UNDER THE HOOD OF OVER-THE-TOP MEASUREMENT
LIVE LINEAR TV VIEWERSHIP IS DECLINING

Change in Weekly Hours Watching Live TV in Past Five Years

Source: Nielsen Total Audience Reports, Q2 2012 & Q2 2017
OTT IS THE FUTURE OF TV

Monthly Reach for P2+ (millions)

Q2 - 2015: 61.1
Q2 - 2016: 86.7
Q2 - 2017: 128.8

OTT REACH HAS GROWN 110% IN TWO YEARS

Source: Nielsen Total Audience Reports, Q2 2015-2017
DESPITE GIANT BUDGETS AND HIGH VIEWERSHIP

TV MEASUREMENT IS STILL EVOLVING
THE CHALLENGE: EXISTING TV BRAND LIFT METHODS

Traditional TV ad effectiveness measurements rely on Opportunity-To-See (OTS) - the likelihood that a survey respondent saw a particular ad is estimated, with no evidence they actually saw it.

Image Source: TV Guide
THE OPPORTUNITY: A NEXT GEN SOLUTION

Roku’s Automatic Content Recognition (ACR) can identify exact programs and ads users have viewed, and when they viewed them - actual exposed viewers can be surveyed for ad effectiveness.

Image Source: AMC
WE USED AUTOMATIC CONTENT RECOGNITION (ACR) ACROSS FOUR BRAND CAMPAIGNS TO EXPLORE:

**IMPACT**
Impact of Linear TV and OTT on branding KPIs

**SYNERGY**
Presence of synergy between Linear TV and OTT

**FREQUENCY**
Optimal frequency of exposure ranges for each medium
THE SCOPE

SURVEY DATA

- Branding effectiveness
  - Awareness
  - Brand perceptions
  - Favorability
  - Purchase Intent
- N = 4,621

BEHAVIORAL DATA

- Media consumption
- Ad exposures and timestamps
- Matched to survey data
IMPACT

HOW DO ADS STACK UP ON LINEAR TV vs. OTT?
WHILE LTV APPEARED STRONGER...

With more than twice as many exposures as OTT, linear TV (LTV) campaigns are more effective overall.

Logistic regressions controlling for age, gender, past purchase, TV viewership, ad exposure, and brand. All values significant at 90% confidence. N=4621, all brands.
OTT ADS
DRIVE MORE PURCHASE INTENT PER IMPRESSION

When controlling for campaign reach, OTT is 67% more effective per exposure at driving purchase intent.

Logistic regressions controlling for age, gender, past purchase, TV viewership, frequency of exposure, and brand. All values significant at 90% confidence.

N=4621, all brands.
OTT PUNCHES ABOVE ITS WEIGHT WHEN ACCOUNTING FOR CAMPAIGN SPEND

Despite making up only a small portion of aggregate campaign spend, OTT ads outclass their LTV counterparts when it comes to effectiveness per exposure.

Proportion of Total Campaign Spend

Percentages based on campaign spend for two out of four brands.
LIGHTER AD LOAD ON OTT CAN DRIVE MORE AD RECALL PER EXPOSURE THAN LINEAR TV

Impact on Aided TV Ad Recall

Legend

- LTV only
- OTT only

FREQUENCY OF EXPOSURE

100%

50%

Logistic regressions controlling for age, gender, past purchase, and frequency. Only viewers exposed within 14 days prior to survey. All values significant at 90% confidence. LTV only N=2036, OTT only N=2621, all brands.
LIGHTER AD LOAD ON OTT CAN DRIVE MORE AD RECALL PER EXPOSURE THAN LINEAR TV

Ad Minutes per Hour

- **CABLE**: 16 Mins
  - 27%

- **BROADCAST**: 14 Mins
  - 23%

- **Roku**: 8 Mins
  - 13%

Source: Nielsen 2017 & Roku Internal Data 2017
ADVERTISING ON OTT IS MORE LIKELY TO BE ASSOCIATED WITH HAVING A UNIQUE STORY TO TELL

Per impression, OTT provides a greater increase than LTV in perception that BRAND HAS A UNIQUE STORY TO TELL

32% HIGHER LIFT ON OTT

Because viewers on OTT choose which content to watch, brands can reach a leaned-in audience that is more engaged.

Logistic regressions controlling for age, gender, past purchase, TV viewership, frequency of exposure, and brand. Values are difference between LTV and OTT lift, per exposure. All values significant at 90% confidence. N=4621, all brands.
THE NEW LIVING ROOM CREATES A HALO EFFECT OF INNOVATION FOR ADVERTISERS

19% HIGHER LIFT ON OTT
Per impression, OTT provides a greater increase than LTV in perception that BRAND IS INNOVATIVE

MORE MODERN
New technology of OTT provides a contemporary experience that old-school TV can't match – and this modern feeling rubs off on brands.

Logistic regressions controlling for age, gender, past purchase, TV viewership, frequency of exposure, and brand. Values are difference between LTV and OTT lift, per exposure. All values significant at 90% confidence.
N=4621, all brands.
PATH FROM EXPOSURE TO INTENT
We tracked the pathway from exposure to linear TV and OTT ads all the way to purchase intent using logistic regression models.

STRENGTH OF RELATIONSHIPS
This helps us understand the strengths of the relationships between key metrics and intent to purchase.
APPEARING INNOVATIVE CAN BE A STRONG DRIVER OF PURCHASE INTENT

Overall Campaign

This model shows the strength of the connections between ad exposure, branding metrics, and ultimately purchase intent.

Logistic regressions controlling for age, gender, past purchase, TV viewership, ad exposure, and brand. Values are marginal increases in percent probability of a positive response, controlling for all previous steps in the path. All values significant at 90% confidence. N=4621, all brands.
SYNERGY

HOW DO LINEAR TV AND OTT ADS WORK TOGETHER?
OTT BOOSTS FAVORABILITY, BUT SYNERGY DRIVES THE GREATEST IMPACT

<table>
<thead>
<tr>
<th>Group</th>
<th>Avg. Frequency</th>
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<tbody>
<tr>
<td>LTV only</td>
<td>6.6</td>
</tr>
<tr>
<td>OTT only</td>
<td>3.5</td>
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<tr>
<td>Both: LTV + OTT</td>
<td>5.5 (2.6 LTV, 2.9 OTT)</td>
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</tbody>
</table>

Viewing the ad on both platforms leads to more than twofold increase in brand favorability lift.
AUGMENT LINEAR TV WITH OTT TO DRIVE AD RECALL

Impact on Aided TV Ad Recall

Legend
- LTV only
- LTV with one OTT

Even adding a single OTT exposure can boost ad recall substantially

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. Results averaged across all brands. All values significant at 90% confidence. LTV only N=2036, LTV+OTT N=1862, all brands.
AUGMENT LINEAR TV WITH OTT TO DRIVE AD RECALL

Impact on Aided TV Ad Recall

<table>
<thead>
<tr>
<th>FREQUENCY OF EXPOSURE</th>
<th>1</th>
<th>2</th>
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</tbody>
</table>

Legend
- LTV only
- LTV with one OTT

Add 1 OTT exposure: Recall increases +34%

Add 1 LTV exposure: Recall increases +6%

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. Results averaged across all brands. All values significant at 90% confidence.

LTV only N=2036, LTV+OTT N=1862, all brands.
OPTIMIZATION
HOW MANY EXPOSURES ARE ENOUGH?
ACROSS CAMPAIGNS, INCREMENTAL IMPACT OF LINEAR TV EXPOSURES PEAKED AT 10X FREQUENCY

Incremental Gain in Aided TV Ad Recall | Across Entire Campaign

Optimum frequency is at the peak, before diminishing returns begin to set in.

Legend
- Teal: LTV only
- Purple: OTT only
- Yellow: Both

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. All values significant at 90% confidence.

Optimum frequency range threshold is 80% of maximum incremental gain in ad recall.

LTV only N=2036, OTT only N=2621, LTV+OTT N=1862, all brands.
OTT MAKES IMPACT SOONER AT 7X FREQUENCY

Incremental Gain in Aided TV Ad Recall | Across Entire Campaign

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. All values significant at 90% confidence. Optimum frequency range threshold is 80% of maximum incremental gain in ad recall. LTV only N=2036, OTT only N=2621, LTV+OTT N=4656, all brands.

Legend
- LTV only
- OTT only
- Both

Optimum frequency is at the peak, before diminishing returns begin to set in.

FREQUENCY OF EXPOSURE

Frequency: 7
EXPOSURE ON BOTH MAKES MAXIMUM IMPACT AT 6.5X FREQUENCY

Incremental Gain in Aided TV Ad Recall | Across Entire Campaign

Optimum frequency is at the peak, before diminishing returns begin to set in.

Legend
- LTV only
- OTT only
- Both

Optimum frequency range threshold is 80% of maximum incremental gain in ad recall.

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. All values significant at 90% confidence.

LTV only N=2036, OTT only N=2621, LTV+OTT N=1862, all brands.
EFFICIENCY IS HIGHEST WITH COMBINED APPROACH

Incremental Gain in Aided TV Ad Recall | Across Entire Campaign

Legend
- LTV only Frequency: 10
- OTT only Frequency: 7
- Both Frequency: 6.5

Optimum frequency is at the peak, before diminishing returns begin to set in

Logistic regressions controlling for age, gender, past purchase, and frequency of exposure. Only viewers exposed within 14 days prior to survey. All values significant at 90% confidence. Optimum frequency range threshold is 80% of maximum incremental gain in ad recall. LTV only N=2036, OTT only N=2621, LTV+OTT N=1862, all brands.
AUDIENCE

REACHING YOUR KEY TARGET WITH LINEAR TV AND OTT
DON’T MISS OUT ON OTT’S SUPERIOR TARGETING

OTT can target on more than just age and gender. Hone in on your key audience—not just your key demographic—by targeting based on:

- Past purchase of your product category
- In-market status
- Behavioral data
- Cable subscription status
OPPORTUNITIES TO IMPROVE YOUR CAMPAIGNS

LEVERAGE THE NEW FACE OF TV.
Lower ad load and a more interactive experience makes for an engaged audience, allowing OTT to amplify your brand’s story and drive purchase intent.

DO MORE WITH LESS.
Synergy between LTV and OTT means having a mixed campaign is best. But because OTT’s ads are more efficient per exposure, even adding a small amount of OTT to your LTV campaign can have a big impact.

WORK SMARTER, NOT HARDER.
Take advantage of OTT’s precise targeting. Consider narrowing your target definitions rather than simply using your LTV campaign’s target.