(1,162.8)	(977.6)	(928.8)
Principal payments on certain finance leases	(13.1)	(18.7)	(25.2)
Adjusted FCF	(624.5)	552.0	(70.9)
Pro forma adjustments related to the sale of the Discontinued Operations and the Switzerland Disposal Group:			
Switzerland Disposal Group(ii)	(40.9)	(65.0)	45.4
Interest and derivative payments(iii)	(21.5)	(1.0)	(24.6)
Transitional services agreements(iv)	61.0	60.0	33.9
Pro forma Adjusted FCF(v)	$ (625.9)	$ 546.0	$ (16.2)

i. For purposes of our condensed consolidated statements of cash flows, expenses financed by an intermediary are treated as hypothetical operating cash outflows and hypothetical financing cash inflows when the expenses are incurred. When we pay the financing intermediary, we record financing cash outflows in our condensed consolidated statements of cash flows. For purposes of our Adjusted Free Cash Flow definition, we add back the hypothetical operating cash outflow when these financed expenses are incurred and deduct the financing cash outflows when we pay the financing intermediary.

ii. The Switzerland Disposal Group is included within our Continuing Operations Adjusted FCF. These pro forma adjustments represent the removal of the Adjusted FCF of the Switzerland Disposal Group, including 100% of the interest and related derivative payments made during the applicable period associated with the UPC Notes.

iii. Represents the addition of the estimated interest and related derivative payments made by UPC Holding associated with our continuing UPC operations in Poland and Slovakia during the applicable period. These estimated payments are calculated based on Poland and Slovakia's pro rata share of UPC Holding's OCF and UPC Holding's aggregate interest and derivative payments during the applicable period. Although we believe that these estimated payments represent a reasonable estimate of the annual interest and related derivative payments that will occur in relation to the continuing operations in Poland and Slovakia, no assurance can be given that the actual interest and derivative payments will be equivalent to the amounts presented. No pro forma adjustments were required with respect to Unitymedia's interest and derivative payments as substantially all of Unitymedia's debt and related derivative instruments were direct obligations of entities within the Vodafone Disposal Group. As a result, the interest and related derivative payments associated with such debt and derivative instruments of Unitymedia are included in discontinued operations.

iv. Represents our preliminary estimate of the net cash flows that we would have received from transitional services agreements if the sale of the Discontinued Operations and the Switzerland Disposal Group had occurred on January 1, 2019. The estimated net cash flows are based on the estimated revenue that we expect to recognize from our transitional services agreements during the first 12 months following the completion of the sale of the Discontinued Operations and the Switzerland Disposal Group, less the estimated incremental costs that we expect to incur to provide such transitional services. As a result, the pro forma adjustments during the three and nine months ended September 30, 2019 include $12.2 million and $88.2 million related to our discontinued operations in Germany, Hungary, Romania and the Czech Republic, respectively, $21.7 million and $65.7 million related to the Switzerland Disposal Group, respectively, and nil and $1.0 million related to our discontinued DTH business, respectively.

v. Represents the Adjusted FCF that we estimate would have resulted if the sale of the Discontinued Operations and the Switzerland Disposal Group had been completed on January 1, 2019. Actual amounts may differ from the amounts assumed for purposes of this pro forma calculation. For example, our Pro forma Adjusted FCF does not include any future benefits related to reductions in our corporate costs as a result of our operating model rationalization or any other potential future operating or capital cost reductions attributable to our continuing or discontinued operations.

GLOSSARY

ARPU: Average Revenue Per Unit is the average monthly subscription revenue per average cable customer relationship or mobile subscriber, as applicable. Following the adoption of ASU 2014-09, subscription revenue excludes interconnect fees, channel carriage fees, mobile handset sales and late fees, but includes the amortization of installation fees. Prior to the adoption of ASU 2014-09, installation fees were excluded from subscription revenue. ARPU per average cable customer relationship is calculated by dividing the average monthly subscription revenue from residential cable and SOHO services by the average number of cable customer relationships for the period. ARPU per average mobile subscriber is calculated by dividing residential mobile and SOHO revenue for the indicated period by the average number of mobile subscribers for the period. Unless otherwise indicated, ARPU per cable customer relationship or mobile subscriber is not adjusted for currency impacts. ARPU per RGU refers to average monthly revenue per average RGU, which is calculated by dividing the average monthly subscription revenue from residential and SOHO services for the indicated period, by the average number of the applicable RGUs for the period. Unless otherwise noted, ARPU in this presentation is considered to be ARPU per average cable customer relationship or mobile subscriber, as applicable.

Cable customer relationships, mobile subscribers and RGUs of entities acquired during the period are normalized. In addition, for purposes of calculating the percentage change in ARPU on a rebased basis, we adjust the prior-year subscription revenue, cable customer relationships, mobile subscribers and RGUs, as applicable, to reflect acquisitions, dispositions, FX and the January 1, 2018 adoption of the new revenue recognition standard (ASU 2014-09, Revenue from Contracts with Customers) on a comparable basis with the current year, consistent with how we calculate our rebased growth for revenue and OCF.

ARPU per Mobile Subscriber: Our ARPU per mobile subscriber calculation that excludes interconnect revenue refers to the average monthly mobile subscription revenue per average mobile subscriber and is calculated by dividing the average monthly mobile subscription revenue (excluding handset sales and late fees) for the indicated period, by the average of the opening and closing balances of mobile subscribers in service for the period. Our ARPU per mobile subscriber calculation that includes interconnect revenue increases the numerator in the above-described calculation by the amount of mobile interconnect revenue during the period.

Basic Video Subscriber: a home, residential multiple dwelling unit or commercial unit that receives our video service over our broadband network either via an analog video signal or via a digital video signal without subscribing to any recurring monthly service that requires the use of encryption-enabling technology. Encryption-enabling technology includes smart cards, or other integrated or virtual technologies that we use to provide our enhanced service offerings. We count RGUs on a unique premises basis. In other words, a subscriber with multiple outlets in one premises is counted as one RGU and a subscriber with two homes and a subscription to our video service at each home is counted as two RGUs.

Blended fully-swapped debt borrowing cost: the weighted average interest rate on our aggregate variable- and fixed-rate indebtedness (excluding finance leases and including vendor financing obligations), including the effects of derivative instruments, original issue premiums or discounts and commitment fees, but excluding the impact of financing costs.

B2B: Business-to-Business.

Cable Customer Relationships: the number of customers who receive at least one of our video, internet or telephony services that we count as RGUs, without regard to which or to how many services they subscribe. Cable Customer Relationships generally are counted on a unique premises basis. Accordingly, if an individual receives our services in two premises (e.g., a primary home and a vacation home), that individual generally will count as two Cable Customer Relationships. We exclude mobile-only customers from Cable Customer Relationships.

Customer Churn: the rate at which customers relinquish their subscriptions. The annual rolling average basis is calculated by dividing the number of disconnects during the preceding 12 months by the average number of customer relationships. For the purpose of computing churn, a disconnect is deemed to have occurred if the customer no longer receives any level of service from us and is required to return our equipment. A partial product downgrade, typically used to encourage customers to pay an outstanding bill and avoid complete service disconnection, is not considered to be disconnected for purposes of our churn calculations. Customers who move within our cable footprint and upgrades and downgrades between services are also excluded from the disconnect figures used in the churn calculation.

DTH Subscriber: a home, residential multiple dwelling unit or commercial unit that receives our video programming broadcast directly via a geosynchronous satellite.

Enhanced Video Subscriber: a home, residential multiple dwelling unit or commercial unit that receives our video service over our broadband network or through a partner network via a digital video signal while subscribing to any recurring monthly service that requires the use of encryption-enabling technology. Enhanced Video Subscribers are counted on a unique premises basis. For example, a subscriber with one or more set-top boxes that receives our video service in one premises is generally counted as just one subscriber. An Enhanced Video Subscriber is not counted as a Basic Video Subscriber. As we migrate customers from basic to enhanced video services, we report a decrease in our Basic Video Subscribers equal to the increase in our Enhanced Video Subscribers.

Homes Passed: homes, residential multiple dwelling units or commercial units that can be connected to our networks without materially extending the distribution plant, except for DTH homes. Certain of our Homes Passed counts are based on census data that can change based on either revisions to the data or from new census results. We do not count homes passed for DTH.

Internet Subscriber: a home, residential multiple dwelling unit or commercial unit that receives internet services over our networks, or that we service through a partner network. Our Internet Subscribers do not include customers that receive services from dial-up connections.

GLOSSARY

Leverage and Liquidity: Consistent with how we calculate our leverage ratios under our debt agreements, we calculate our debt ratios on a basis that includes both our continuing and discontinued operations, with the gross and net debt ratios defined as total debt and net debt, respectively, divided by annualized OCF of the latest quarter. Net debt is defined as total debt less cash and cash equivalents. For purposes of these calculations, debt is measured using swapped foreign currency rates, consistent with the covenant calculation requirements of our subsidiary debt agreements, and excludes the loans backed or secured by the shares we hold in ITV plc and Lions Gate Entertainment Corp. We have not presented leverage ratios on a continuing operations basis as we believe that such a presentation would overstate our leverage and would not be representative of the actual leverage ratios that we will report once all dispositions are completed. For additional information, see note 4 to the condensed consolidated financial statements included in our 10-Q. The pro forma net leverage ratio for the Vodafone transaction is adjusted to reflect certain items, including (i) the adjustments included in our pro forma liquidity calculation, as described above, (ii) the removal of the OCF of our operations in Germany, Hungary, Romania and the Czech Republic and (iii) the removal of the debt associated with our operations in Germany, including adjustments associated with related derivative instruments.

Liquidity refers to cash and cash equivalents plus the maximum undrawn commitments under subsidiary borrowing facilities, without regard to covenant compliance calculations. Pro forma liquidity for the Vodafone transaction is adjusted to reflect certain items, including (i) our preliminary estimate of the net cash and cash equivalents received upon closing of the transaction of €10.1 billion ($11.3 billion based on an FX rate of EUR/USD 1.12) and (ii) the prepayment of $1.6 billion outstanding principal amount of term loans under the UPC Holding Bank Facility.

MDU: Multiple Dwelling Unit.

Mobile Subscriber Count: the number of active SIM cards in service rather than services provided. For example, if a mobile subscriber has both a data and voice plan on a smartphone this would equate to one mobile subscriber. Alternatively, a subscriber who has a voice and data plan for a mobile handset and a data plan for a laptop would be counted as two mobile subscribers. Customers who do not pay a recurring monthly fee are excluded from our mobile telephony subscriber counts after periods of inactivity ranging from 30 to 90 days, based on industry standards within the respective country. In a number of countries, our mobile subscribers receive mobile services pursuant to prepaid contracts.

MVNO: Mobile Virtual Network Operator.

NPS: Net Promoter Score.

OCF: As used herein, OCF has the same meaning as the term "Adjusted OIBDA" that is referenced in our 10-Q. OCF is the primary measure used by our chief operating decision maker to evaluate segment operating performance. OCF is also a key factor that is used by our internal decision makers to (i) determine how to allocate resources to segments and (ii) evaluate the effectiveness of our management for purposes of annual and other incentive compensation plans. As we use the term, OCF is defined as operating income before depreciation and amortization, share-based compensation, provisions and provision releases related to significant litigation and impairment, restructuring and other operating items. Other operating items include (a) gains and losses on the disposition of long-lived assets, (b) third-party costs directly associated with successful and unsuccessful acquisitions and dispositions, including legal, advisory and due diligence fees, as applicable, and (c) other acquisition-related items, such as gains and losses on the settlement of contingent consideration. Our internal decision makers believe OCF is a meaningful measure because it represents a transparent view of our recurring operating performance that is unaffected by our capital structure and allows management to (1) readily view operating trends, (2) perform analytical comparisons and benchmarking between segments and (3) identify strategies to improve operating performance in the different countries in which we operate. We believe our OCF measure is useful to investors because it is one of the bases for comparing our performance with the performance of other companies in the same or similar industries, although our measure may not be directly comparable to similar measures used by other public companies. OCF should be viewed as a measure of operating performance that is a supplement to, and not a substitute for, operating income, net earnings or loss, cash flow from operating activities and other U.S. GAAP measures of income or cash flows. A reconciliation of our operating income to total OCF for our continuing operations is presented in the following table:

	Three months ended September 30,		Nine months ended September 30,	
	2019	2018	2019	2018
	in millions			
Operating income	$ 208.8	$ 205.2	$ 463.0	$ 586.9
Share-based compensation expense	74.0	42.8	228.3	131.0
Depreciation and amortization	892.9	929.4	2,754.3	2,934.1
Impairment, restructuring and other operating items, net	36.0	107.3	140.1	197.9
Total OCF	$ 1,211.7	$ 1,284.7	$ 3,585.7	$ 3,849.9

OCF margin: calculated by dividing OCF by total revenue for the applicable period.

GLOSSARY

OFCF: As used herein, Operating Free Cash Flow or "OFCF" represents OCF less property and equipment additions. OFCF is an additional metric that we use to measure the performance of our operations after considering the level of property and equipment additions incurred during the period. For limitations of OFCF, see the definition of OCF.

A reconciliation of our total OCF to total OFCF for our continuing operations is presented in the following table:

	Three months ended September 30,		Nine months ended September 30,	
	2019	2018	2019	2018
	in millions			
Total OCF	$ 1,211.7	$ 1,284.7	$ 3,585.7	$ 3,849.9
Property and equipment additions	(658.8)	(887.9)	(2,040.1)	(2,734.3)
Total OFCF	$ 552.9	$ 396.8	$ 1,545.6	$ 1,115.6

OFCF margin: OFCF margin is calculated by dividing OFCF by total revenue for the applicable period.

Property and equipment additions (P&E Additions): includes capital expenditures on an accrual basis, amounts financed under vendor financing or finance lease arrangements and other non-cash additions.

Rental ARPU: subscription ARPU less out-of-bundle telephony usage and pay-per-view

RGU: A Revenue Generating Unit is separately a Basic Video Subscriber, Enhanced Video Subscriber, DTH Subscriber, Internet Subscriber or Telephony Subscriber. A home, residential multiple dwelling unit, or commercial unit may contain one or more RGUs. For example, if a residential customer in our U.K. market subscribed to our enhanced video service, fixed-line telephony service and broadband internet service, the customer would constitute three RGUs. Total RGUs is the sum of Basic Video, Enhanced Video, DTH, Internet and Telephony Subscribers. RGUs generally are counted on a unique premises basis such that a given premises does not count as more than one RGU for any given service. On the other hand, if an individual receives one of our services in two premises (e.g., a primary home and a vacation home), that individual will count as two RGUs for that service. Each bundled cable, internet or telephony service is counted as a separate RGU regardless of the nature of any bundling discount or promotion. Non-paying subscribers are counted as subscribers during their free promotional service period. Some of these subscribers may choose to disconnect after their free service period. Services offered without charge on a long-term basis (e.g., VIP subscribers or free service to employees) generally are not counted as RGUs. We do not include subscriptions to mobile services in our externally reported RGU counts. In this regard, our RGU counts exclude our separately reported postpaid and prepaid mobile subscribers.

SIM: Subscriber Identification Module

SOHO: Small or Home Office Subscribers

Telephony Subscriber: a home, residential multiple dwelling unit or commercial unit that receives voice services over our networks, or that we service through a partner network. Telephony Subscribers exclude mobile telephony subscribers.

U.S. GAAP: Accounting principles generally accepted in the United States.

YoY: Year-over-year.

APPENDIX - LIGHTNING

Revenue and OCF of UKIE’s Project Lighting are presented on and incremental basis. For example, OCF growth and OCF margins (and therefore OFCF growth and margins) for UKIE’s Project Lightning represents “Incremental OCF”, which is supplemental non-GAAP information that has a different meaning than the OCF we report for our operating segments that are used by our chief operating decision maker to evaluate segment operating performance.

As we use this term, Incremental OCF includes only the revenue and expenses directly associated with the homes built under Project Lightning since its launch in the third quarter of 2015. The direct and incremental expenses associated with Project Lightning include certain non-capitalizeable customer installations, programming (on a per subscriber basis when above the overall minimum guaranteed contractual amount across our consolidated subscriber base), third party network traffic, billing and collections, certain call center and other operating costs related to personnel dedicated to Project Lighting. Incremental OCF excludes significant costs incurred that would otherwise be included if the UKIE’s Project Lightning was operated as a standalone segment or operating entity and excludes indirect costs related to functions required to support Project Lighting. Specifically, among other expenses, Incremental OCF excludes allocations of broadband network taxes, general corporate costs and administrative, general network operations, information technology, facilities, commercial, and general sales and marketing costs.

APPENDIX - OFCF

Operating Free Cash Flow or “OFCF” represents OCF less property and equipment additions. OFCF is an additional metric that we use to measure the performance of our operations after considering the level of property and equipment additions incurred during the period. For limitations of OFCF, see the definition of OCF.

A reconciliation of our quarterly operating income to OCF and OFCF for our continuing operations is presented in the following table:

	Three months ended				
	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19
Operating Income	$ 205.2	$ 252.4	$ 105.5	$ 148.7	$ 208.8
Share-based compensation expense	42.8	75.0	67.3	87.0	74.0
Depreciation and amortization	929.4	924.0	939.6	921.8	892.9
Impairment, restructuring and other operating items, net	107.3	50.2	70.9	33.2	36.0
OCF	1,284.7	1,301.6	1,183.3	1,190.7	1,211.7
Less: P&E Additions	(887.9)	(971.4)	(698.6)	(682.7)	(658.8)
OFCF	$ 396.8	$ 330.2	$ 484.7	$ 508.0	$ 552.9