KANTAR

Television Station Weather Forecast Accuracy Study

April 2020

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Kantar is the world's leading data, evidence-based, insights and consulting company, serving more than half of the Fortune 500 companies worldwide.

We have a complete, unique and rounded understanding of how people think, feel and act; globally and locally in over 90 markets. By combining the deep expertise of our people, our data resources and benchmarks, our innovative analytics and technology, we help our clients **understand people** and **inspire growth**.

We collect our data digitally in real time and share over 2 billion human insights at scale and at speed. We have self service solutions which return results the same day as well as deep diagnostic ones which take longer. We use AI and machine learning to track more than 1 billion digital ad exposures every day and analyze more than 500 million conversations a year. With more than 88 million members, we have the world's biggest permission-based, research-ready respondent network.

Most Extensive Study on On-Air Forecast Accuracy to Date

Goal: To compare the accuracy of weather forecasts presented on television to determine which station is the most accurate in each market examined.

- The study, conducted between February 3rd and April 3rd, 2020, gathered, analyzed and compared the on-air televised weather forecast presentations of NBC, CBS and FOX local stations along with ABC Owned and Operated stations, which utilize the AccuWeather forecast in eight markets, to determine which had the most accurate forecast.

- The eight markets examined are: New York City, Los Angeles, Chicago, Houston, Philadelphia, San Francisco, Raleigh, and Fresno.

Methodology

- For maximum consistency, the 6 pm local time, Monday to Friday, on-air TV weathercast, which most stations provide, was viewed, and the forecast from this telecast was recorded and compared and the results verified.

- Forecasts were verified by comparing them to observed data from US National Weather Service official data sources (see Appendix B).

- For a complete glossary of all terms, calculations and data sources (see footnotes and Appendix A).

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AccuWeather/ABC Weather Forecasts are the Most Accurate

Our careful examination shows that the AccuWeather forecast, broadcast on ABC Owned Television Stations, was the **most accurate** weather forecast among all stations in every one of the eight markets examined.

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AccuWeather/ABC Weather Forecasts Provide the Most Useful Detail

The AccuWeather/ABC weathercasts also provided much more useful forecast detail and important information to help audiences make better weather-impacted decisions.

- Of great significance, this study included a qualitative component that analyzed the level of detail provided within each station's weathercasts and found that the AccuWeather/ABC weathercasts provided **vastly more detailed and actionable** information than were provided by NBC, CBS, and FOX stations, enabling ABC station viewers to make more informed decisions for **greater safety, planning and comfort**.

- AccuWeather/ABC weathercasts provided viewers more of what they needed to prepare for upcoming weather, from more accurate timing, to more accurate dangerous weather predictions, to **more specific details** about conditions impacting travel and outings.

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AccuWeather/ABC Weather Forecasts Offer Greater Timing Detail

ABC station viewers had a better opportunity to properly adjust their plans due to weather and precipitation.

AccuWeather/ABC provided:

- **More detail** about precipitation than the other stations, including the **probability of precipitation** and the **timing** of changeover for different types of precipitation.

- Information **42% more often** on the start and end times of **precipitation**.

- **60% more detail when fog will form** or dissipate, allowing drivers to plan around delays.

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AccuWeather/ABC Weather Forecasts Offer More Details for Greater Safety

Information about severe weather and the formation of potentially dangerous conditions provided ABC station viewers more opportunity to protect themselves and their loved ones.

AccuWeather/ABC provided:

- Details about **expected road conditions** during snow or ice events **4 times more** often than the other stations.

- Details about the formation of **black ice from fog 3 times more often** than the other stations examined.

- Details about **severe weather impacts** in the viewing area **25% more often** than the other stations.

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AccuWeather/ABC Forecasts Offer Better Details on Weather's Impact on Viewers' Activities

With more details and accurate information to work with, AccuWeather/ABC weathercasts enable viewers to make smarter decisions about outings and travel:

- Provided details regarding the visibility and impact to **travel due to foggy conditions 3 times more** often.

- Provided details about **expected travel conditions** or delays **twice as often**

- Provided the details about **how to dress** for the forecasted weather **twice as often**.

- Provided details **48% more** often regarding the weather conditions for a specific event such as a **local football game or parade**.

- Provided information **76% more** often on **relative humidity** for better health management.
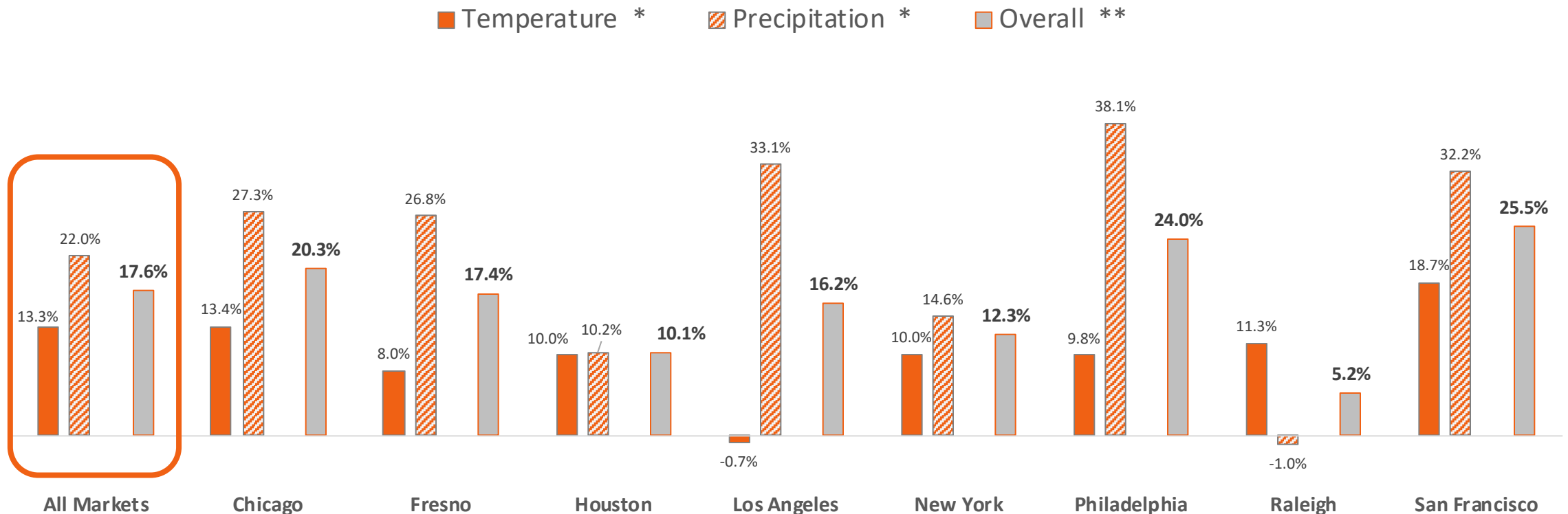
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Overall Analysis
Across All Markets

All Markets: Temperature and Precipitation Forecast Comparison

AccuWeather/ABC Increased Forecast Accuracy vs. Other Local TV Stations

■ Temperature *   ▨ Precipitation *   ▨ Overall **

	All Markets	Chicago	Fresno	Houston	Los Angeles	New York	Philadelphia	Raleigh	San Francisco
Temperature	13.3%	13.4%	8.0%	10.0%	-0.7%	10.0%	9.8%	11.3%	18.7%
Precipitation	22.0%	27.3%	26.8%	10.2%	33.1%	14.6%	38.1%	-1.0%	32.2%
Overall	17.6%	20.3%	17.4%	10.1%	16.2%	12.3%	24.0%	5.2%	25.5%

The graph above shows the **temperature, precipitation, and overall accuracy** in each ABC Owned Television market. AccuWeather/ABC weathercasts were found to be the most accurate overall and **17.6%** more accurate across all markets in predicting temperature and precipitation.
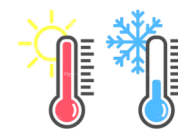
AccuWeather/ABC Weather Forecasts Demonstrated the Greatest Accuracy

Across all markets, the AccuWeather/ABC weathercasts were proven to be the most accurate for temperature and precipitation.
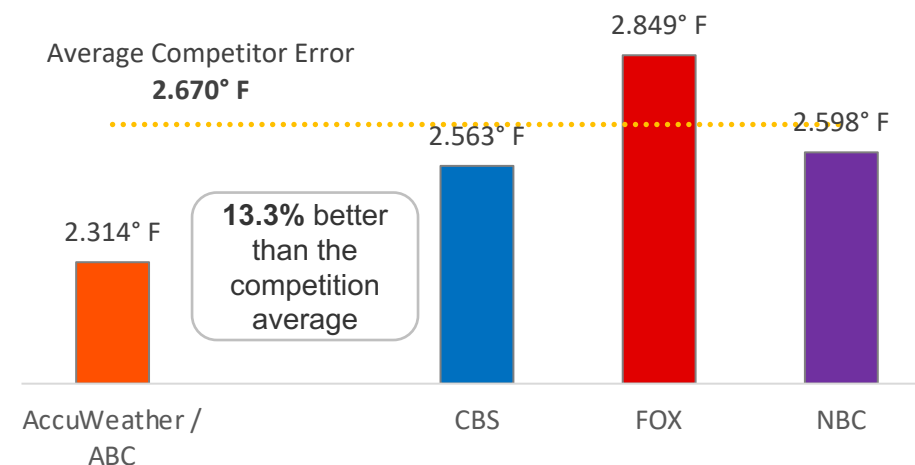
AccuWeather/ABC Stations Ranked #1

For **temperature**, AccuWeather/ ABC forecasts were ranked #1 and were 9.7% more accurate than CBS, 10.9% more accurate than NBC, and 18.8% more accurate than FOX.
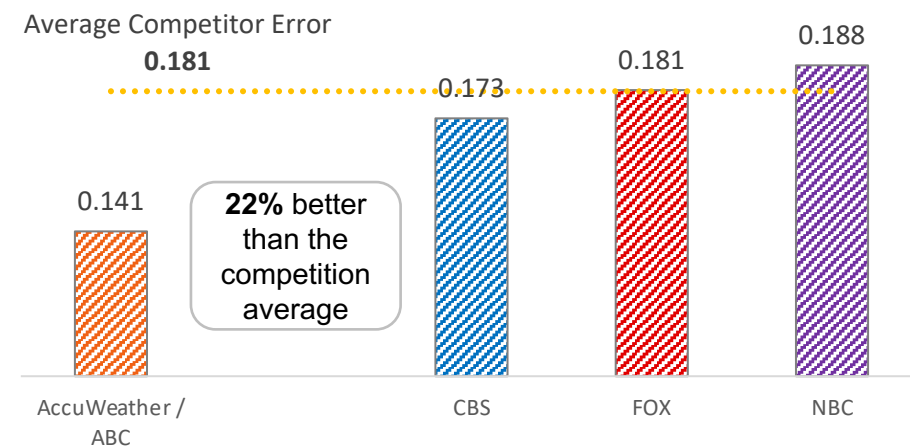
For **precipitation**, AccuWeather/ABC weathercasts were ranked #1 and were 18.5% more accurate than CBS, 22.1% more accurate than FOX, and 25% more accurate than NBC.
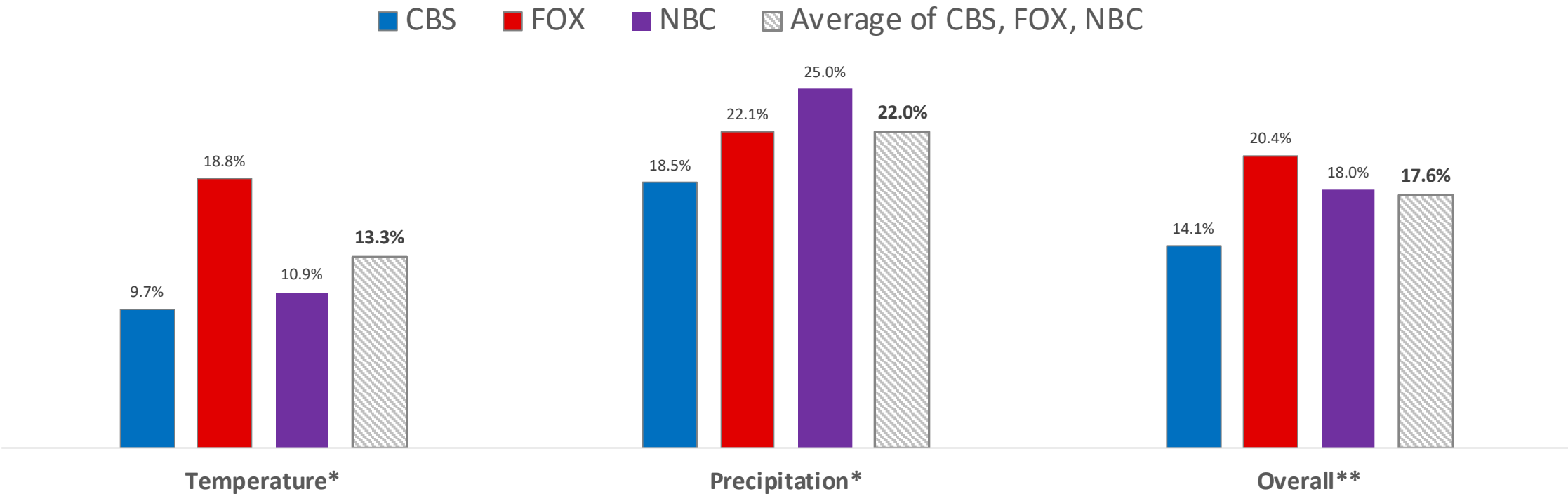
Temperature Forecast Error*

Average Competitor Error
2.670° F

2.849° F

2.598° F

2.563° F

2.314° F

13.3% better than the competition average

AccuWeather / ABC | CBS | FOX | NBC

Precipitation Forecast Error*

Average Competitor Error
0.181

0.188

0.181

0.173

0.141

22% better than the competition average

AccuWeather / ABC | CBS | FOX | NBC

* See Appendix A

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AccuWeather/ABC Forecasts are the Most Accurate for Temperature and Precipitation Compared to Other Local Stations Across All Markets

AccuWeather/ABC Percent (%) More Accurate than Local TV Stations

■ CBS　■ FOX　■ NBC　▨ Average of CBS, FOX, NBC

Temperature*
- CBS: 9.7%
- FOX: 18.8%
- NBC: 10.9%
- Average: **13.3%**

Precipitation*
- CBS: 18.5%
- FOX: 22.1%
- NBC: 25.0%
- Average: **22.0%**

Overall**
- CBS: 14.1%
- FOX: 20.4%
- NBC: 18.0%
- Average: **17.6%**

The graph above shows the accuracy of the AccuWeather/ABC weathercast vs. other local stations for all markets combined. AccuWeather/ABC weathercasts are the most accurate overall, in every market, with a percentage average of **14.1%** greater accuracy than CBS, **18%** greater accuracy than NBC and **20.4%** greater accuracy than FOX.

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* See Appendix A
** This is the average of the improvements in temperature and precipitation presented in the two columns to the left and represents the overall advantage in accuracy of the AccuWeather ABC forecasts over the other stations in each market.

AccuWeather/ABC Forecast Ranked #1 for Providing Impact-Driven, Useful Details

In addition to providing the most accurate forecasts, the AccuWeather/ABC stations also gave viewers more useful forecast detail and important information than the other stations.

AccuWeather/ABC was ranked #1 in providing the most detail more often and with the most impact:

Road Conditions – provided 4.5 times more often
Fog Visibility – provided 3.6 times more often
Travel Forecasts – provided 3.2 times more often
Black Ice Formation – provided 3 times more often
Travel Delays – provided 2.9 times more often
Dressing/Clothing Suggestions – provided twice as often
Humidity Changes – provided 1.9 times more often

and more

AccuWeather/ABC Forecast Detail - Greater Percentage of Information Televised

Relative humidity information	76%
Timing on when fog will break or form.	60%
Provides other special details	59%
Weather conditions for specific events such as parades, football games	48%
Variation in snowfall amounts across larger region	47%
Variation of snow accumulation on paved and unpaved surfaces	47%
Precipitation starts and end time	42%
Daily wind forecasts	40%
Timing of changeover in the type of precipitation	39%
Variation in type of precipitation across the viewing area	35%
Severe weather impacts	25%
Variation in snowfall amounts across the viewing area	24%
Hours of precipitation	23%
Variation in probability of precipitation across the area	22%
Variation in amount of rain across area	21%
Weather headlines or comparisons	21%
Weather variations between city and suburbs or rural areas	16%
Weather comparisons across days	15%
Variation in low temperatures across the area	14%
Variation in high temperatures across the area	11%
Provides forecasts for beaches, mountains, or other areas of interest	5%

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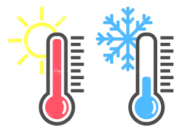Market Specific Analysis
Chicago

The AccuWeather/WLS Weather Forecast is the Most Accurate in Chicago

The AccuWeather/WLS was the most accurate forecast of all TV stations in the Chicago market and was 20.3% more accurate overall vs. all in-market TV stations in forecasting temperature and precipitation.**
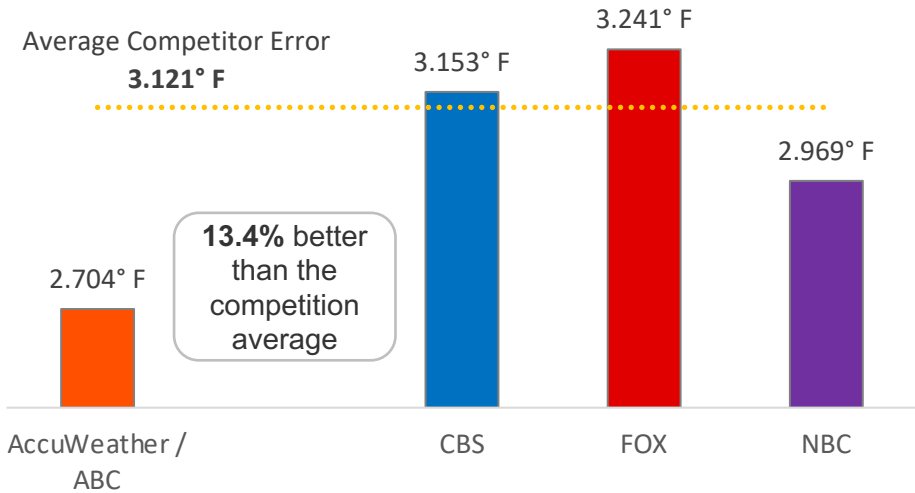
For temperature, the AccuWeather/WLS weather forecast was **8.9% more accurate** than WMAQ (NBC), **14.2% more accurate** than WBBM (CBS) and **16.6% more accurate** than WFLD (FOX).

For precipitation, the AccuWeather/WLS forecast was **17.4% more accurate** than WBBM (CBS), **20.1% more accurate** than WFLD (FOX), and **39.9% more accurate** than WMAQ (NBC).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error **3.121° F**

- AccuWeather / ABC: 2.704° F
- CBS: 3.153° F
- FOX: 3.241° F
- NBC: 2.969° F

13.4% better than the competition average

Precipitation* Forecast Error

Average Competitor Error **0.274**

- AccuWeather / ABC: 0.199
- CBS: 0.241
- FOX: 0.249
- NBC: 0.331

27.3% better than the competition average

* See Appendix A

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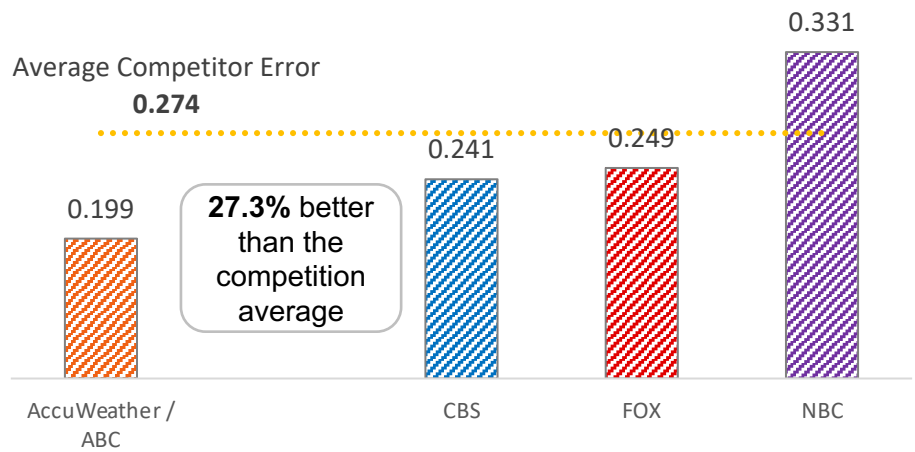
AccuWeather/WLS is Most Accurate for Temperature and Precipitation

AccuWeather/WLS Percent (%) More Accurate than other Chicago Local TV Stations

■ WBBM (CBS)　　■ WFLD (FOX)　　■ WMAQ (NBC)　　▨ Average of CBS, FOX, NBC

	Temperature *	Precipitation *	Overall **
WBBM (CBS)	14.2%	17.4%	15.8%
WFLD (FOX)	16.6%	20.1%	18.3%
WMAQ (NBC)	8.9%	39.9%	24.4%
Average of CBS, FOX, NBC	13.4%	27.3%	20.3%
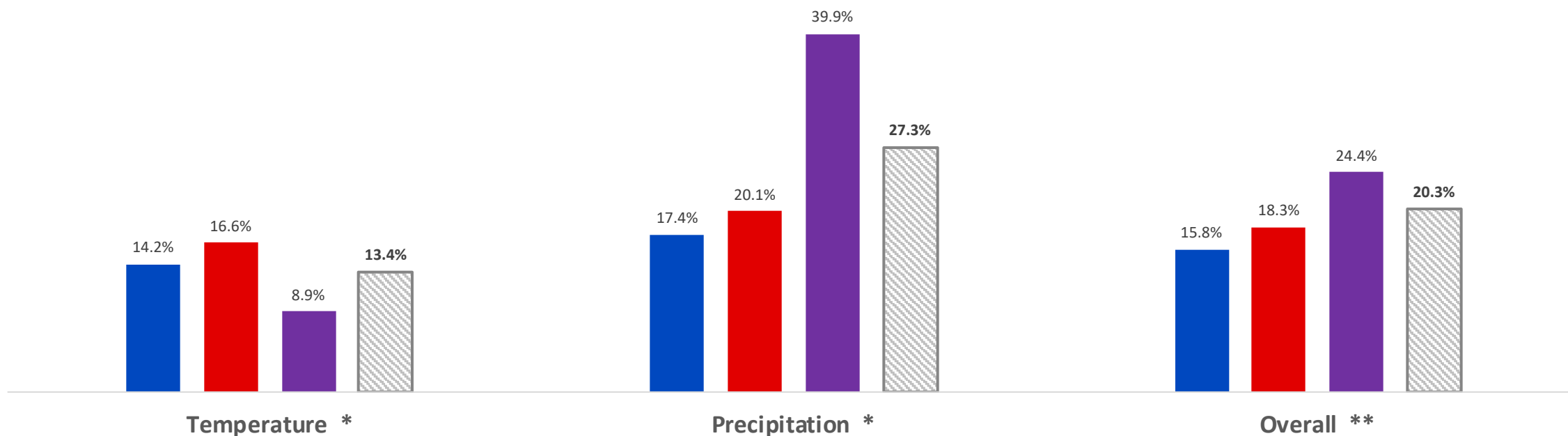
The graph above shows the overall accuracy of the AccuWeather/WLS weathercast vs. other local TV stations in the Chicago market. The AccuWeather/WLS forecasts are the most accurate overall by **20.3%.** AccuWeather/WLS weather forecast was **15.8%** more accurate than WBBM (CBS), **18.3%** more accurate than WFLD (FOX) and **24.4%** more accurate than WMAQ (NBC).

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AccuWeather/WLS Weather Forecast Ranked #1 in Chicago for Providing Impact-Driven, Useful Details

In Chicago, the AccuWeather/ABC station, WLS, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Chicago stations.

The AccuWeather/WLS weathercast was ranked #1 in providing the most detail more often.

Special Details – provided twice as often
Severe Weather Impacts – provided twice as often
Timing on When Fog will Break/ Form – provided 89% more often
Fog Visibility and Impact on Travel – provided 85% more often
Expected Travel Conditions/Delays – provided 60% more often
Precipitation Start and End Times – provided 55% more often

and more

AccuWeather/WLS Forecast Detail - Greater Percentage of Information Televised

Timing on when fog will break or form.	89%
Visibility and impact of foggy conditions on travel	85%
Expected travel conditions or delays	60%
Precipitation starts and end time	55%
Hours of precipitation	50%
Weather headlines or comparisons	36%
Weather information for travelers	27%
Variation in amount of rain across area	24%
Weather comparisons - one day vs rest of the week.	20%
Variation in type of precipitation across the viewing area	19%
Timing of changeover in the type of precipitation	13%
Provides forecasts for beaches, mountains, or other areas of interest	8%
Weather variations between city and suburbs or rural areas	7%

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Fresno

The AccuWeather/KFSN Weather Forecast is the Most Accurate in Fresno

The AccuWeather/KFSN was the most accurate forecast of all TV stations in the Fresno market and was 17.4% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**
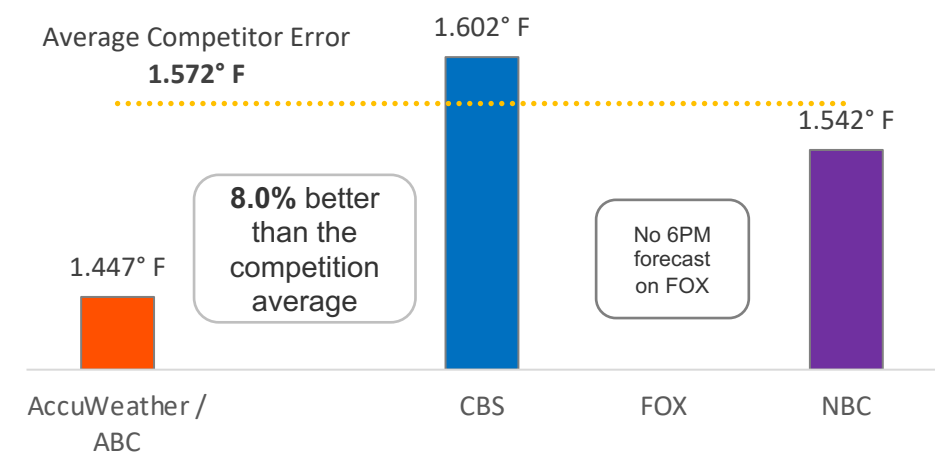
For temperature, the AccuWeather/KFSN weather forecast was **6.2% more accurate** than KSEE (NBC) and **9.7% more accurate** than KSEE (CBS).

For precipitation, the AccuWeather/KFSN forecast was **14.9% more accurate** than KSEE (CBS) and **35.8% more accurate** than KSEE (NBC).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
1.572° F

1.602° F

1.447° F

1.542° F

8.0% better than the competition average

No 6PM forecast on FOX

AccuWeather / ABC

CBS

FOX

NBC

Precipitation* Forecast Error

Average Competitor Error
0.133

0.151

0.097

0.114

26.8% better than the competition average

No 6PM forecast on FOX

AccuWeather / ABC

CBS

FOX

NBC
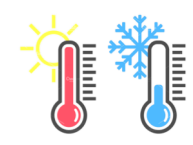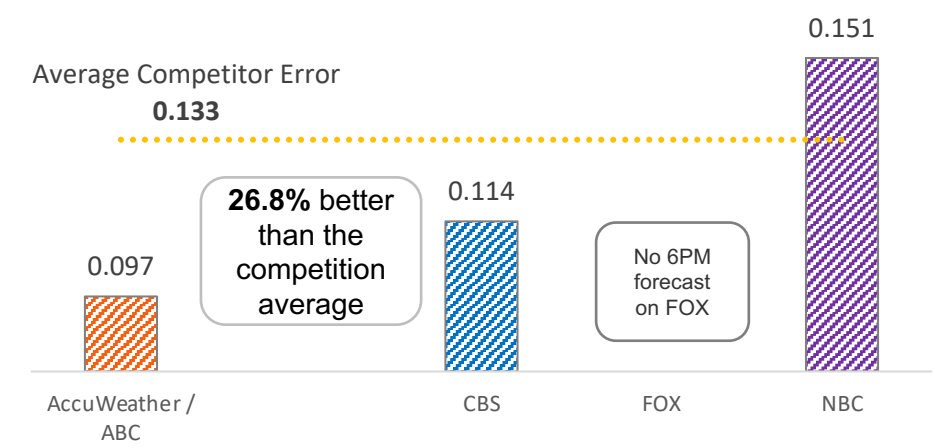
* See Appendix A

AccuWeather/KFSN is Most Accurate for Temperature and Precipitation

AccuWeather/KFSN Percent (%) More Accurate than other Fresno Local TV Stations

■ KSEE (CBS)   ■ KMPH (FOX)   ■ KSEE (NBC)   ▨ Average of CBS, FOX, NBC

	Temperature *	Precipitation *	Overall **
KSEE (CBS)	9.7%	14.9%	12.3%
KMPH (FOX)	No 6PM forecast on FOX	No 6PM forecast on FOX	No 6PM forecast on FOX
KSEE (NBC)	6.2%	35.8%	21.0%
Average of CBS, FOX, NBC	8.0%	26.8%	17.4%
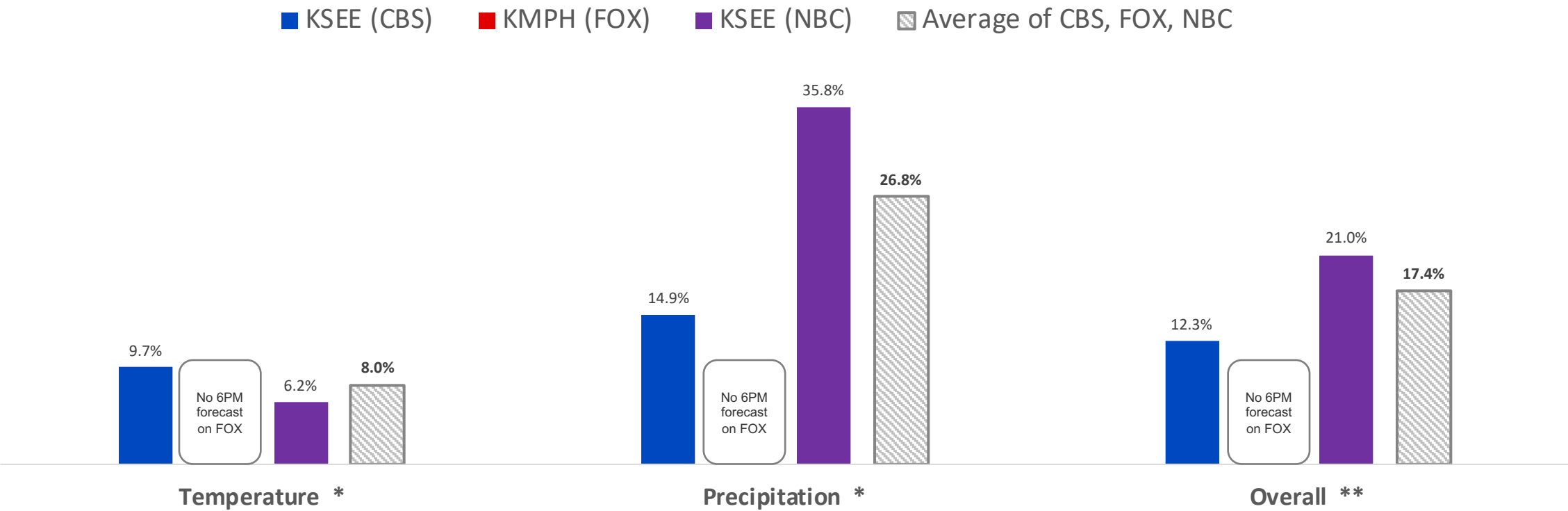
The graph above shows the overall accuracy of the AccuWeather/KFSN weathercast vs. other local TV stations in the Fresno market. The AccuWeather/KFSN forecasts are the most accurate overall by **17.4%.** AccuWeather/KFSN weather forecast was **12.3%** more accurate than KSEE (CBS) and **21.0%** more accurate than KSEE (NBC).

AccuWeather/KFSN Weather Forecast Ranked #1 in Fresno for Providing Impact-Driven, Useful Details

In Fresno, the AccuWeather/ABC station, KFSN, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Fresno stations.

The AccuWeather/KFSN weathercast was ranked #1 in providing the most detail more often.

Traveler Information – provided 4.7 times more often
Travel Delays – provided 4.5 times more often
Events Forecast – provided 3.7 times more often
Regional Snow Variations – provided twice as often
Road Conditions – provided twice as often

and more

AccuWeather/KFSN Forecast Detail - Greater Percentage of Information Televised

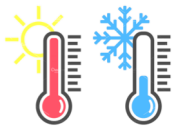|	
Variation in snowfall amounts across the viewing area	50%
Variation of snow accumulation on paved and unpaved surfaces	50%
Variation in type of precipitation across the viewing area	44%
Timing on when fog will break or form.	25%
Variation in amount of rain across area	16%
Provides forecasts for beaches, mountains, or other areas of interest	14%
Timing of changeover in the type of precipitation	11%
Weather comparisons across days	9%

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Market Specific Analysis
Houston

The AccuWeather/KTRK Weather Forecast is the Most Accurate in Houston

The AccuWeather/KTRK was the most accurate forecast of all TV stations in the Houston market and was 10.1% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**

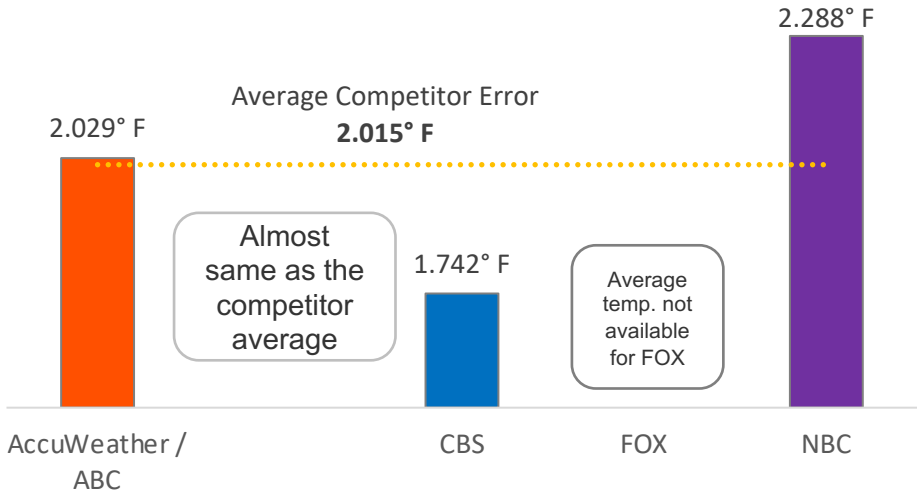For temperature, the AccuWeather/KTRK weather forecast was **5.9% more accurate** than KRIV (FOX), **10.2% more accurate** than KPRC (NBC) and **13.6% more accurate** than KHOU (CBS).

For precipitation, the AccuWeather/KTRK forecast was **8.7% more accurate** than KHOU (CBS), **10.0% more accurate** than KRIV (FOX), and **11.9% more accurate** than KPRC (NBC).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
3.030° F

2.727° F

3.156° F

2.898° F

3.036° F

10.0% better than the competition average

AccuWeather / ABC

CBS

FOX

NBC

Precipitation* Forecast Error

Average Competitor Error
0.140

0.126

0.138

0.140

0.143

10.2% better than the competition average

AccuWeather / ABC

CBS

FOX

NBC

* See Appendix A

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23

23
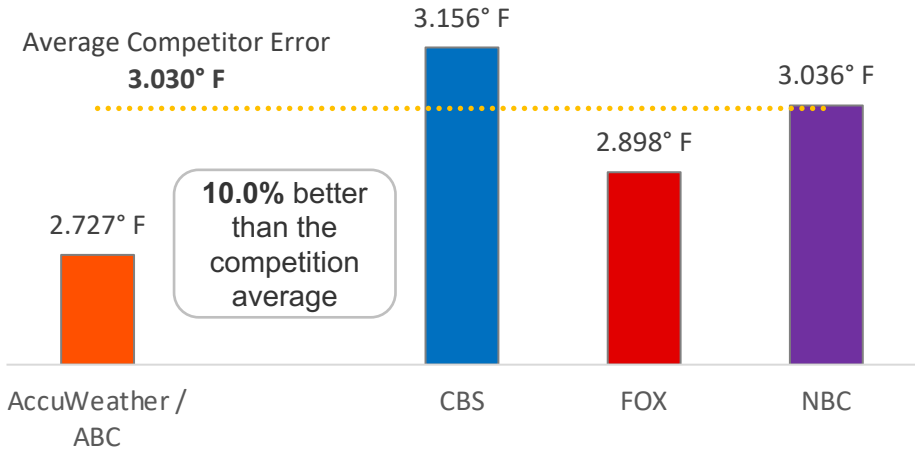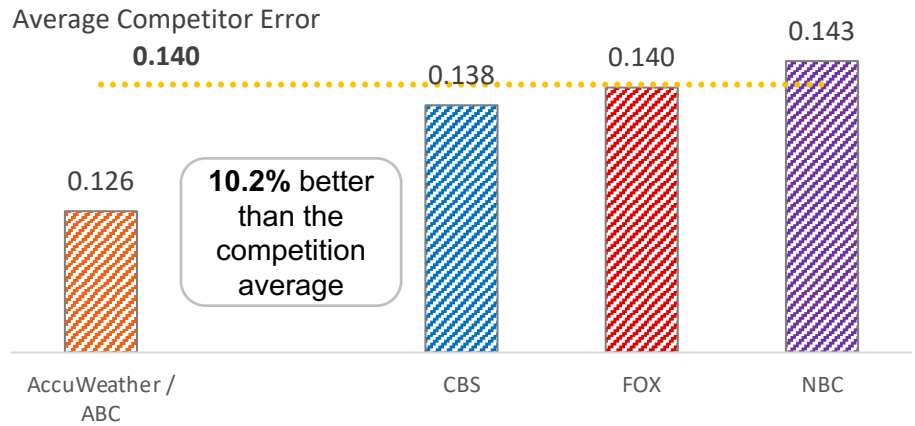
AccuWeather/KTRK is Most Accurate for Temperature and Precipitation

AccuWeather/KTRK Percent (%) More Accurate than other Houston Local TV Stations

■ KHOU (CBS)   ■ KRIV (FOX)   ■ KPRC (NBC)   ▨ Average of CBS, FOX, NBC

Temperature *   **Precipitation ***   **Overall ****

Temperature: KHOU 13.6%, KRIV 5.9%, KPRC 10.2%, Average **10.0%**
Precipitation: KHOU 8.7%, KRIV 10.0%, KPRC 11.9%, Average **10.2%**
Overall: KHOU 11.1%, KRIV 8.0%, KPRC 11.0%, Average **10.1%**
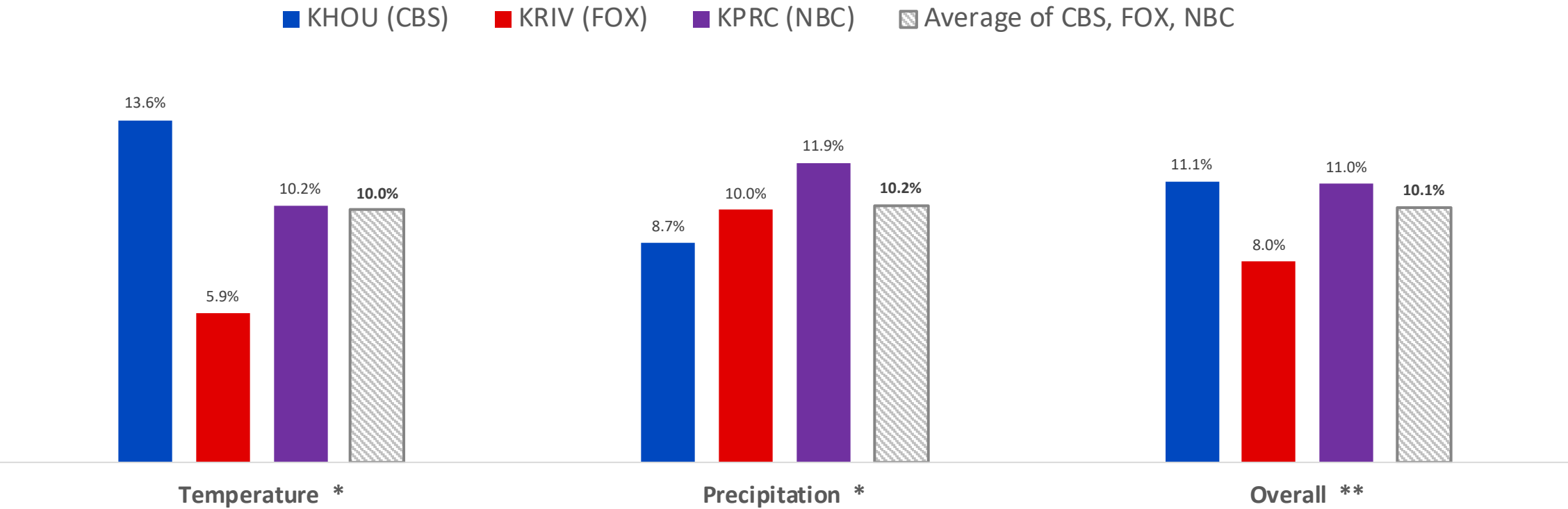
The graph above shows the overall accuracy of the AccuWeather/KTRK weathercast vs. other local TV stations in the Houston market. The AccuWeather/KTRK forecasts are the most accurate overall by **10.1%.** AccuWeather/KTRK weather forecast was **8.0%** more accurate than KRIV (FOX), **11.0%** more accurate than KPRC (NBC) and **11.1%** more accurate than KHOU (CBS).
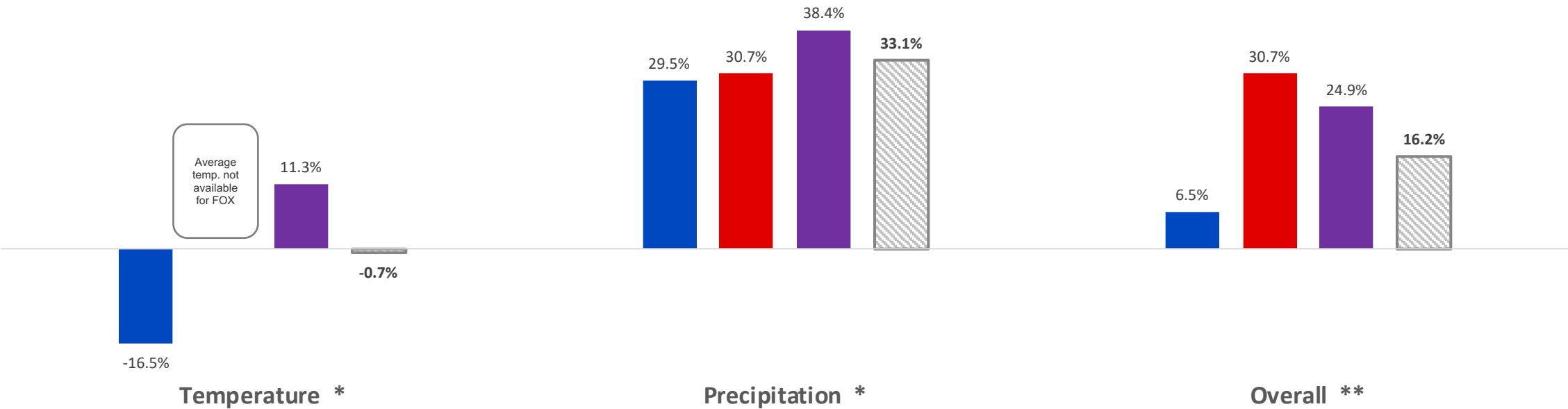
AccuWeather/KTRK Weather Forecast Ranked #1 in Houston for Providing Impact-Driven, Useful Details

In Houston, the AccuWeather/ABC station, KTRK, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Houston stations.

The AccuWeather/KTRK weathercast was ranked #1 in providing the most detail more often.

Fog Impact – provided 3.3 times more often
Black Ice– provided 3 times as often
Fog Timing – provided 2.7 times more often
Weather Headlines – provided 2.7 times more often
Precip Changeover Timing– provided 2.2 times more often
Precipitation Timings– provided twice as often

and more

AccuWeather/KTRK Forecast Detail - Greater Percentage of Information Televised

Daily wind forecasts	58%
Changes in humidity levels	47%
Severe weather impacts	31%
Weather comparisons across days	11%

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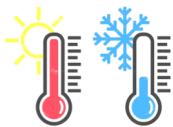
Market Specific Analysis
Los Angeles

The AccuWeather/KABC Weather Forecast is the Most Accurate in Los Angeles

The AccuWeather/KABC was the most accurate forecast of all TV stations in the Los Angeles market and was 16.2% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**
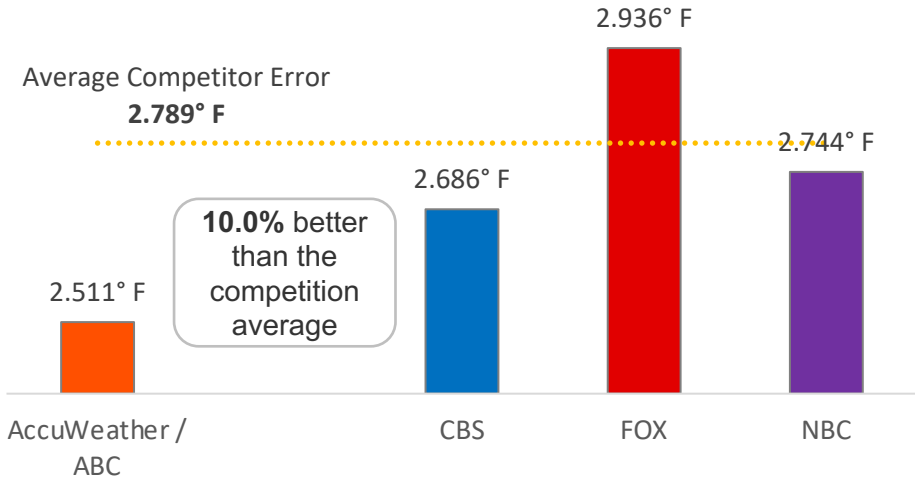
For temperature, the AccuWeather/KABC weather forecast was **11.3% more accurate** than KNBC (NBC).

For precipitation, the AccuWeather/KABC forecast was **29.5% more accurate** than KCBS (CBS), **30.7% more accurate** than KTTV (FOX), and **38.4% more accurate** than KNBC (NBC).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
2.015° F

2.029° F

1.742° F

2.288° F

Almost same as the competitor average

Average temp. not available for FOX

AccuWeather / ABC   CBS   FOX   NBC

Precipitation* Forecast Error

Average Competitor Error
0.182

0.122

0.173

0.176

0.198

33.1% better than the competition average

AccuWeather / ABC   CBS   FOX   NBC

* See Appendix A

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27   27
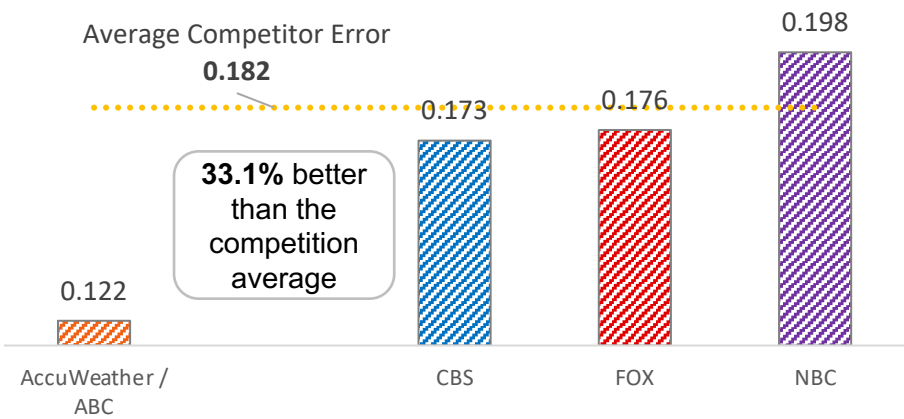
AccuWeather/KABC is Most Accurate for Temperature and Precipitation

AccuWeather/KABC Percent (%) More Accurate Than Los Angeles Local TV Stations

■ KCBS (CBS)   ■ KTTV (FOX)   ■ KNBC (NBC)   ▨ Average of CBS, FOX, NBC

The graph above shows the overall accuracy of the AccuWeather/KABC weathercast vs. other local TV stations in the Los Angeles market. The AccuWeather/KABC forecasts are the most accurate overall by **16.2%.** AccuWeather/KABC weather forecast was **6.5%** more accurate than KCBS (CBS), **24.9%** more accurate than KNBC (NBC) and **30.7%** more accurate than KTTV (FOX).
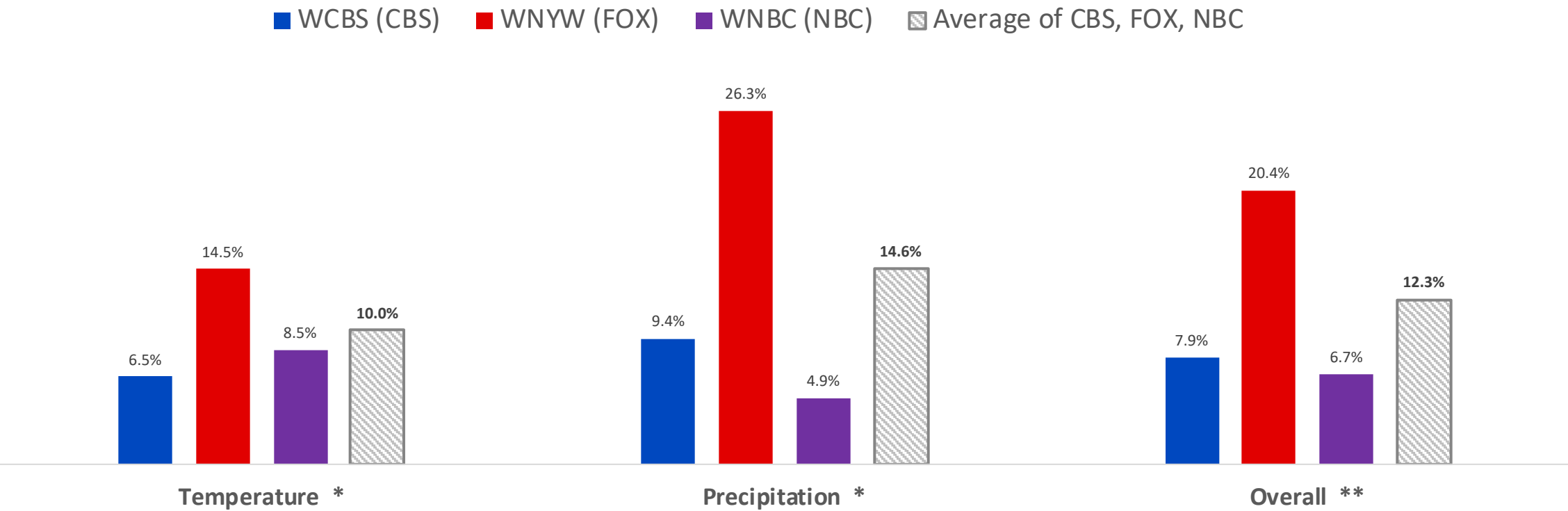
AccuWeather/KABC Weather Forecast Ranked #1 in Los Angeles for Providing Impact-Driven, Useful Details

In Los Angeles, the AccuWeather/ABC station, KABC, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Los Angeles stations.

The AccuWeather/KABC weathercast was ranked #1 in providing the most detail more often.

Weather comparisons (days) – provided 3 times as often
Event Forecast– provided twice as often
Traveler Information – provided twice as often
Special Details – provided twice as often

and more

Forecast Detail - Greater Percentage of Information Televised

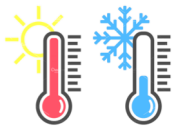|	
Variation in low temperatures across the area	80%
Variation in high temperatures across the area	10%
Provides forecasts for beaches, mountains, or other areas of interest	7%

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Market Specific Analysis
New York

The AccuWeather/WABC Weather Forecast is the Most Accurate in New York

The AccuWeather/WABC was the most accurate forecast of all TV stations in the New York market and was 12.3% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**

For temperature, the AccuWeather/WABC weather forecast was **6.5% more accurate** than WCBS (CBS), **8.5% more accurate** than WNBC (NBC) and **14.5% more accurate** than WNYW (FOX).

For precipitation, the AccuWeather/WABC forecast was **4.9% more accurate** than WNBC (NBC), **9.4% more accurate** than WCBS (CBS), and **26.3% more accurate** than WNYW (FOX).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
2.789° F

2.936° F

2.744° F

2.686° F

2.511° F

10.0% better than the competition average

AccuWeather / ABC   CBS   FOX   NBC

Precipitation* Forecast Error

Average Competitor Error
0.204

0.236

0.192

0.174

0.183

14.6% better than the competition average

AccuWeather / ABC   CBS   FOX   NBC

KANTAR
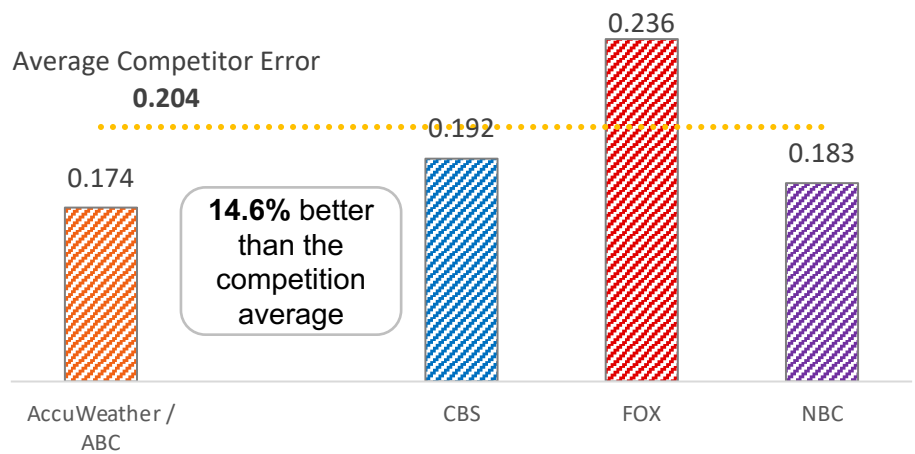
AccuWeather/WABC is Most Accurate for Temperature and Precipitation

AccuWeather/WABC Percent (%) More Accurate than other New York Local TV Stations

■ WCBS (CBS) ■ WNYW (FOX) ■ WNBC (NBC) ▨ Average of CBS, FOX, NBC

Temperature *
- WCBS (CBS): 6.5%
- WNYW (FOX): 14.5%
- WNBC (NBC): 8.5%
- Average of CBS, FOX, NBC: 10.0%

Precipitation *
- WCBS (CBS): 9.4%
- WNYW (FOX): 26.3%
- WNBC (NBC): 4.9%
- Average of CBS, FOX, NBC: 14.6%

Overall **
- WCBS (CBS): 7.9%
- WNYW (FOX): 20.4%
- WNBC (NBC): 6.7%
- Average of CBS, FOX, NBC: 12.3%

The graph above shows the overall accuracy of the AccuWeather/WABC weathercast vs. other local TV stations in the New York market. The AccuWeather/WABC forecasts are the most accurate overall by **12.3%.** AccuWeather/WABC weather forecast was **6.7%** more accurate than WNBC (NBC), **7.9%** more accurate than WCBS (CBS) and **20.4%** more accurate than WNYW (FOX).
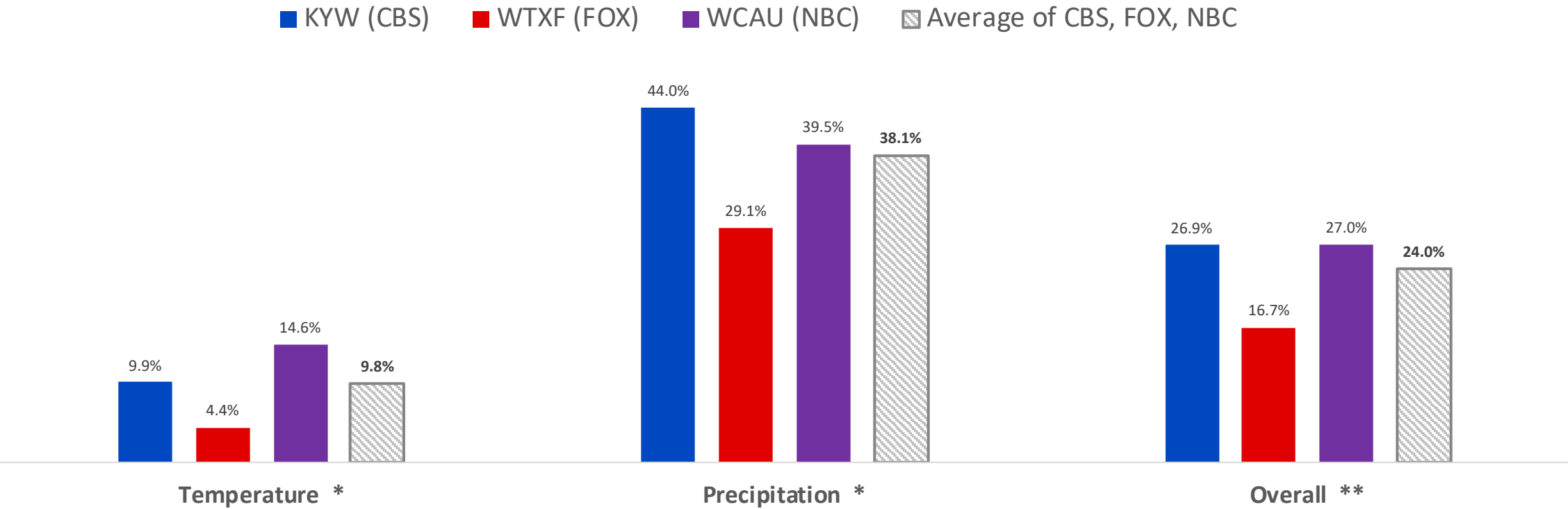
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AccuWeather/WABC Weather Forecast Ranked #1 in New York for Providing Impact-Driven, Useful Details

In New York, the AccuWeather/ABC station, WABC, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other New York stations.

The AccuWeather/WABC weathercast was ranked #1 in providing the most detail more often.

Weather Headlines – provided 3.5 times more often
Regional Snow Variations – provided twice as often
Humidity Changes – provided twice as often

and more

AccuWeather/WABC Forecast Detail - Greater Percentage of Information Televised

Variation in probability of precipitation across the area	59%
Variation in type of precipitation across the viewing area	54%
Weather comparisons across days	52%
Variation in low temperatures across the area	24%
Weather variations between city and suburbs or rural areas	5%

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33

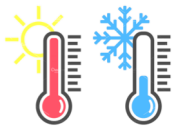Market Specific Analysis
Philadelphia

The AccuWeather/WPVI Weather Forecast is the Most Accurate in Philadelphia

The AccuWeather/WPVI was the most accurate forecast of all TV stations in the Philadelphia market and was 24.0% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**

For temperature, the AccuWeather/WPVI weather forecast was **4.4% more accurate** than WTXF (FOX), **9.9% more accurate** than KYW (CBS) and **14.6% more accurate** than WCAU (NBC).

For precipitation, the AccuWeather/WPVI forecast was **29.1% more accurate** than WTXF (FOX), **39.5% more accurate** than WCAU (NBC), and **44.0% more accurate** than KYW (CBS).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
2.599° F

2.344° F

9.8% better than the competition average

2.602° F

2.451° F

2.744° F

AccuWeather / ABC — CBS — FOX — NBC

Precipitation* Forecast Error

Average Competitor Error
0.233

0.144

38.1% better than the competition average

0.257

0.203

0.238

AccuWeather / ABC — CBS — FOX — NBC

* See Appendix A

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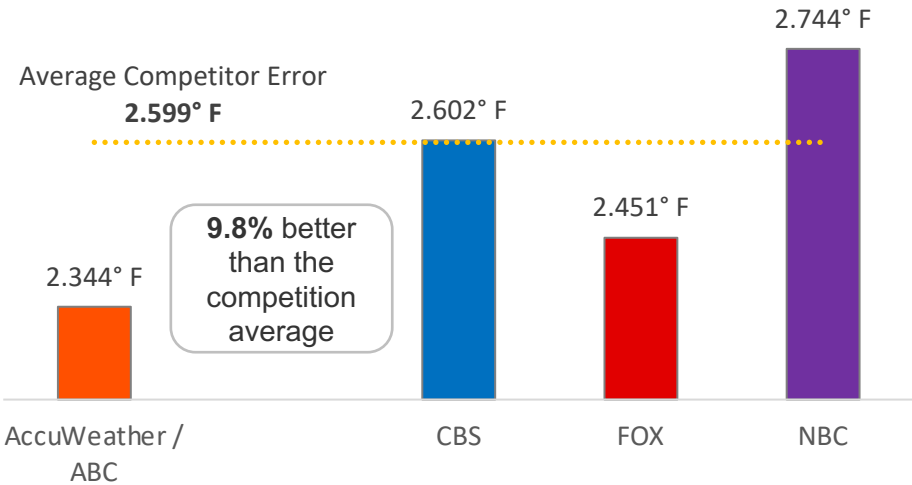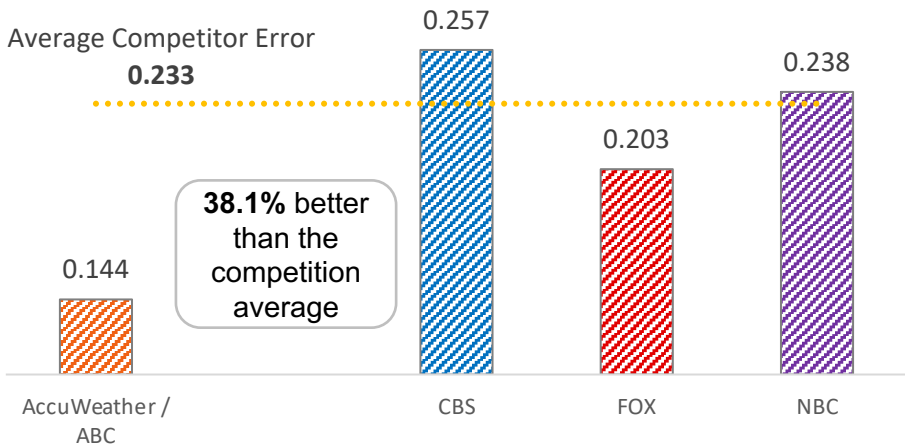
AccuWeather/WPVI is Most Accurate for Temperature and Precipitation

AccuWeather/WPVI Percent (%) More Accurate than other Philadelphia Local TV Stations

■ KYW (CBS)   ■ WTXF (FOX)   ■ WCAU (NBC)   ▨ Average of CBS, FOX, NBC

Temperature *
- KYW (CBS): 9.9%
- WTXF (FOX): 4.4%
- WCAU (NBC): 14.6%
- Average of CBS, FOX, NBC: **9.8%**

Precipitation *
- KYW (CBS): 44.0%
- WTXF (FOX): 29.1%
- WCAU (NBC): 39.5%
- Average of CBS, FOX, NBC: **38.1%**

Overall ***
- KYW (CBS): 26.9%
- WTXF (FOX): 16.7%
- WCAU (NBC): 27.0%
- Average of CBS, FOX, NBC: **24.0%**

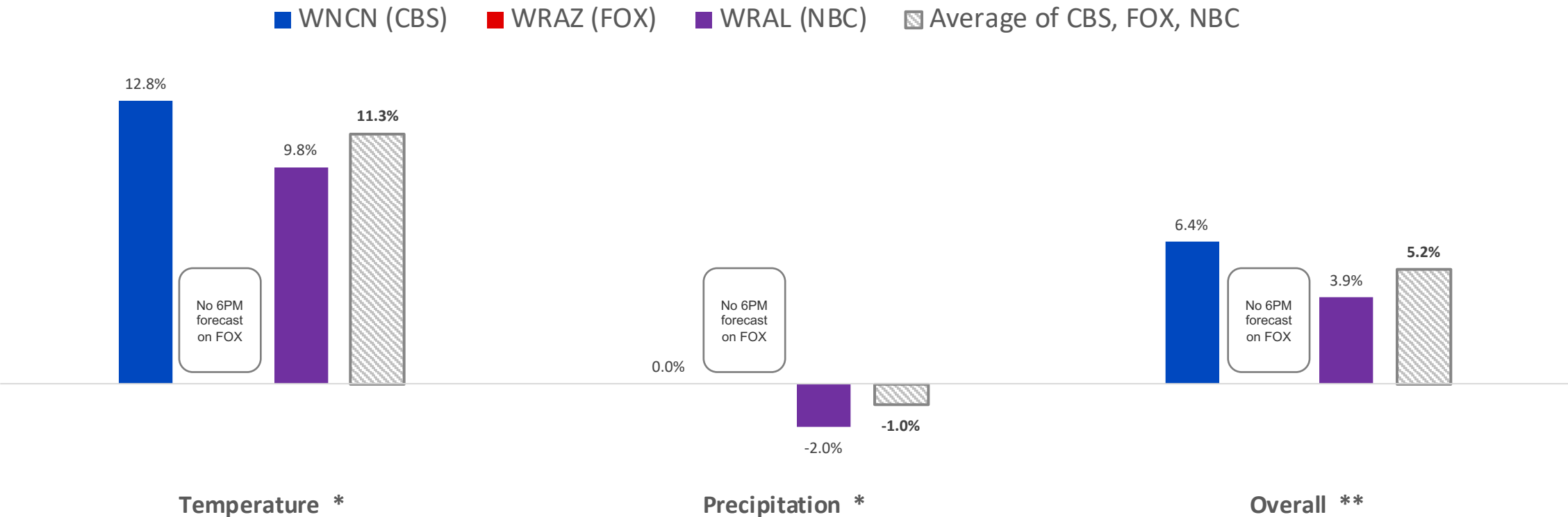The graph above shows the overall accuracy of the AccuWeather/WPVI weathercast vs. other local TV stations in the Philadelphia market. The AccuWeather/WPVI forecasts are the most accurate overall by **24.0%.** AccuWeather/WPVI weather forecast was **16.7%** more accurate than WTXF (FOX), **26.9%** more accurate than KYW (CBS) and **27.0%** more accurate than WCAU (NBC).

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AccuWeather/WPVI Weather Forecast Ranked #1 in Philadelphia for Providing Impact-Driven, Useful Details

In Philadelphia, the AccuWeather/ABC station, WPVI, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Philadelphia stations.

The AccuWeather/WPVI weathercast was ranked #1 in providing the most detail more often.

Changeover in type of Precipitation– provided 50% more often
Special Details– provided 33% more often
Hyperlocal Weather Variations– provided 11% more often

and more

AccuWeather/WPVI Forecast Detail - Greater Percentage of Information Televised

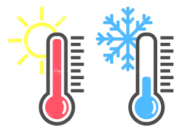|	
Timing of changeover in the type of precipitation	50%
Provides other special details	33%
Weather variations between city and suburbs or rural areas	11%
Weather comparisons across days	9%
Variation in probability of precipitation across the area	6%

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Market Specific Analysis
Raleigh

The AccuWeather/WTVD Weather Forecast is the Most Accurate in Raleigh

The AccuWeather/WTVD was the most accurate forecast of all TV stations in the Raleigh market and was 5.2% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**

For temperature, the AccuWeather/WTVD weather forecast was **9.8% more accurate** than WRAL (NBC) and **12.8% more accurate** than WNCN (CBS).

For precipitation, the AccuWeather/WTVD forecast was **as accurate as** WNCN (CBS)

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
2.931° F

2.980° F

2.882° F

2.600° F

11.3% better than the competition average

No 6PM forecast on FOX

AccuWeather / ABC | CBS | FOX | NBC

Precipitation* Forecast Error

Average Competitor Error
0.153

0.154

0.154

0.151

Almost same as the competitor average

No 6PM forecast on FOX

AccuWeather / ABC | CBS | FOX | NBC

* See Appendix A

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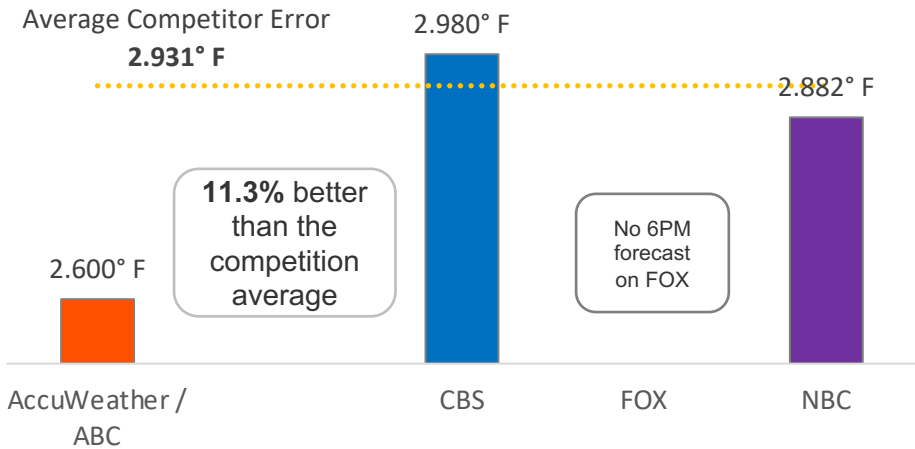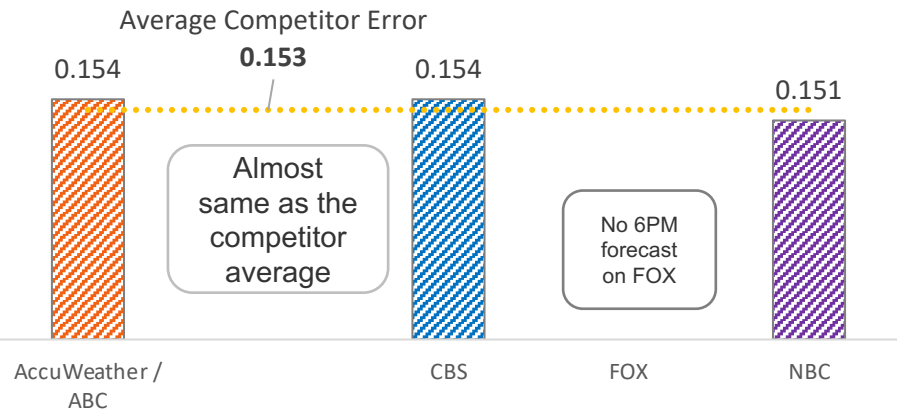
AccuWeather/WTVD is Most Accurate for Temperature and Precipitation

AccuWeather/WTVD Percent (%) More Accurate than other Raleigh Local TV Stations

■ WNCN (CBS)   ■ WRAZ (FOX)   ■ WRAL (NBC)   ▨ Average of CBS, FOX, NBC

The graph above shows the overall accuracy of the AccuWeather/WTVD weathercast vs. other local TV stations in the Raleigh market. The AccuWeather/WTVD forecasts are the most accurate overall by **5.2%.** AccuWeather/WLS weather forecast was **3.9%** more accurate than WRAL (NBC) and **6.4%** more accurate than WNCN (CBS).

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AccuWeather/WTVD Weather Forecast Ranked #1 in Raleigh for Providing Impact-Driven, Useful Details

In Raleigh, the AccuWeather/ABC station, WTVD, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other Raleigh stations.

The AccuWeather/WTVD weathercast was ranked #1 in providing the most detail more often.

Relative Humidity – provided 4.2 times more often
Regional Snow Variation – provided twice as often
Travel Delays – provided twice as often
Traveler Information – provided twice as often
What To Wear – provided twice as often

and more

AccuWeather/WTVD Forecast Detail - Greater Percentage of Information Televised

Timing of changeover in the type of precipitation	50%
Variation in type of precipitation across the viewing area	38%
Variation in snowfall amounts across the viewing area	33%
Severe weather impacts	33%
Timing of heaviest precipitation	14%

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Market Specific Analysis
San Francisco

The AccuWeather/KGO Weather Forecast is the Most Accurate in San Francisco

The AccuWeather/KGO was the most accurate forecast of all TV stations in the San Francisco market and was 25.5% more accurate overall vs all in-market TV stations in forecasting temperature and precipitation.**

For temperature, the AccuWeather/KGO weather forecast was **11.3% more accurate** than KNTV (NBC) and **20.7% more accurate** than KTVU (FOX) .

For precipitation, the AccuWeather/KGO forecast was **16.0% more accurate** than KTVU (FOX), **35.2% more accurate** than KNTV (NBC), and **40.9% more accurate** than KPIX (CBS).

**See overall comparison on next slide

Temperature* Forecast Error

Average Competitor Error
2.644° F

2.711° F

2.577° F

2.149° F

18.7% better than the competition average

Average temp. not available for CBS

AccuWeather / ABC — CBS — FOX — NBC

Precipitation* Forecast Error

Average Competitor Error
0.100

0.115

0.105

0.081

0.068

32.2% better than the competition average

AccuWeather / ABC — CBS — FOX — NBC

See Appendix A

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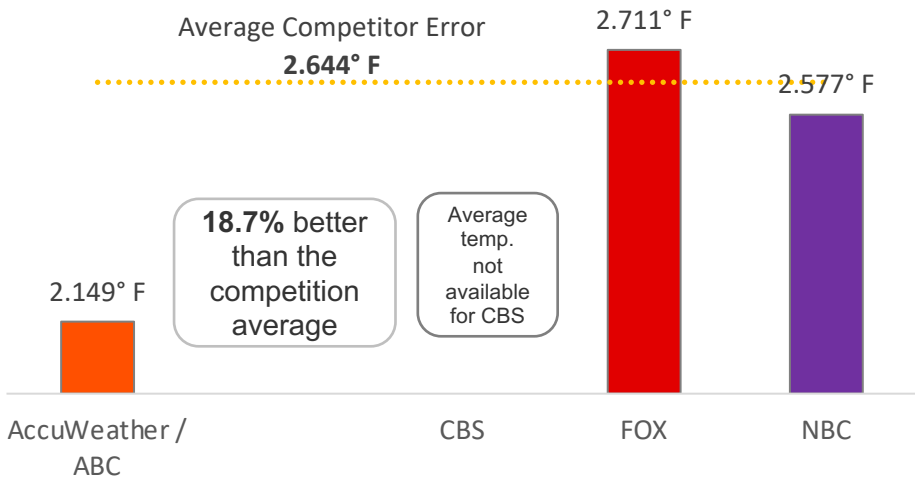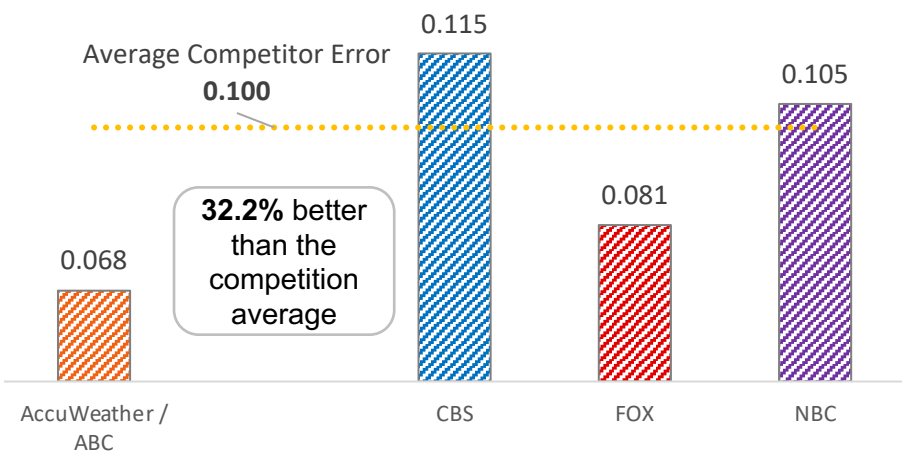
AccuWeather/KGO is Most Accurate for Temperature and Precipitation

AccuWeather/KGO Percent (%) More Accurate than other San Francisco Local TV Stations

■ KPIX (CBS)   ■ KTVU (FOX)   ■ KNTV (NBC)   ▨ Average of CBS, FOX, NBC

Temperature *: KTVU (FOX) 20.7%, KNTV (NBC) 16.6%, Average 18.7%. Average temp. not available for CBS.

Precipitation *: KPIX (CBS) 40.9%, KTVU (FOX) 16.0%, KNTV (NBC) 35.2%, Average 32.2%.

Overall **: KPIX (CBS) 40.9%, KTVU (FOX) 18.4%, KNTV (NBC) 25.9%, Average 25.5%.
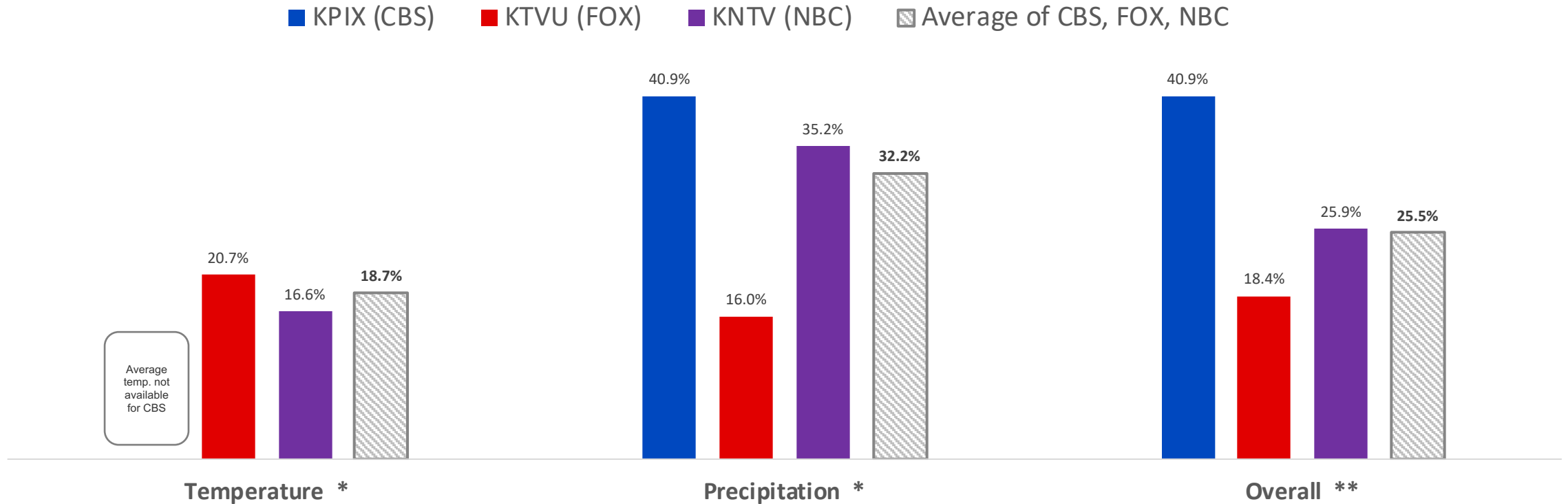
The graph above shows the overall accuracy of the AccuWeather/KGO weathercast vs. other local TV stations in the San Francisco market. The AccuWeather/KGO forecasts are the most accurate overall by **25.5%.** AccuWeather/KGO weather forecast was **18.4%** more accurate than KTVU (FOX), **25.9%** more accurate than KNTV (NBC) and **40.9%** more accurate than KPIX (CBS).

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AccuWeather/KGO Weather Forecast Ranked #1 in San Francisco for Providing Impact-Driven, Useful Details

In San Francisco, the AccuWeather/ABC station, KGO, provided the most impact-driven weathercasts with much more useful and localized forecast detail and important information than the other San Francisco stations.

The AccuWeather/KGO weathercast was ranked #1 in providing the most detail more often.

Travel Delays – provided 5 times as often
Severe Weather Impacts– provided 3.8 times as often
Regional Snow Variation – provided 3 times as often
Event Forecasts – provided 2.5 times as often
Weather Headlines– provided twice as often

and more

AccuWeather/KGO Forecast Detail - Greater Percentage of Information Televised

Variation in snowfall amounts across the viewing area	67%
Variation in type of precipitation across the viewing area	29%

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Appendix

TV Station Weather Forecast Accuracy Study

APPENDIX A – DEFINITIONS

1. Brier Score – A standard measure of the accuracy of probability of precipitation forecasts. Uses the forecasted probability (e.g. 60% = 0.6) and the observed precipitation (e.g. 0 for no precipitation OR 1 for precipitation). The resulting equation is $(F - O)^2$ which is then summed for the entire dataset. Numbers close to 0 signify a more accurate forecast.

2. Average Error – The average of the given accuracy metric. For example, if showing the average competitor error in a temperature chart, this is the average of errors from each competitor over the course of the study. If NBC had a temperature error of 4F, CBS an error of 2F, and FOX and error of 3F, the average error would be 3F.

3. Precipitation – The Brier scores (see above) were aggregated for all forecasts during the study for forecast Days 1 to 5 (Monday through Friday). Therefore, the precipitation accuracy results in this study show the accuracy of probability of precipitation forecasts. In a case where specific probability was not mentioned, the forecast text predicting the precipitation was used to provide a percentage value. A mention of words that indicated uncertainty like "showers possible," "might rain," "rain possible" was given a value of 50%. A certain mention of precipitation was given a value of 100%.

4. Temperature – For temperature, average temperature was calculated using high and low, adding them together and dividing by 2. This was done for both forecast temperature (Days 1 to 5) and observed temperatures. The absolute error was then averaged across all forecasts.

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TV Station Weather Forecast Accuracy Study

APPENDIX B – DATA SOURCES

Forecast data was gathered using the on-air televised weather forecast by viewing the archived footage available through TVEyes.

Observation Locations

Observed data was gathered from official U.S. National Weather Service observation sites using these links:

New York City   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KNYC&num=72&raw=0
Philadelphia   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KPHL&num=72&raw=0
Raleigh   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KRDU&num=72&raw=0
Chicago   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KORD&num=72&raw=0
Fresno   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KFAT&num=72&raw=0
Houston   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KIAH&num=72&raw=0
Los Angeles   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KCQT&num=72&raw=0
San Francisco   : https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=riw&sid=KSFO&num=72&raw=0

*Temperature forecasts for San Francisco were verified using the "Preliminary Monthly Climate Data (CF6)" product from the National Weather Service for "Downtown San Francisco" (data found at https://w2.weather.gov/climate/index.php?wfo=mtr.) All other data was verified at SFO.

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About Kantar

Kantar is the world's leading data, insights and consulting company. Helping clients understand people and inspire growth across a range of industries:
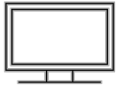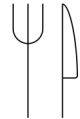
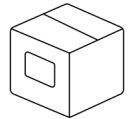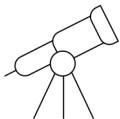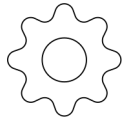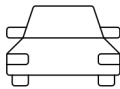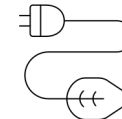| Media | Telecoms | Technology | Fashion Beauty and Luxury | Finance | Government and Public Sector | Hospitality |

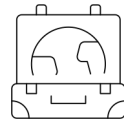| Consumer Packaged Goods | Life Sciences | Manufacturing and B-to-B | Automotive and Mobility | Retail | Energy and Utilities | Leisure and Travel |

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Kantar Facts

1 billion

We track more than 1 billion digital ad exposures every day

500 million

Our AI marketing analytics engine analyses more than 500 million conversations a year

88 million

With more than 88 million members, we have the world's biggest permission-based, research-ready respondent network

45 million

Our Enhanced Profiles offer provides a deep understanding of 45 million consumers across 4,800 profiling attributes

200,000+

We have tested and measured over 200,000+ adverts in our Link database

20,000

More than 20,000 brands are evaluated within the BrandZ diagnostics framework

50+

We are responsible for independent TV ratings in more than 50 countries around the world

17

The numbers of brands that sell more than one billion items globally per year. Tracked in our Shopper Panel of 400,000 households in 45 countries

KANTAR

The world's most powerful data assets and insights

Profiles Network

With more than 88 million people in 70 countries, the world's largest single source of permission-based research-ready respondents

BrandZ

Brand diagnostics including 20K+ brand evaluations supported by 650K+ consumer interviews

Link

Normative Ad Copy testing platform with analysis of over 200K ads and 20 million consumer responses

Consumer Targeting

700K global consumer survey enables in-depth analysis of consumer behaviours and preferences for advanced segmentation, planning and activation

Advertising Intelligence

Ad expenditure data from 4 million + brands across twenty online and offline media forms

KANTAR

The world's most powerful assets

Buying Behaviour Panels

The largest network of panels tracking purchase and usage behaviour over 400,000 households across 45 countries

Health and Wellness

World's largest study of patients' characteristics, attitudes and behaviours with 250K global respondents

Retail IQ

Retail market forecasts and vendor analysis blended with expert insight into the trends that are shaping an evolving retail marketplace

Global Monitor

Featuring a mix of provocative thought-leadership, rigorous data and on-demand guidance, our strategic thinking delivers the consumer-centricity businesses need to stay on the leading edge of change
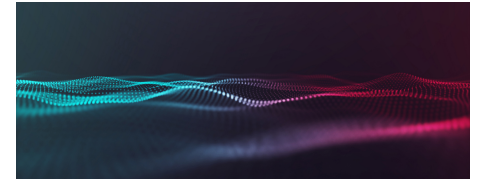
Media Effectiveness

Normative advertising effectiveness benchmarks from over 25,000 campaigns and 900+ companies

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Data Collection, Analysis and Conclusions by Kantar