

Size of the Category 7_A Installed Base

IEEE 802.3bq Next Generation BASE-T Task Force
(Topic: 25GBASE-T)

July, 2015

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CONNECTING THE WORLD TO A HIGHER STANDARD

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Objectives

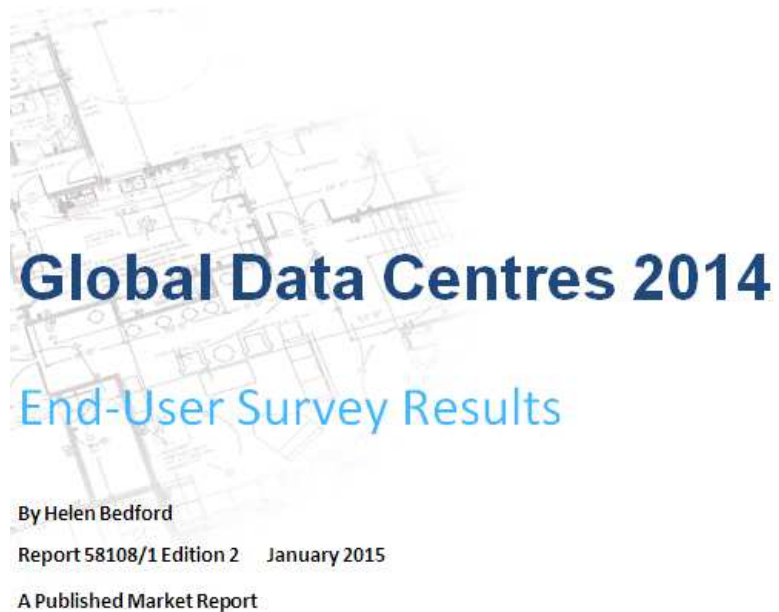
- Use third party data to make an assessment of the installed base of category 7_A cabling in the data center
- Use third party data to make an assessment of the percentage of end-users that have some category 7_A cabling installed in their data center
- Remind the group of the multiple technical contributions demonstrating that 30m of category 7_A cabling should support 25GBASE-T
- Move that 30m of category 7_A cabling be incorporated into clause 113.7 of the next IEEE P802.3bq draft for support of 25GBASE-T



Background reference data

- This contribution updates [maguire_1_0513_40GBT.pdf](#), which used data from the BSRIA World Structured Cabling Study (Nov, 2011)
- Volume and number of drops through the end of 2015 can be conservatively extrapolated from this report (assuming volume for 2012 , 2013, 2014, and 2015 is equivalent to 2011) as follows:
 - 450 million meters of cable shipped (39.2 + 46.2 + 45.7 + 64.2 + 51.9 x 5)
 - If the average channel length is 30m (20m solid and 10m stranded), then 22.5 million drops will be installed
 - If the average channel length is 40m (30m solid and 10m stranded), then 15 million drops will be installed
 - If the average channel length is 50m (40m solid and 10m stranded), then 11.3 million drops will be installed

New BSRIA data available (see Annex A)



- BSRIA “Global Data Centres 2014, End-User Survey Results, Report 58108/1, Edition 2, January 2015
- Survey of 326 respondents
 - 187 representing enterprise data centers
 - 139 representing colocation data centers
- Extracts provided with the kind permission of BSRIA

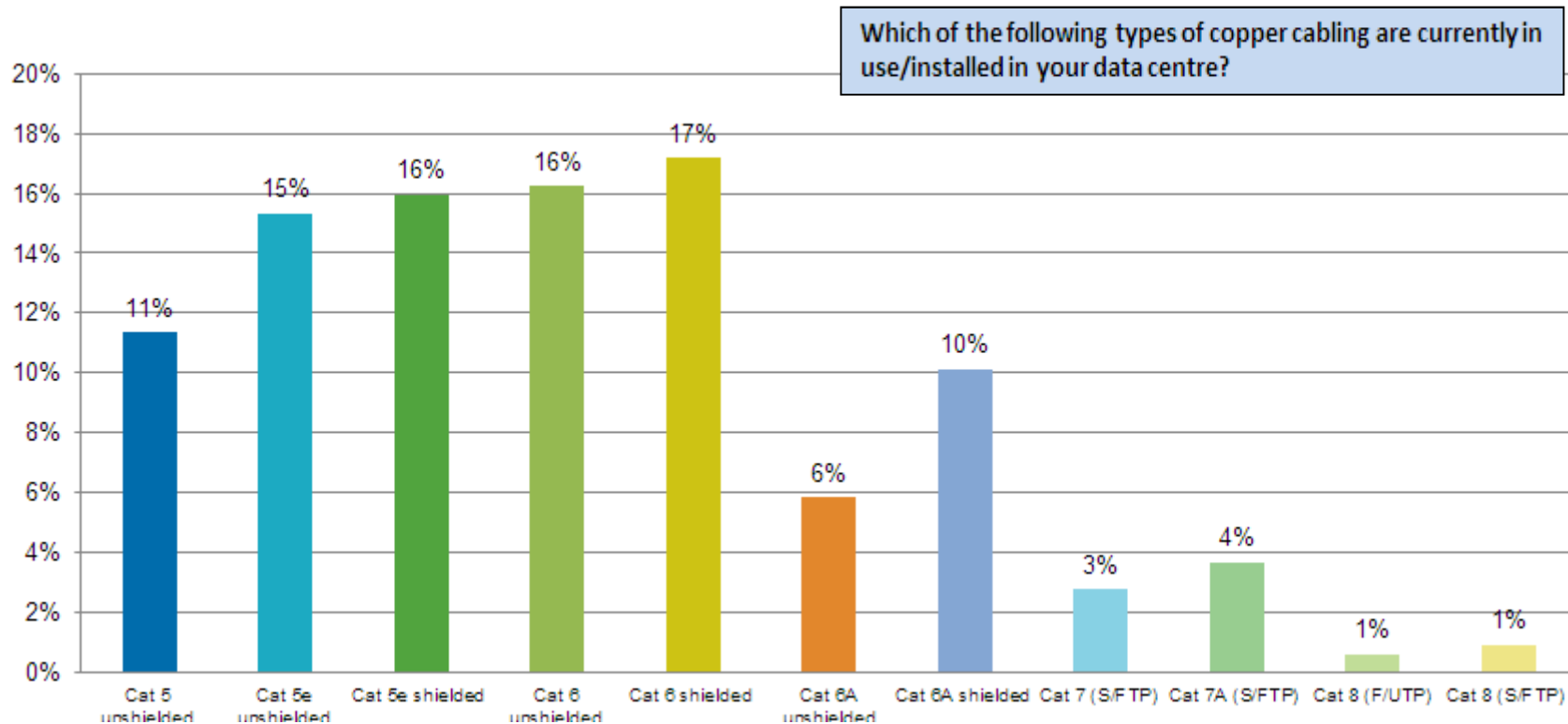


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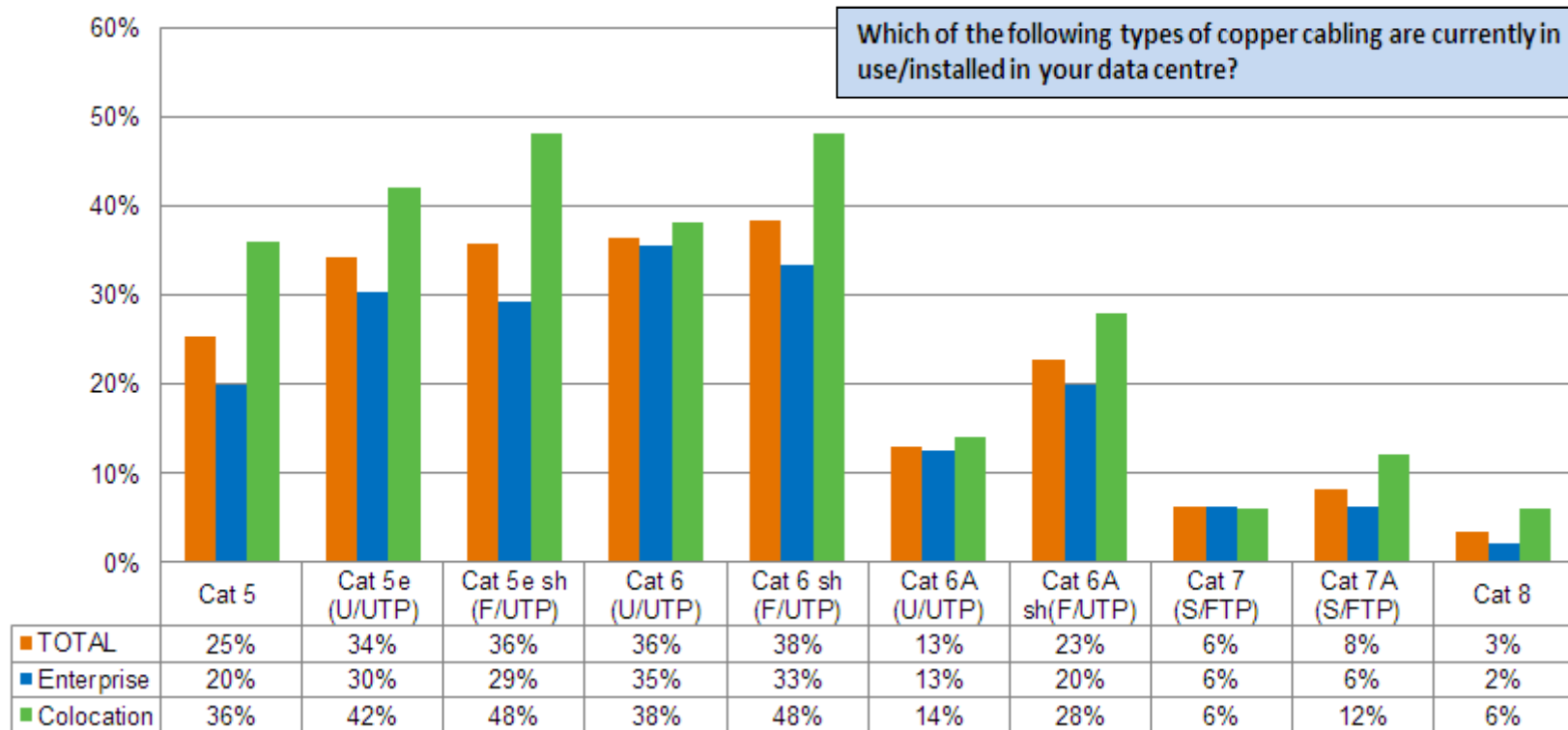


Copper: Categories Installed



- 4% of all data center cabling is category 7_A

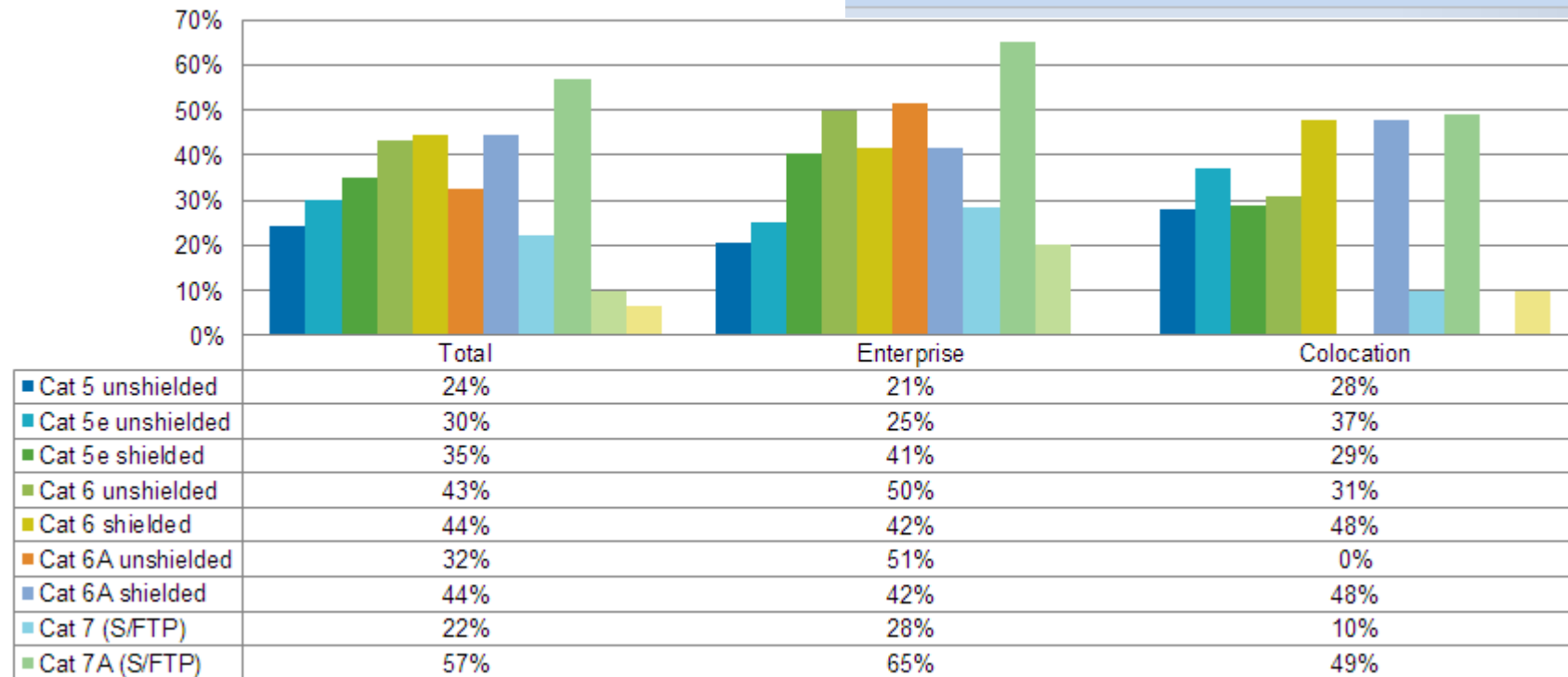
Copper: Categories Installed - Summary of Means



- However, 12% of colocation and 6% of enterprise data centers have some category 7_A cabling installed in them

Copper: Categories Installed Last 12months

What percentage of the total volume of each type of copper cable was bought in the last twelve months?



- And, in the last 12 months, 57% of data center end users have purchased category 7_A cable - these are potentially 25GBASE-T ready drops!

Conclusions

- Multiple technical contributions exist demonstrating that up to 30m of the installed base of class F_A cabling can support 25GBASE-T
 - [“Cat 7A Channel Analysis”](#), Stephen Bates
 - [“Class FA Cabling for 25GBASE-T”](#), Yakov Belopolsky
 - [“ISO/IEC 11801-1 Cabling Characteristics”](#), Dave Hess
 - [“Comparison of Cat7A Channel and 802.3bq Link Segment Specification”](#), Martin Rossbach
- 10 to over 20 million installed class F_A cabling drops will potentially be available to support 25GBASE-T by the end of the year
- 30m of category 7_A should be recognized for support of 25GBASE-T media and explicitly incorporated into clause 113.7 of the next IEEE P802.3bq draft

Annex A – Reference BSRIA market information

- The following extracts from BSRIA “Global Data Centres 2014, End-User Survey Results, Report 58108/1, Edition 2, January 2015 in this Annex have been provided with the kind permission of BSRIA

Global Data Centres 2014

End-User Survey Results

By Helen Bedford

Report 58108/1 Edition 2 January 2015

A Published Market Report





A BSRIA Published Market Report

Global Data Centres – End-User Survey Results

Contract	Report 58108/1
Date	January 2015
Developed for:	A published market report
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No. of slides:	101
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Edition no.	2

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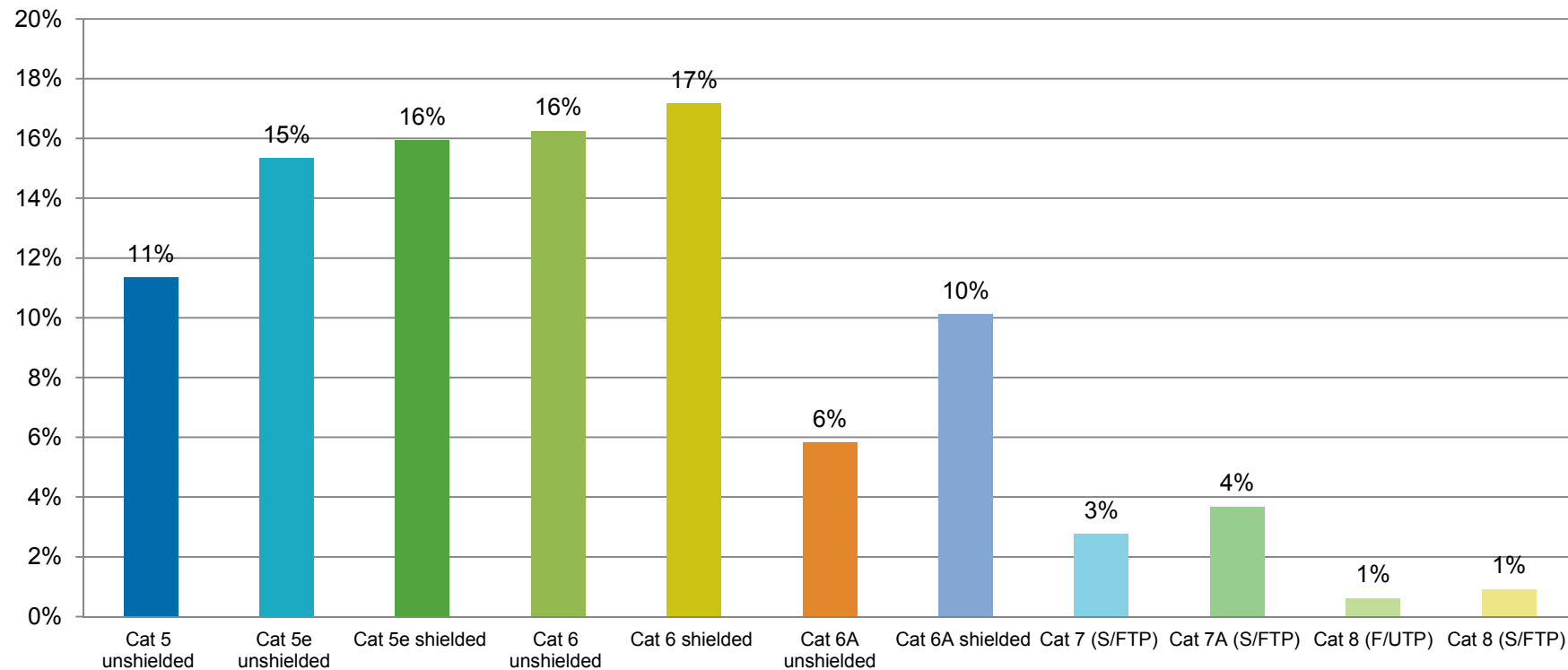
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Copper: Categories Installed

Which of the following types of copper cabling are currently in use/installed in your data centre?

Breakdown of Copper by Category



Overall, the biggest share in the installed base is taken by Cat6 (both shielded and unshielded) – 33%.

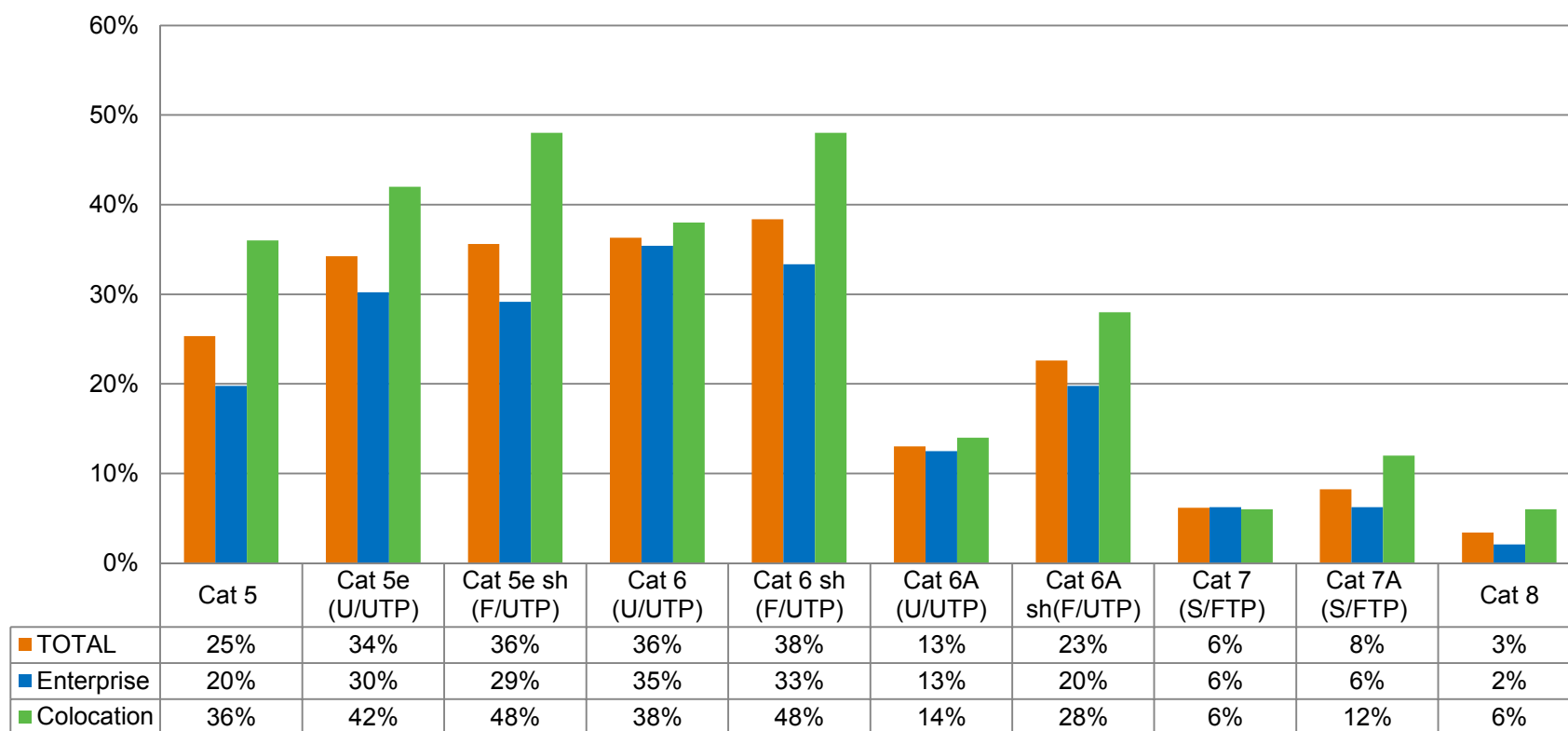
Cat5e is still holding its place in the Data Centres that participated in the Survey.

Cat6A accounts for 16%, while Cat 7 and Cat7A have a smaller percentage of the installed base.

Source: BSRIA
n=326

Copper: Categories Installed – Summary of Means

Which of the following types of copper cabling are currently in use/installed in your data centre?



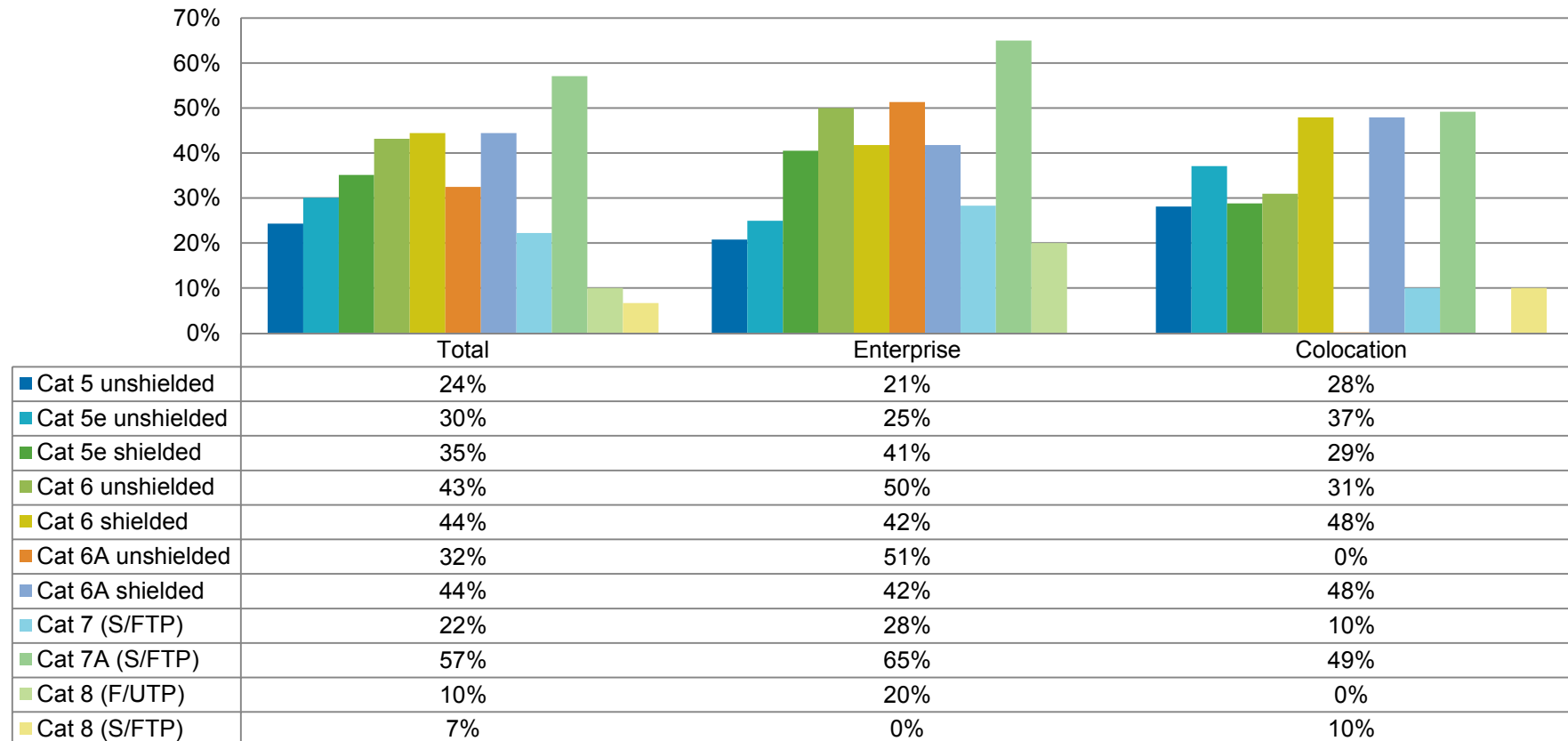
	Total	Enterprise	Colocation
Base: All who have at least 1% of copper in DC	146	96	50
Responses	326	187	139

Source: BSRIA

Copper: Categories Installed Last 12months

What percentage of the total volume of each type of copper cable was bought in the last twelve months?

Copper Cable by Category: Bought Last 12 Months – Summary of Means



*Note: The Cat5 cabling installed in the last 12 months has been in China and Brazil.
We believe that the end-users mix Cat5 and Cat5e in their responses*

n=153, overall responses=326 Source: BSRIA



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