Marketing Systems Group

Advanced Cellular Frame
The Next Generation of RDD

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Presentation Layout

- **Big Picture**
- **Evolution of RDD**
- **Ever-Changing Dual-Frame RDD**
- **Advanced Cellular Frame (ACF)**
- **Takeaways**

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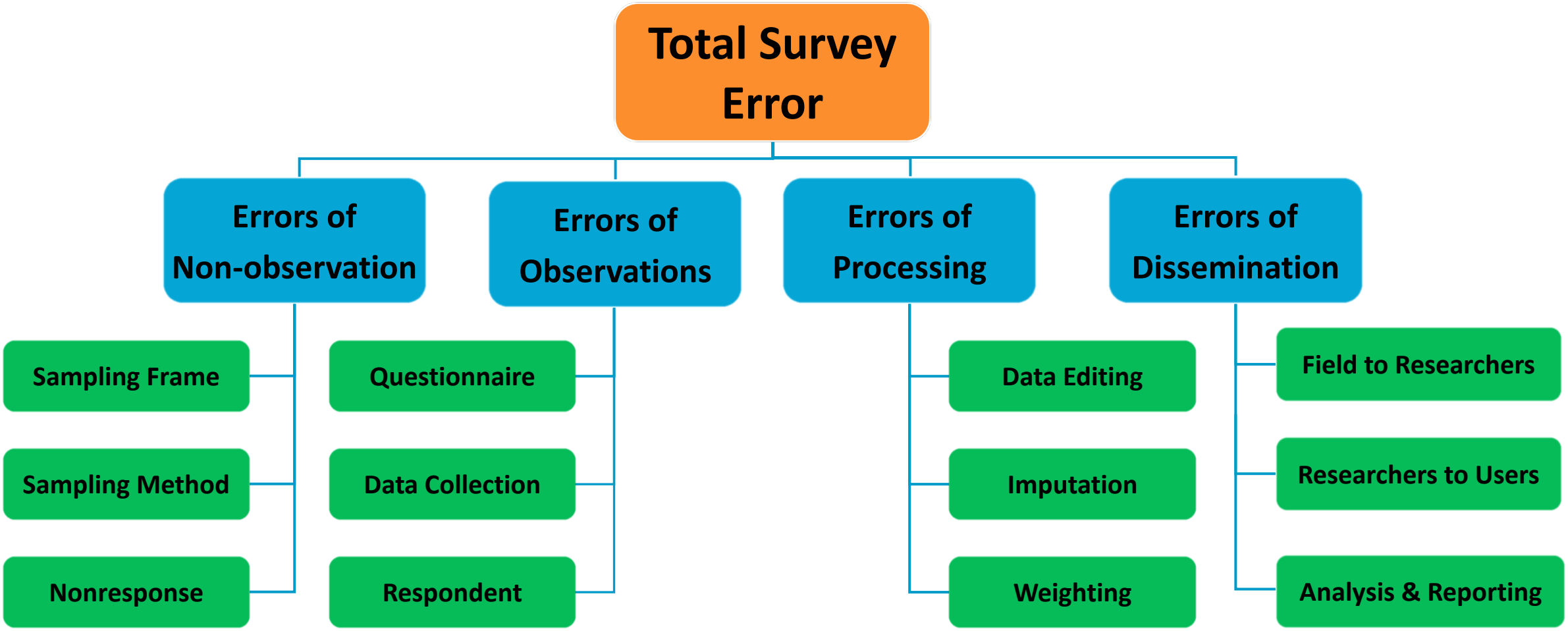
Big Picture



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Evolution of RDD

1964: Cooper used local area directories to identify assigned prefixes and then appended a random four-digit suffix to create the seven-digit number for dialing.

1970: Mitofsky developed a two-stage sampling scheme by relying on how numbers were assigned to increase the efficiency of the sample.

1978: Waksberg introduced refinements by using PPS sampling for selection of the first-stage clusters of telephone banks.

1993: Casady & Lepkowski introduced the method of list-assisted RDD by using telephone banks with at least one listed number.

1995: Brick, Kulp, and Malarek quantified the ignorable undercoverage of list-assisted RDD.

2007: Blumberg & Luke pointed out the coverage error of landline-only RDD that has led to the development of dual-frame RDD.

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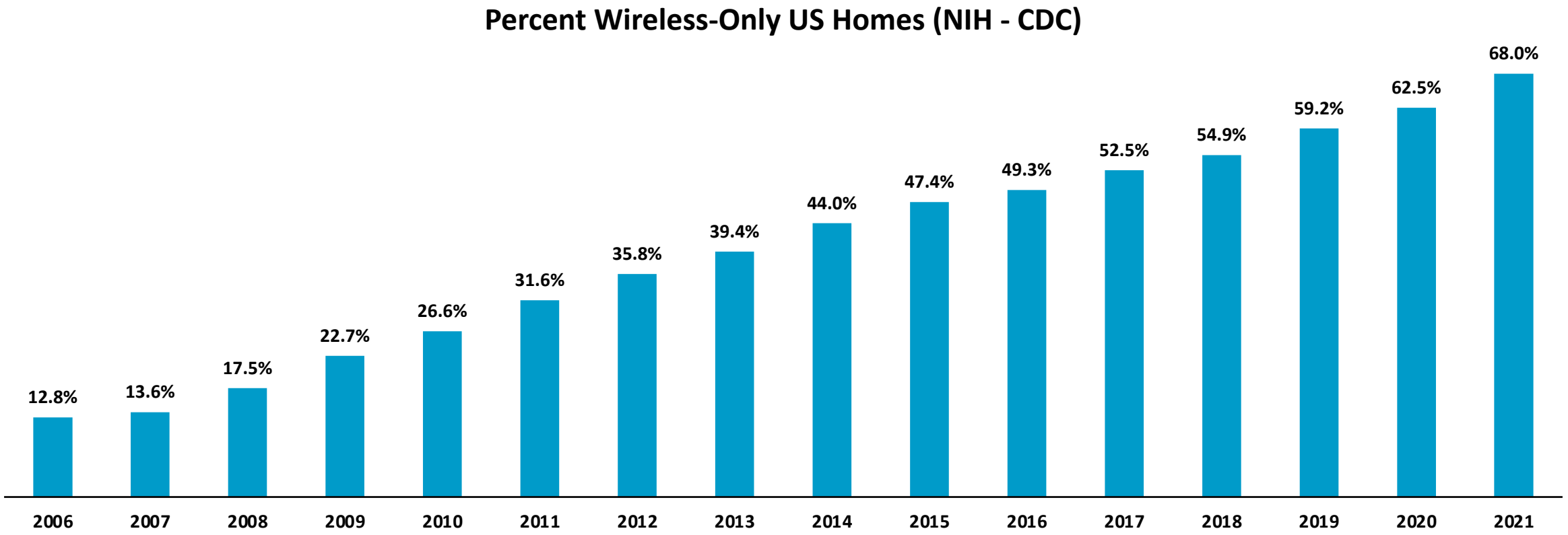
EVER-CHANGING DUAL-FRAME RDD



- **Inconsistent mix of cellular and landline numbers in RDD samples**
- **Cumbersome methods of weighting to deal with frame multiplicity**

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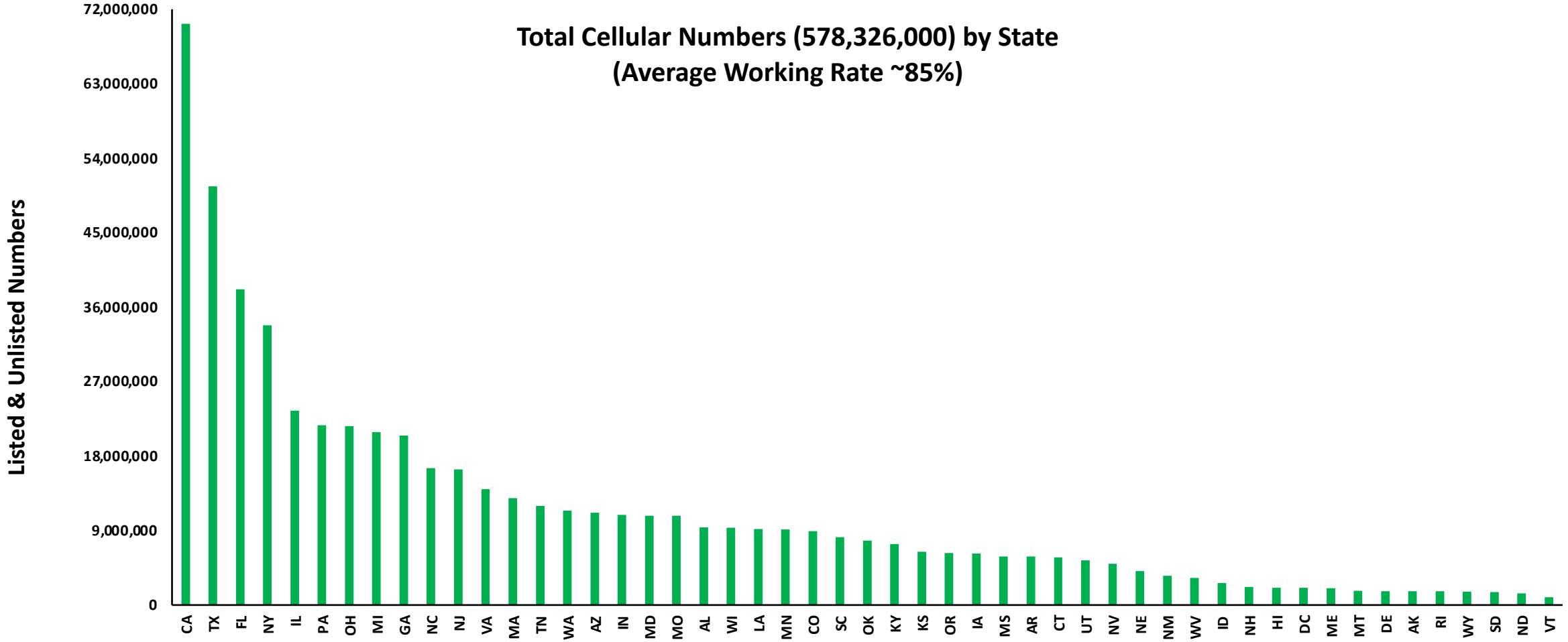
ADVANCED CELLULAR FRAME



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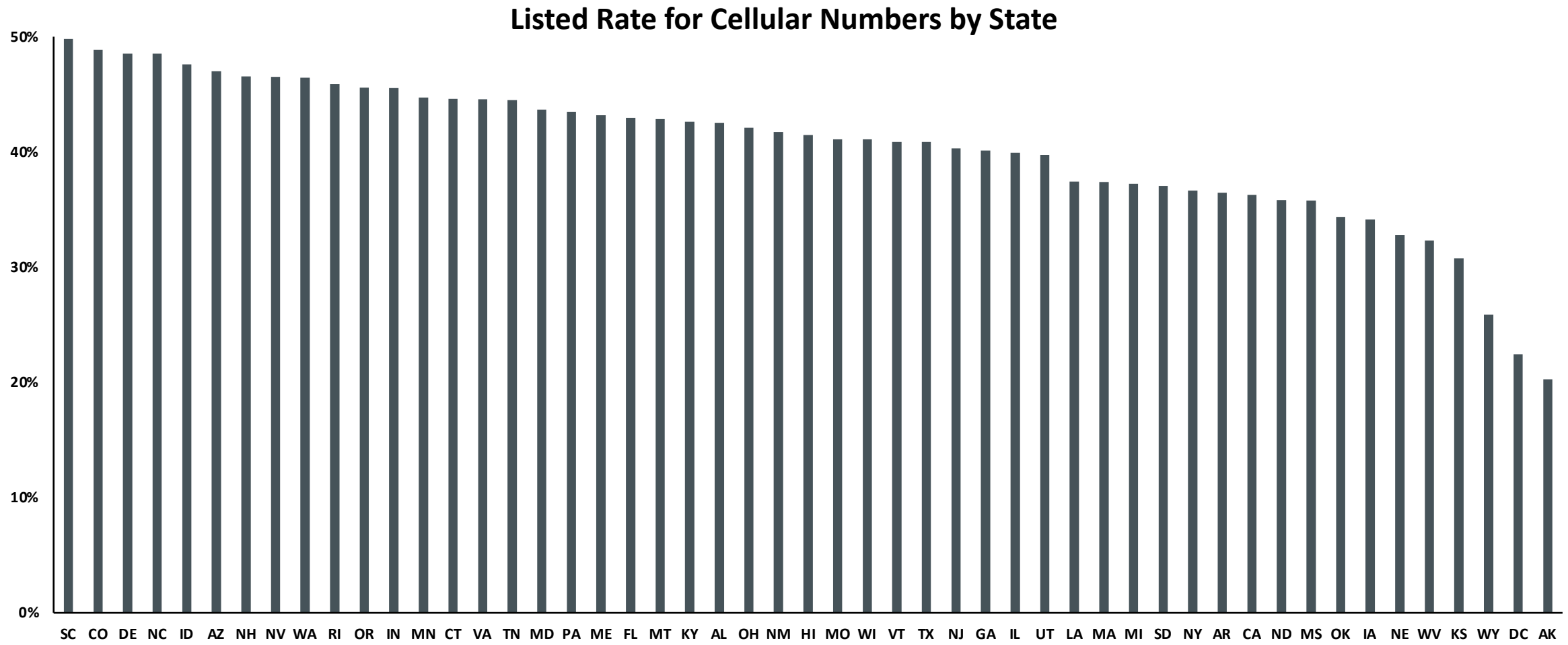
Advanced Cellular Frame



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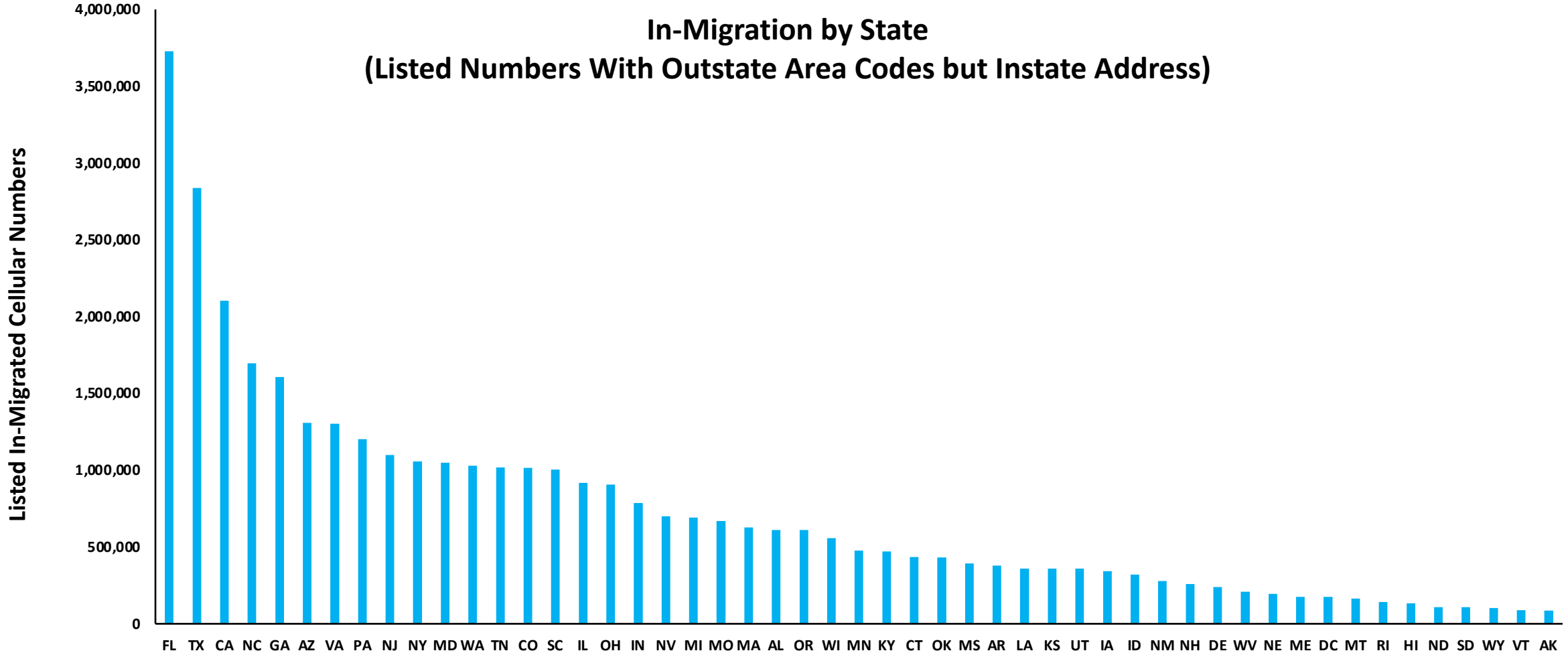

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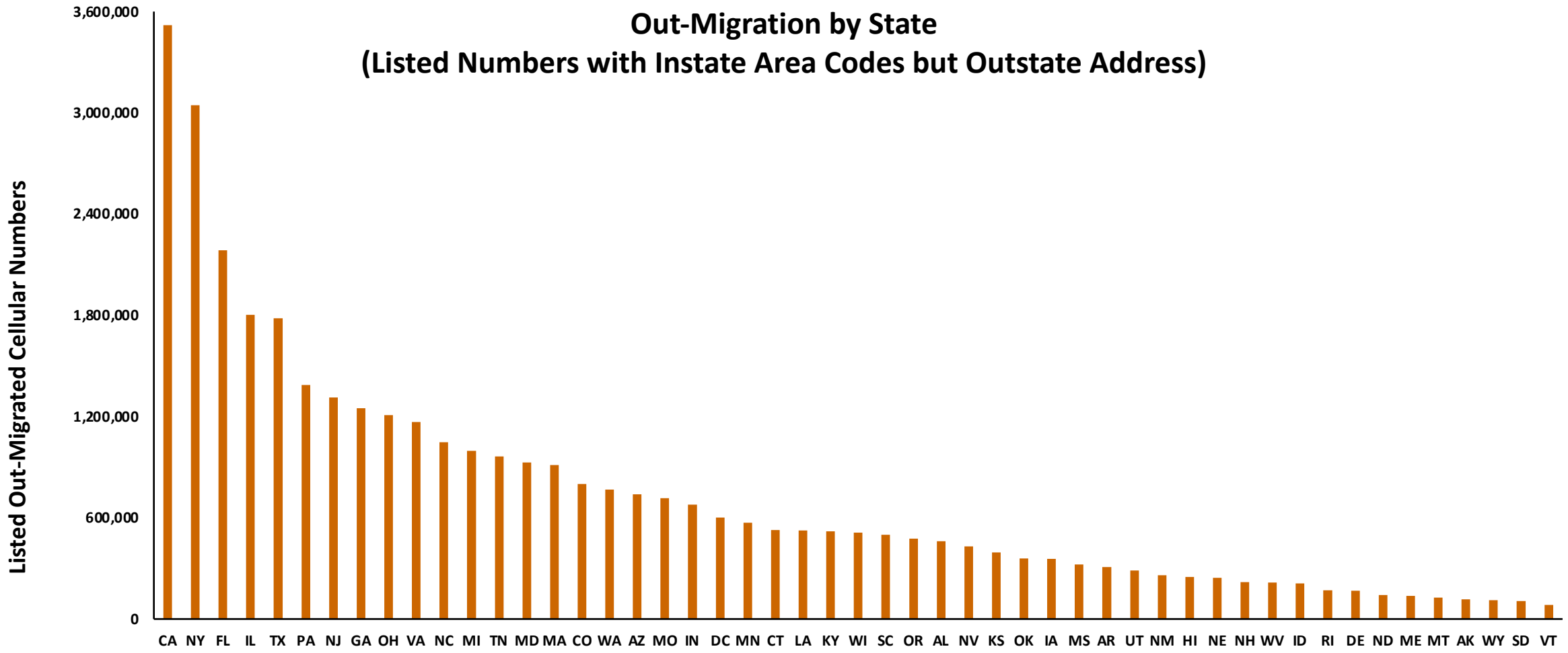

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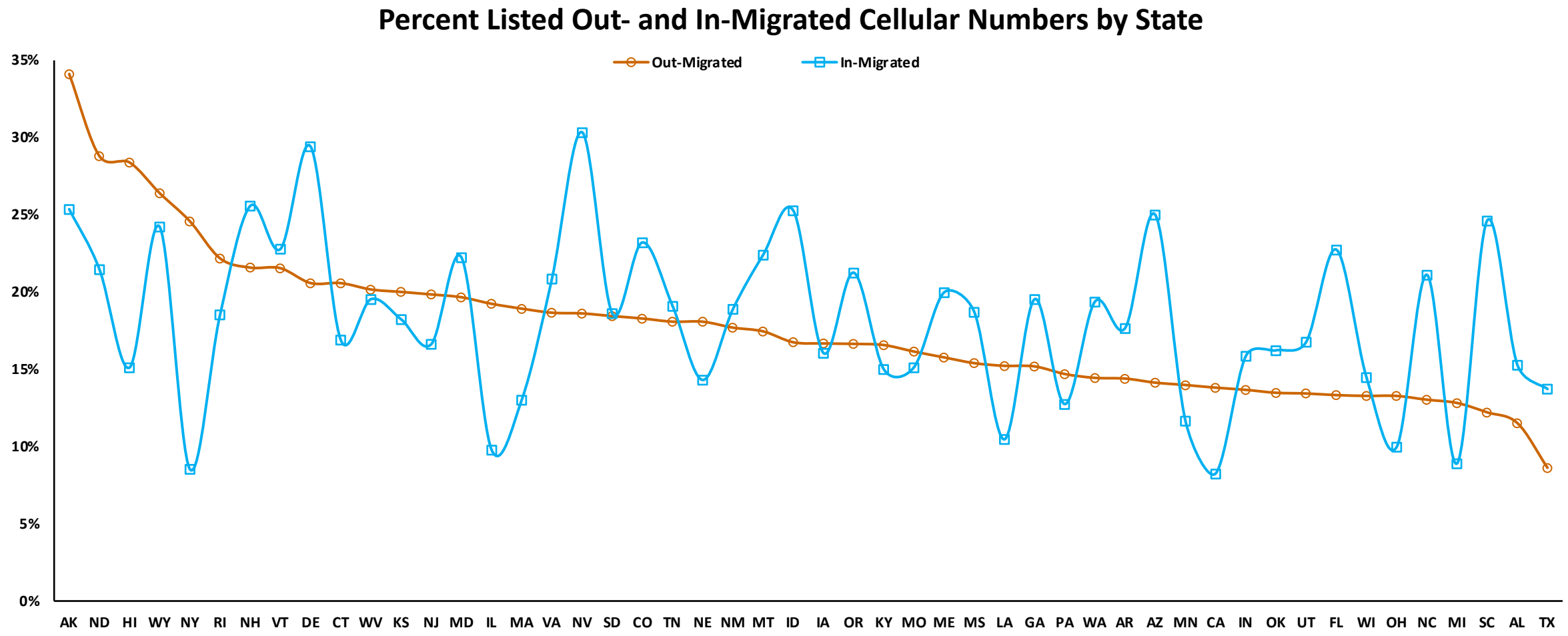

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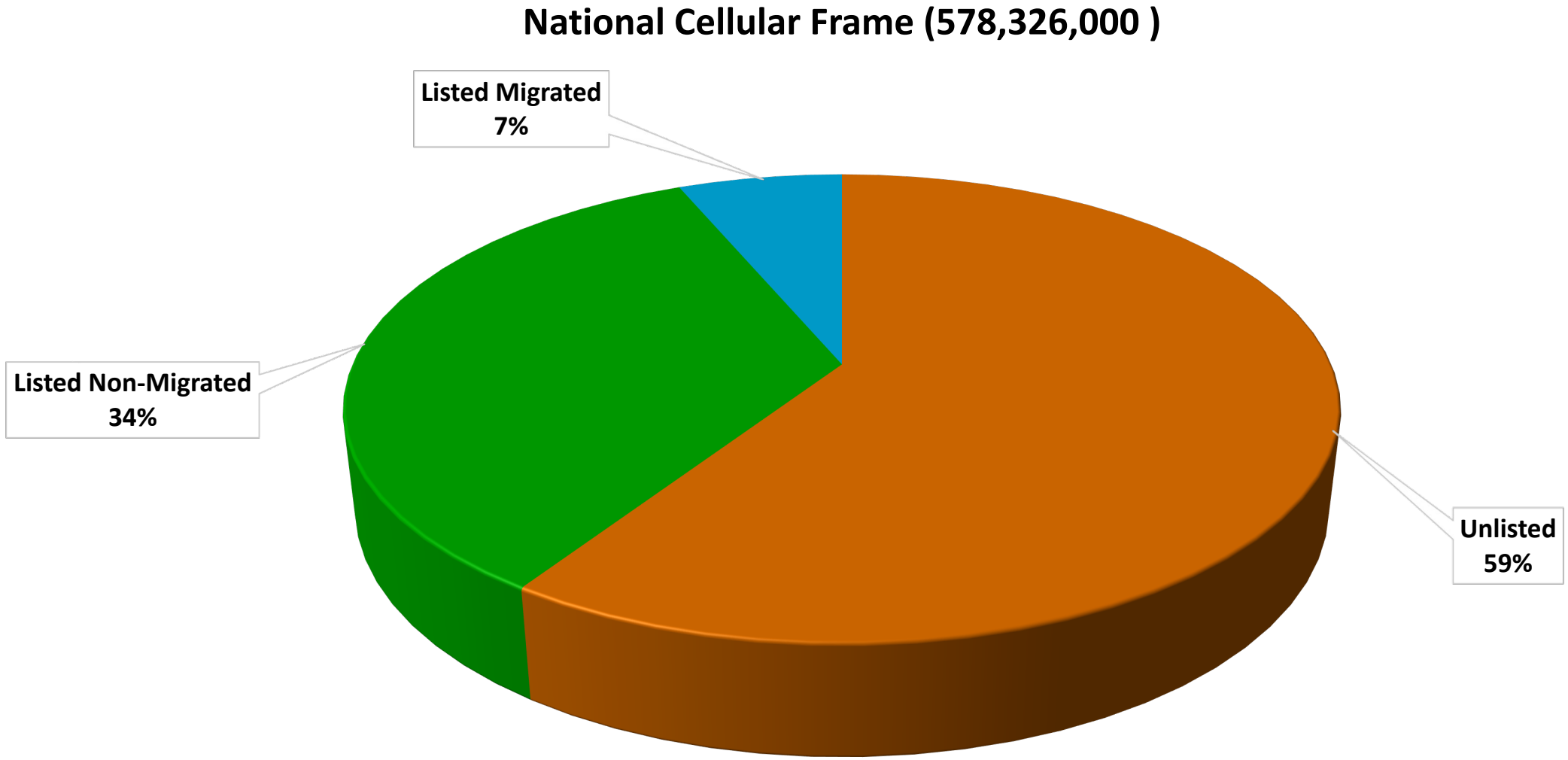
Legacy Frame



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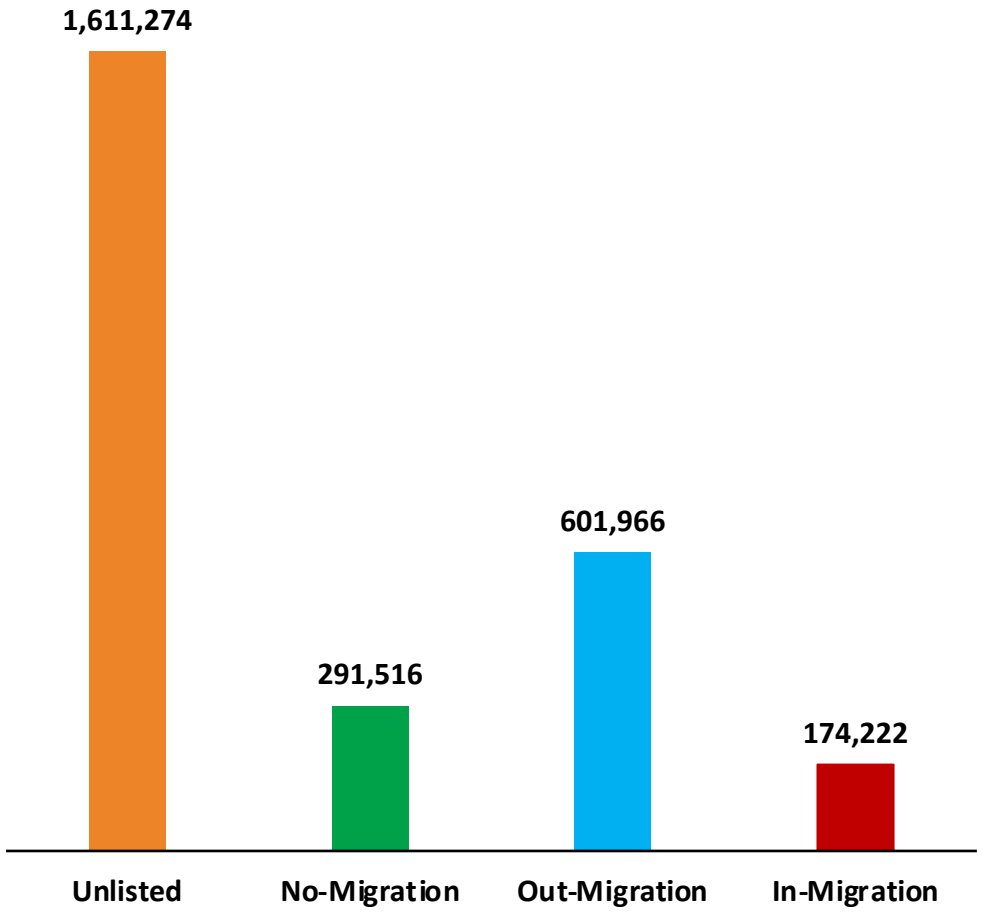
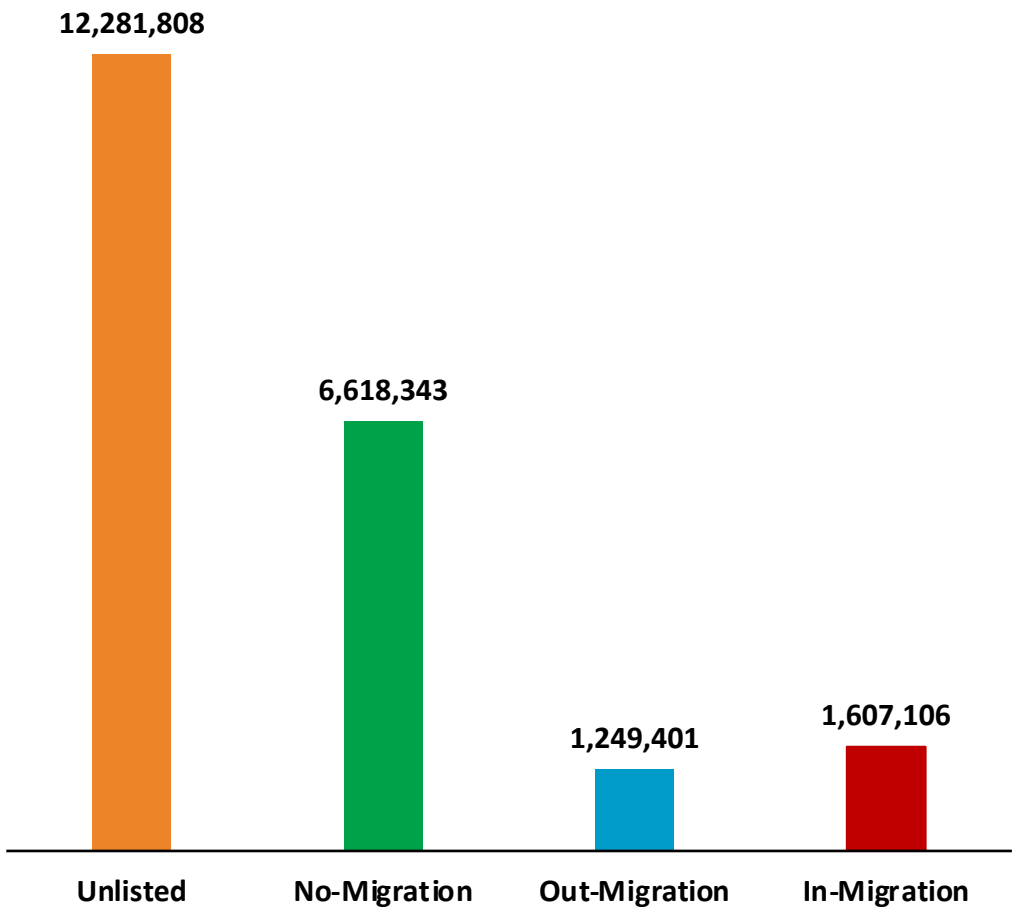
ADVANCED CELLULAR FRAME

Topology of Cellular Numbers in DC



Topology of Cellular Numbers in GA



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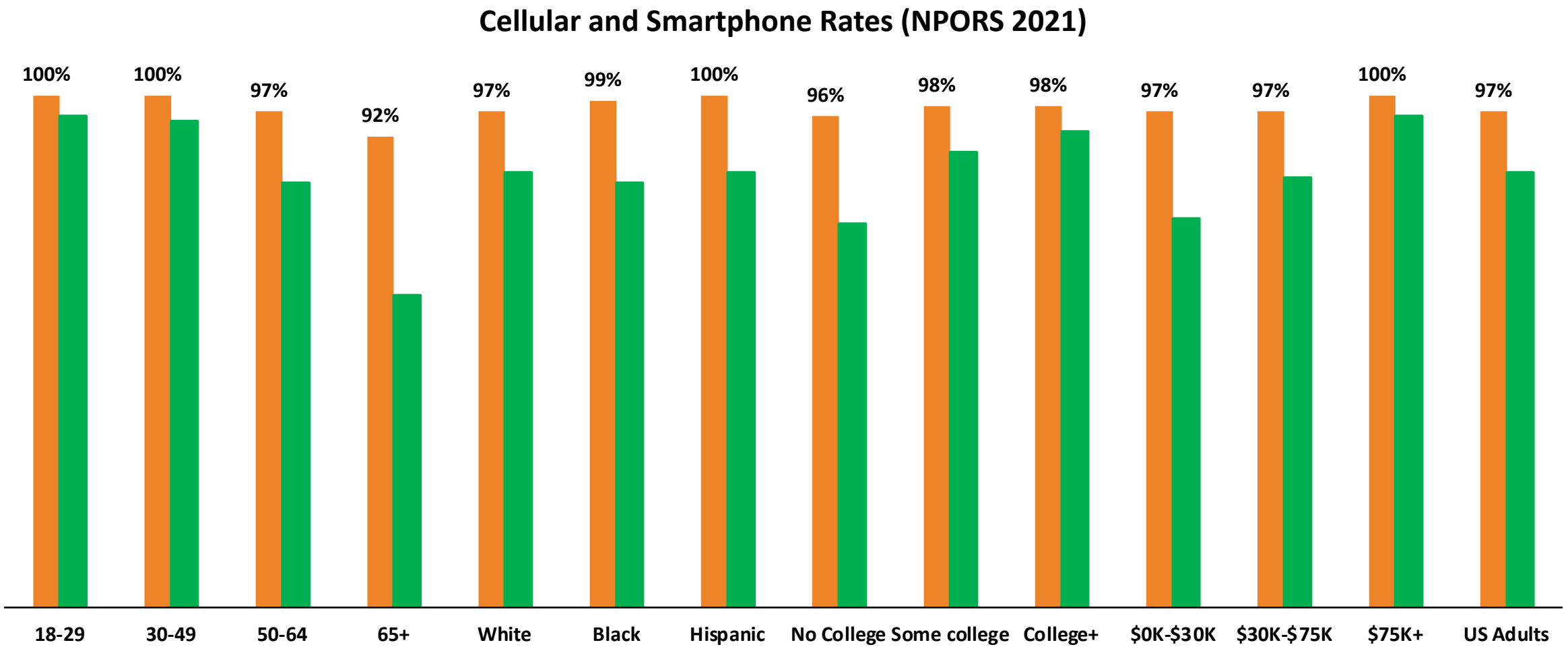
ARE WE THERE YET?



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TAKEAWAYS

- **Is RDD still a viable option?**
  - Time and cost requirements are increasing
  - Perhaps the only option for large rapid-response surveys
- **Coverage challenges of the legacy cellular frame:**
  - Progressively undercovers smaller geographies (>50% for counties)
  - A sizable screening cost for out-migrated numbers
- **Advanced Cellular Frame (ACF):**
  - Improves coverage by including listed inwardly-migrated numbers
  - Reduces cost by eliminating listed outwardly-migrated numbers

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Thank You

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