

C O L O R I D



C O L O R I D  
WHAT WE WILL TALK ABOUT

- Intro to Mobile ID
- Survey says...
- Survey of Mobile ID technology and products

C O L O R I D

## NFC STANDARD

- NFC Standard was created in 2002
- Sony and NXP
- ISO/IEC 14443 defines ID card communications with readers
  - MIFARE, DESFire, Seos
- ISO/IEC 18000-3 specifies RFID communications used by NFC devices
  - Phones

C O L O R I D

## NFC - EARLY DAYS

- Technically, NFC refers to using the secure element tied to the NFC chip in a mobile device
- NFC chip was secure storage
  - Owned by network operators (Verizon, ATT)
  - Who wanted a fee for use
- In 2013, Google introduced (Host Card Emulation) to store data in the phone and transmit via NFC chip
  - Not actually on the NFC chip
    - Which never actually happened



C O L O R I D

## BLUETOOTH WORKAROUND

- HID, aptiQ wrote NFC mobile apps for physical access
  - Built NFC tech into their readers
- Apple doggedly restricted NFC to ApplePay
- HID and others devised a workaround
  - Bluetooth works on iPhones and Android devices
  - BLE stores encrypted data (ID number) in phone storage, which remains encrypted until it hits the reader
  - Adoption has been slow
- **Why was it slow?**

C O L O R I D  
MOBILE AT 2012 NACCU

WHAT'S HOT?  
PHONES!

- NFC
  - Near Field Communication
  - Contactless chip in the phone that talks to phone OS
- Phones with NFC in US
  - Samsung Nexus S
  - LG Optimus
  - Blackberries
  - iPhone 5 may get NFC?
- After market NFC add-ons
  - SD card
  - SIM
  - Case with NFC chip and antenna

NACCU 2012 -- COLORID -- ID TRENDS

# SURVEY SAYS...

Are you thinking what everyone else is thinking?

C O L O R I D  
HID AND GENETEC

TECHNOLOGY REPORT  
Access Control in Higher Education

- HID AND Genetec commissioned a report in 2018
- *HID Global commissioned SecurityInformed.com to produce this document, which is based on research conducted jointly by HID Global and Genetec*

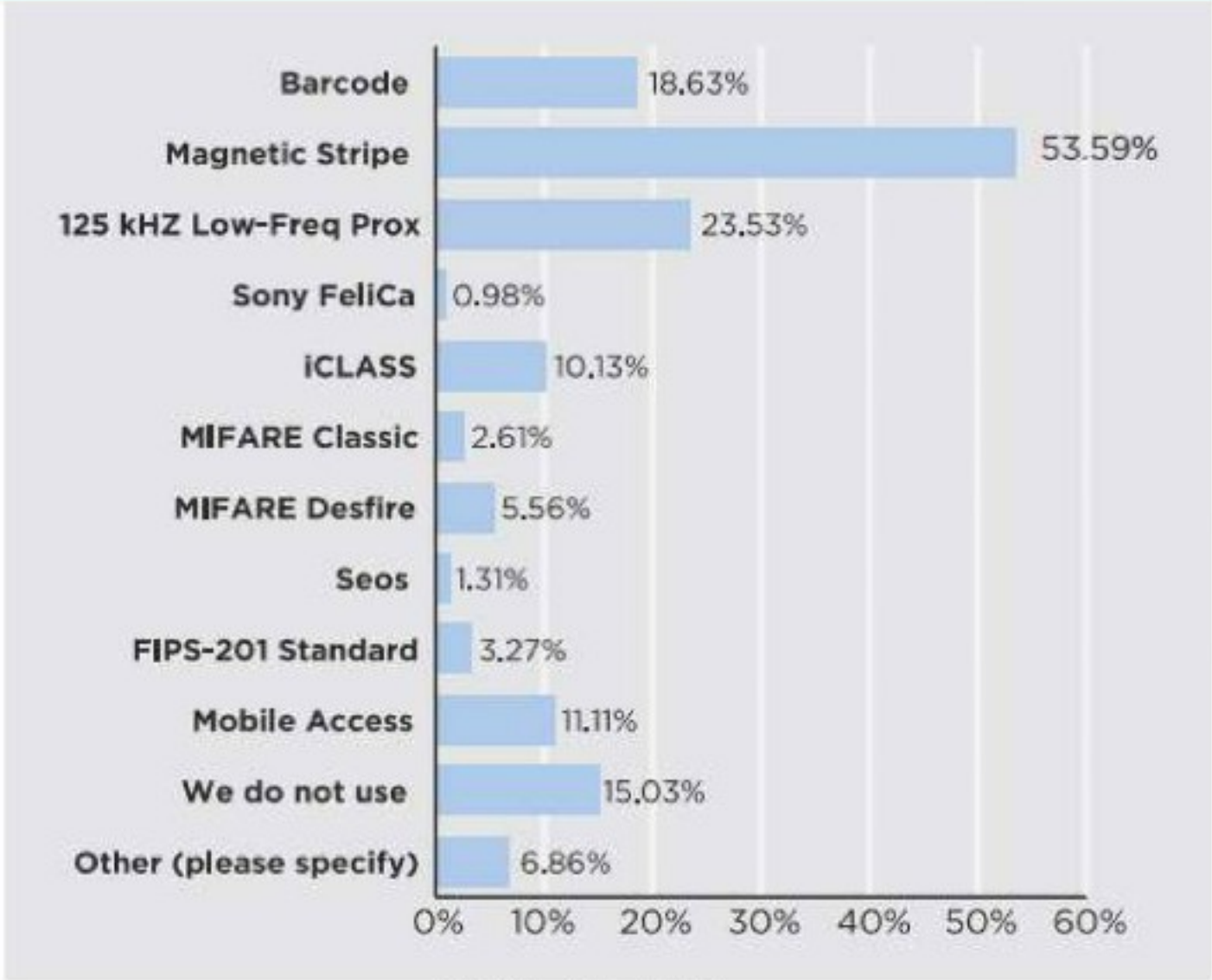


# Which ID technologies are on your campus?

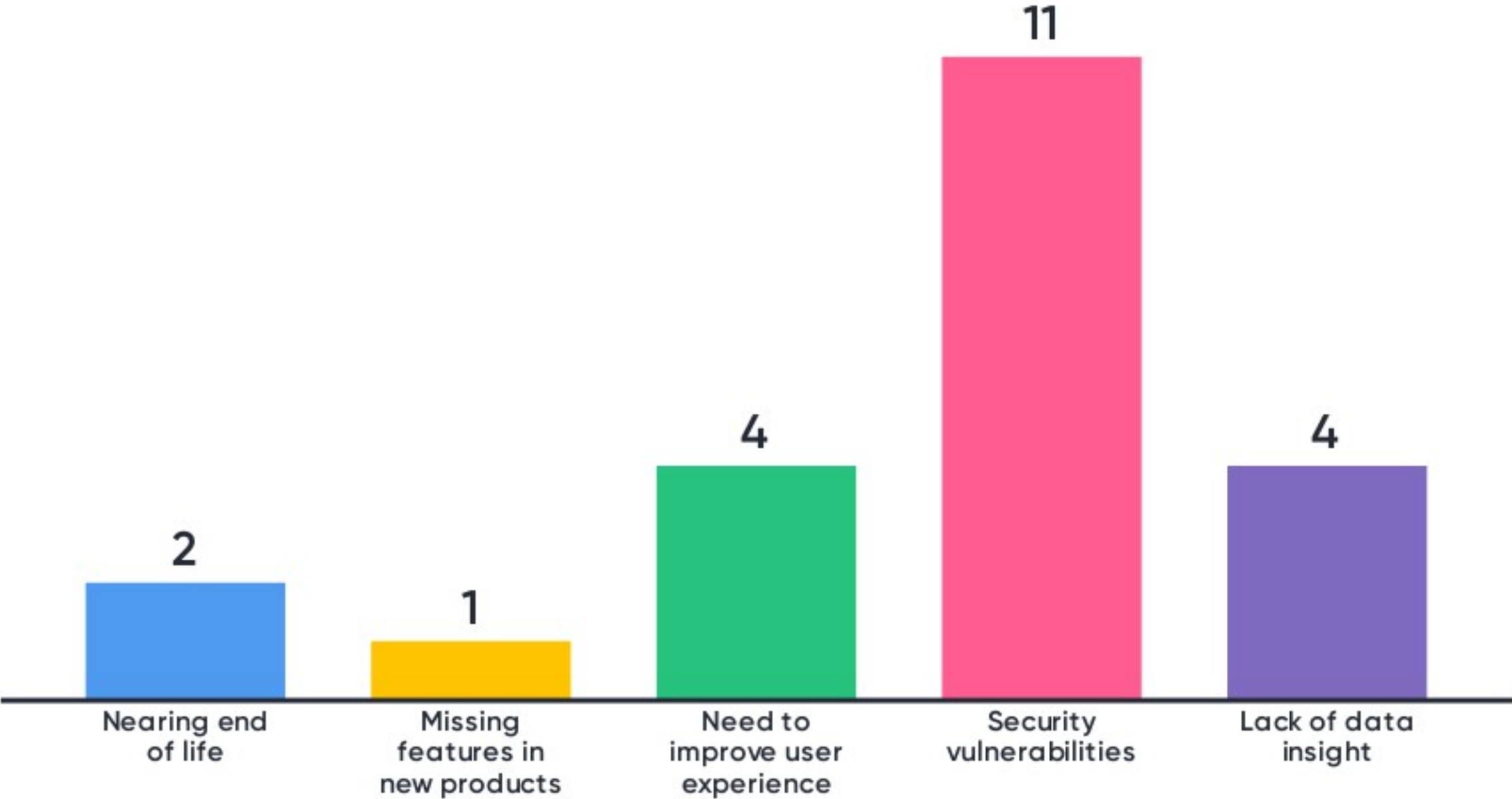


C O L O R I D

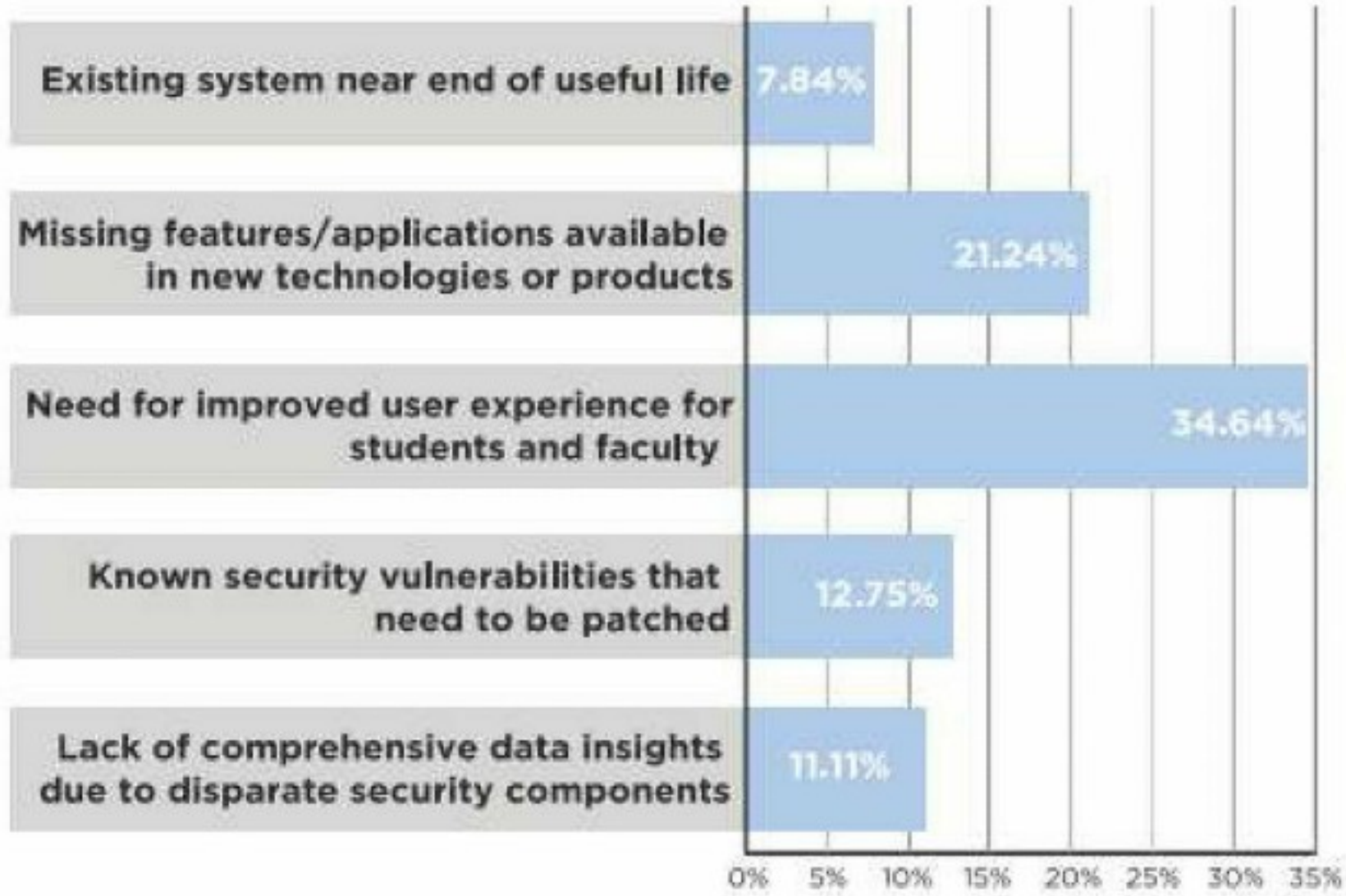
# PACS ID Tech on Your Campus



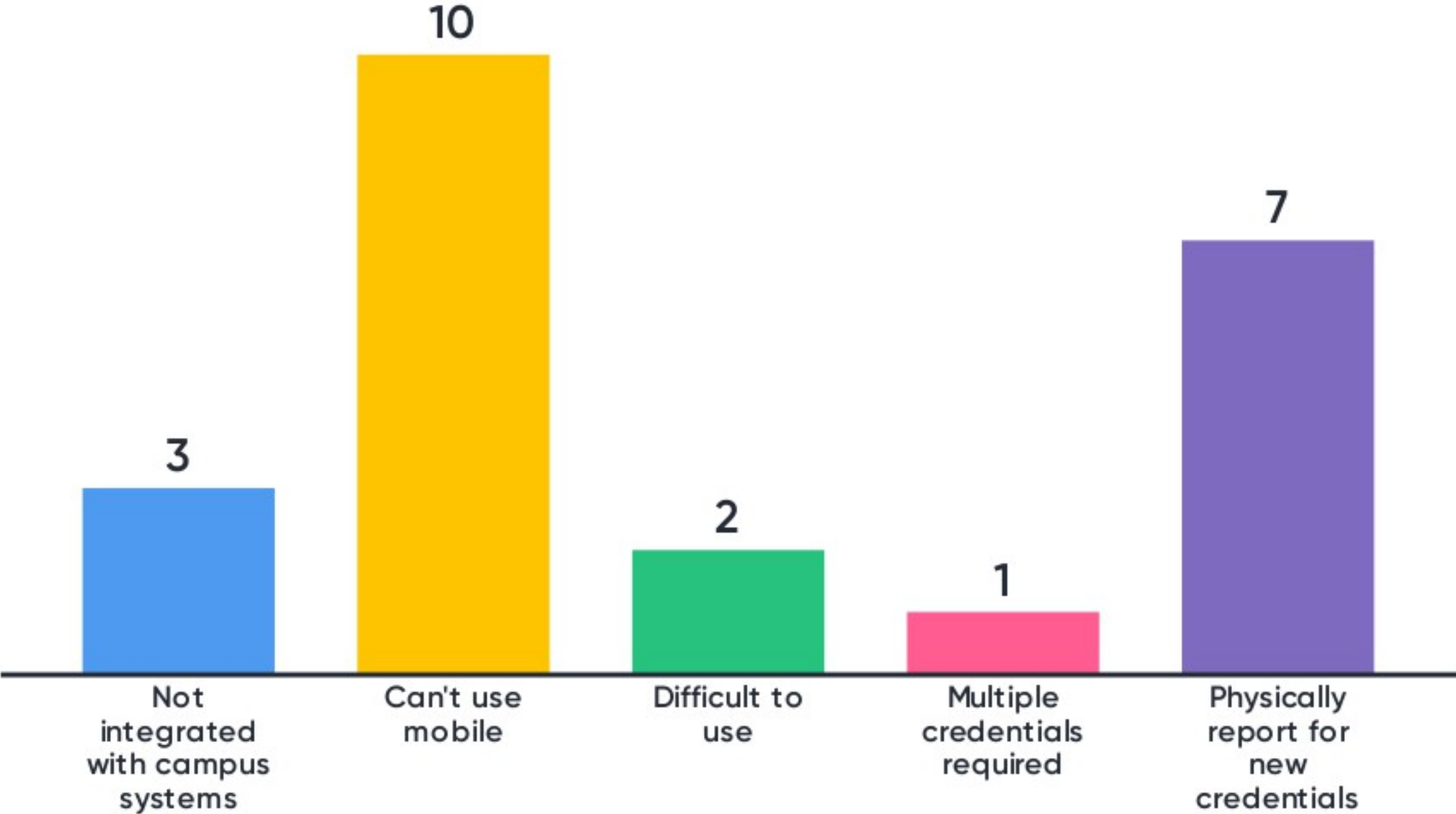
# Biggest challenge with your PACS



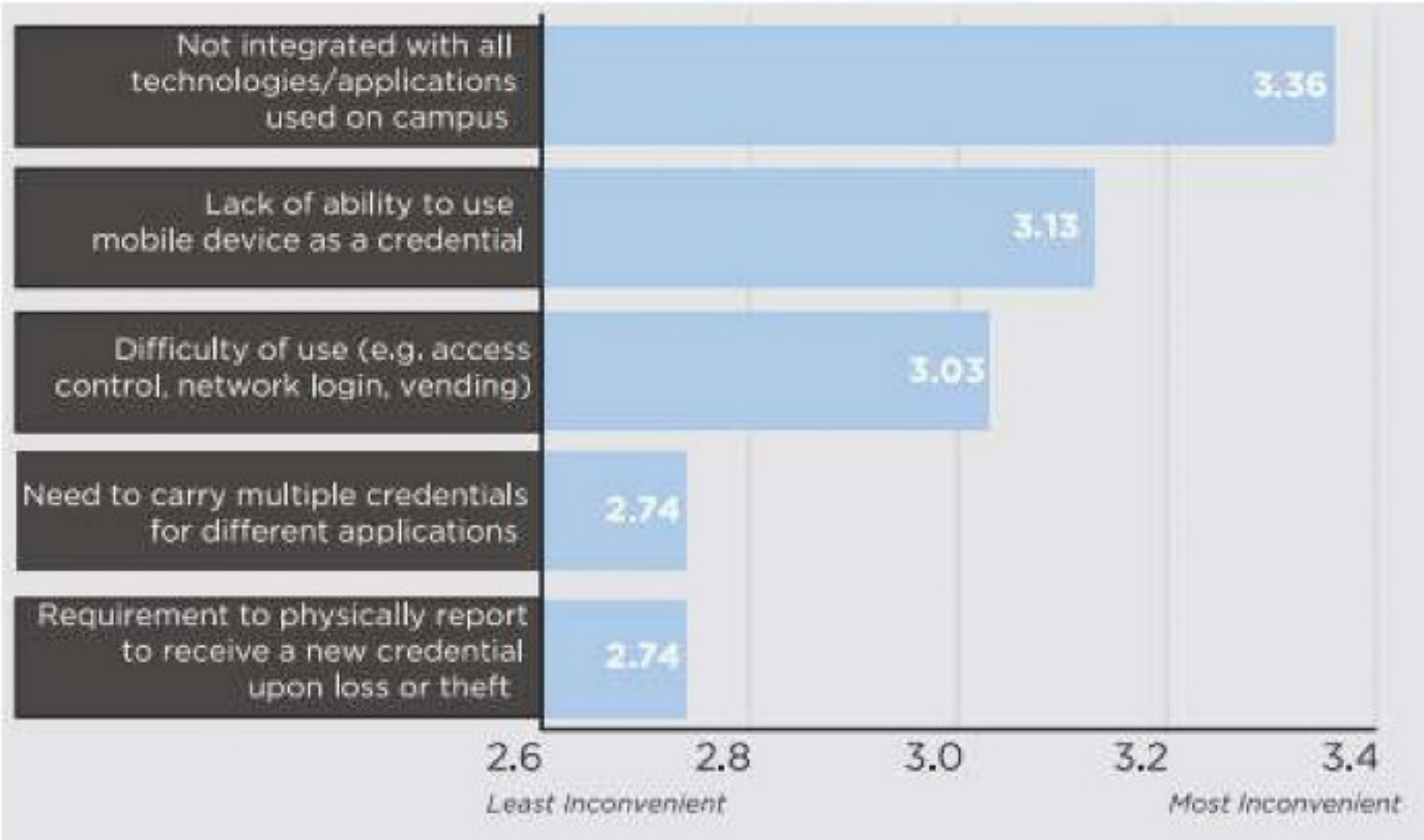
# COLORID BIGGEST CHALLENGE WITH YOUR PACS



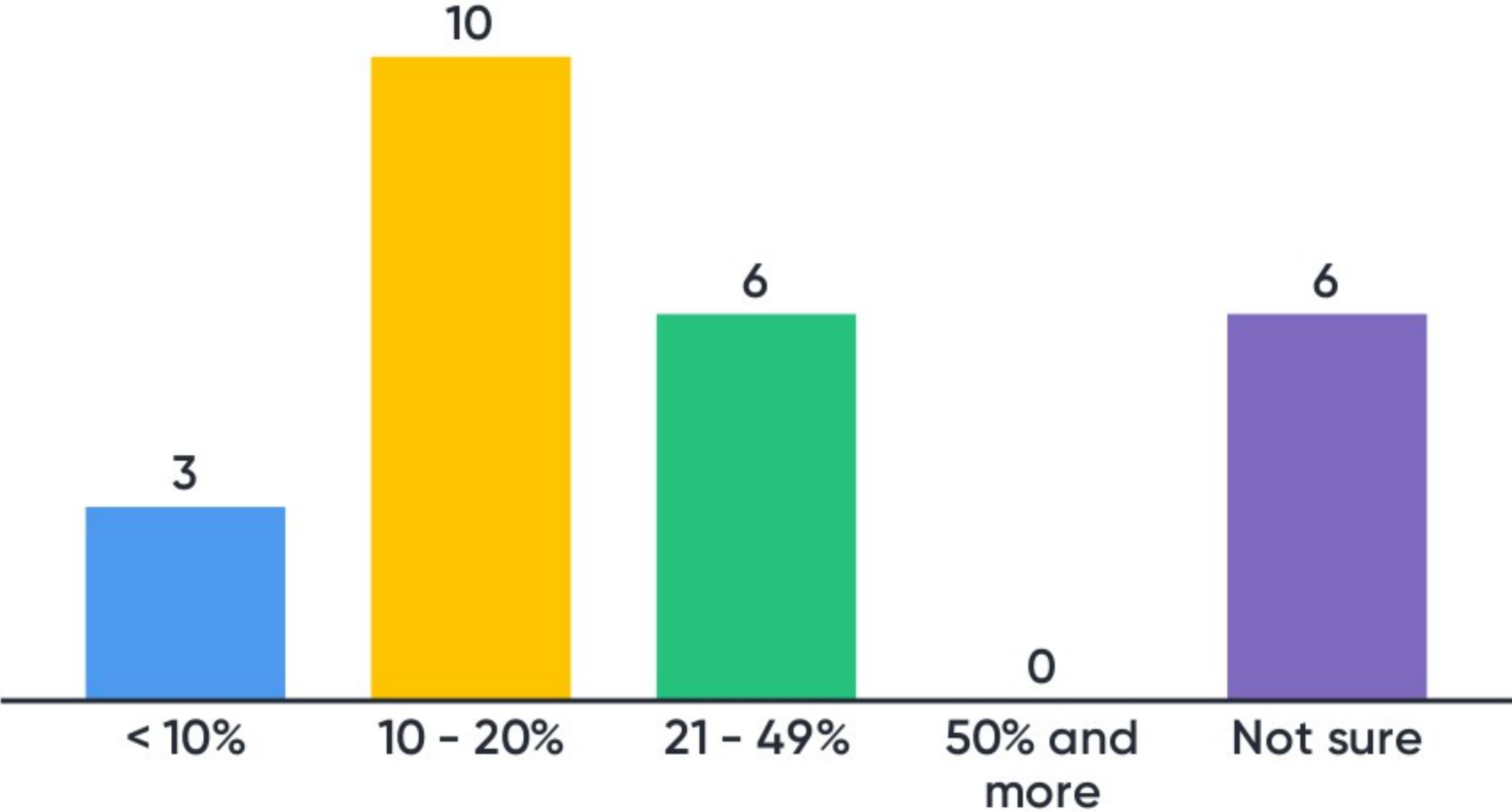
# Most inconvenient aspects of PACS



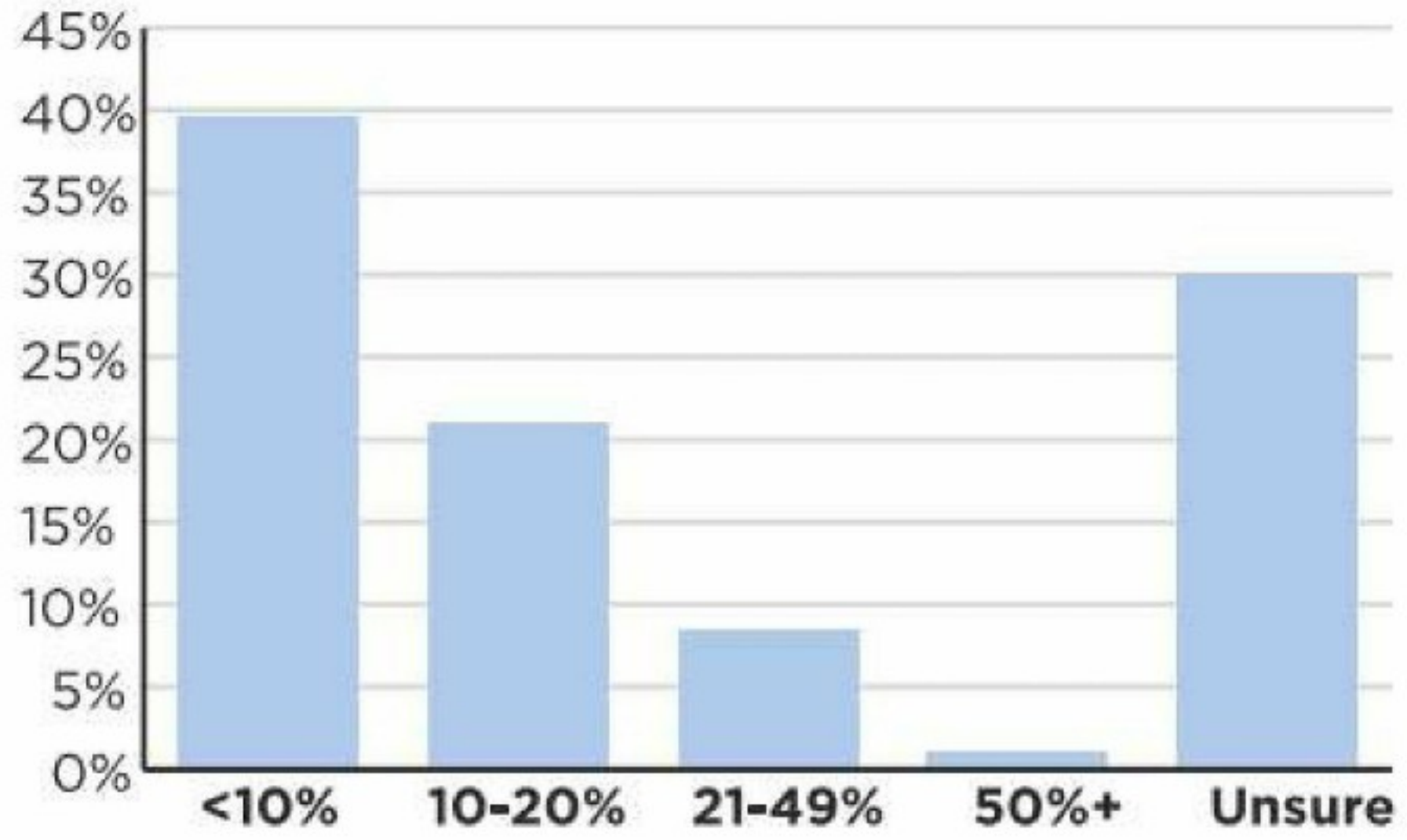
# COLORID MOST CONVENIENT ASPECTS OF PACS



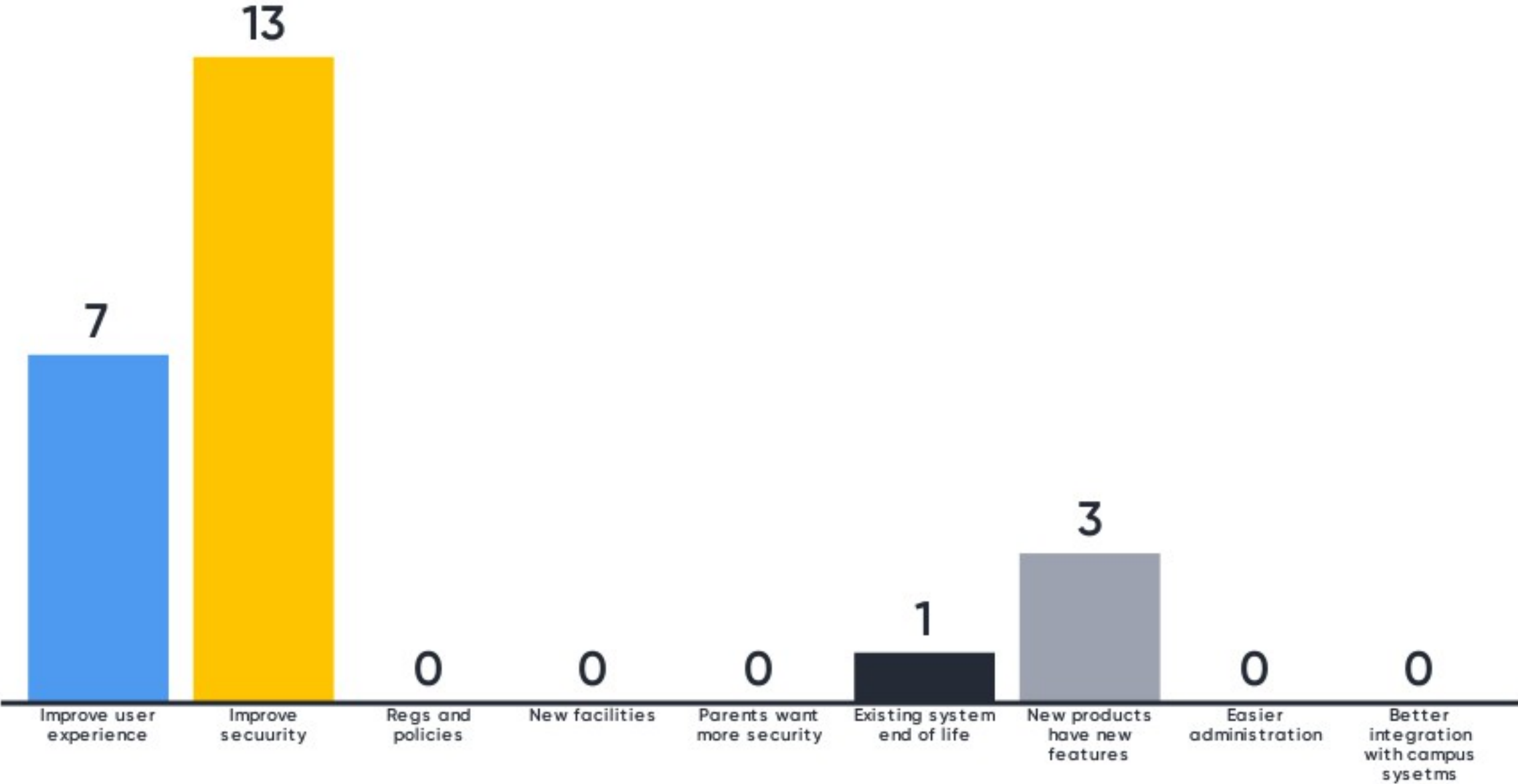
# Percent of lost ID cards each year



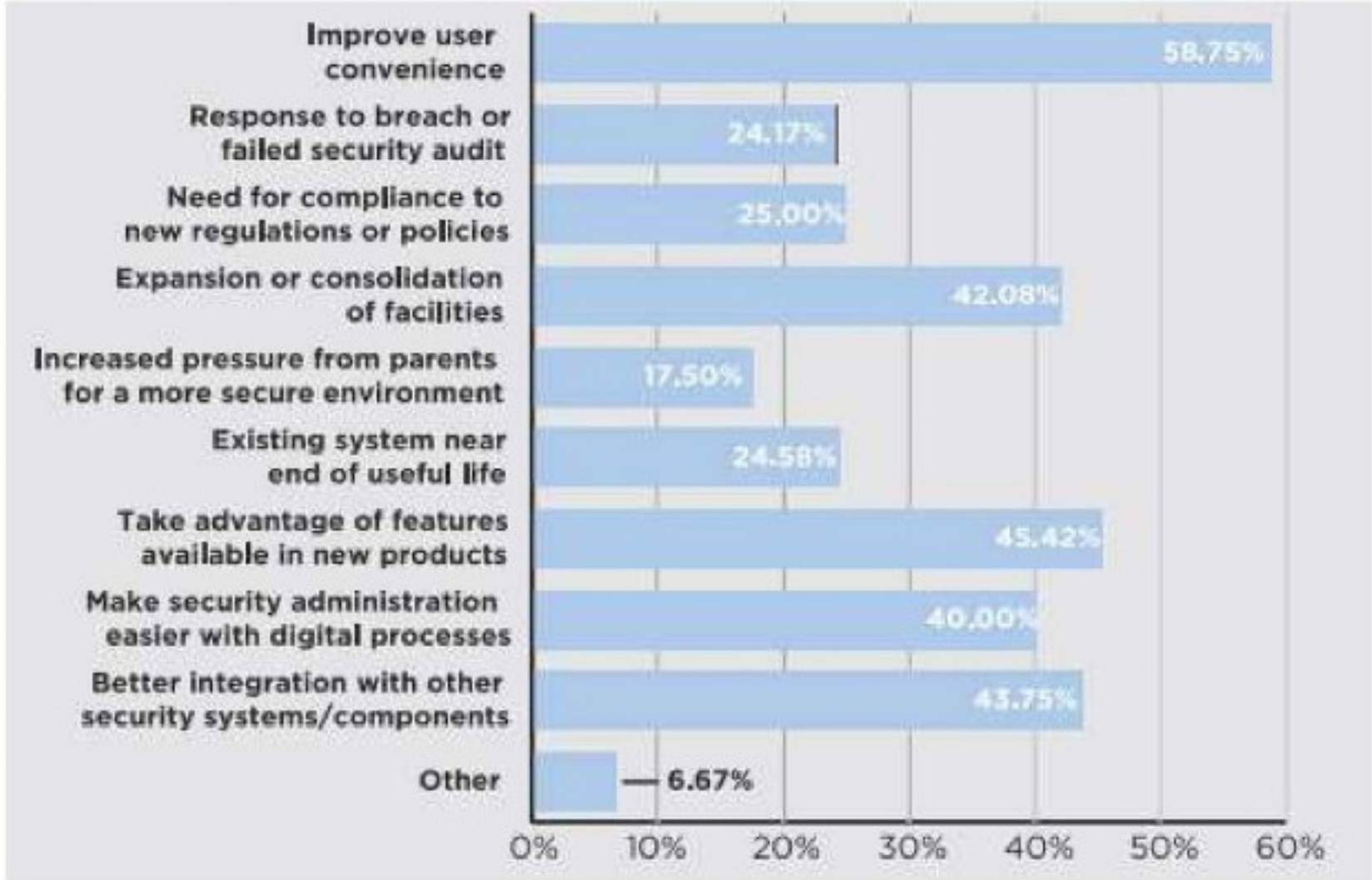
COLORID  
**LOST ACCESS CONTROL CARDS EACH YEAR**



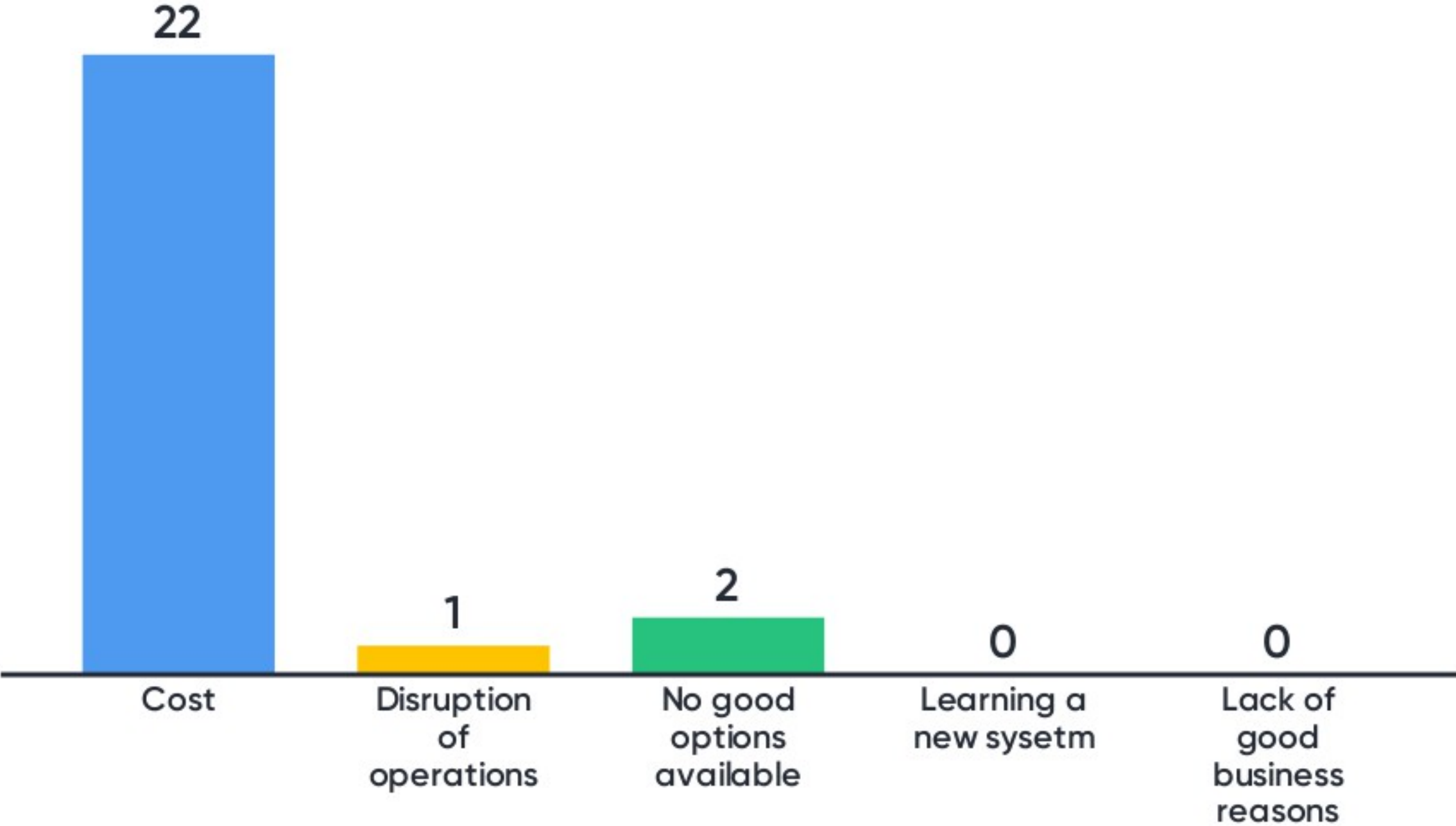
# Drivers for new ID technologies



# COLORID DRIVERS TO UPGRADE PACS

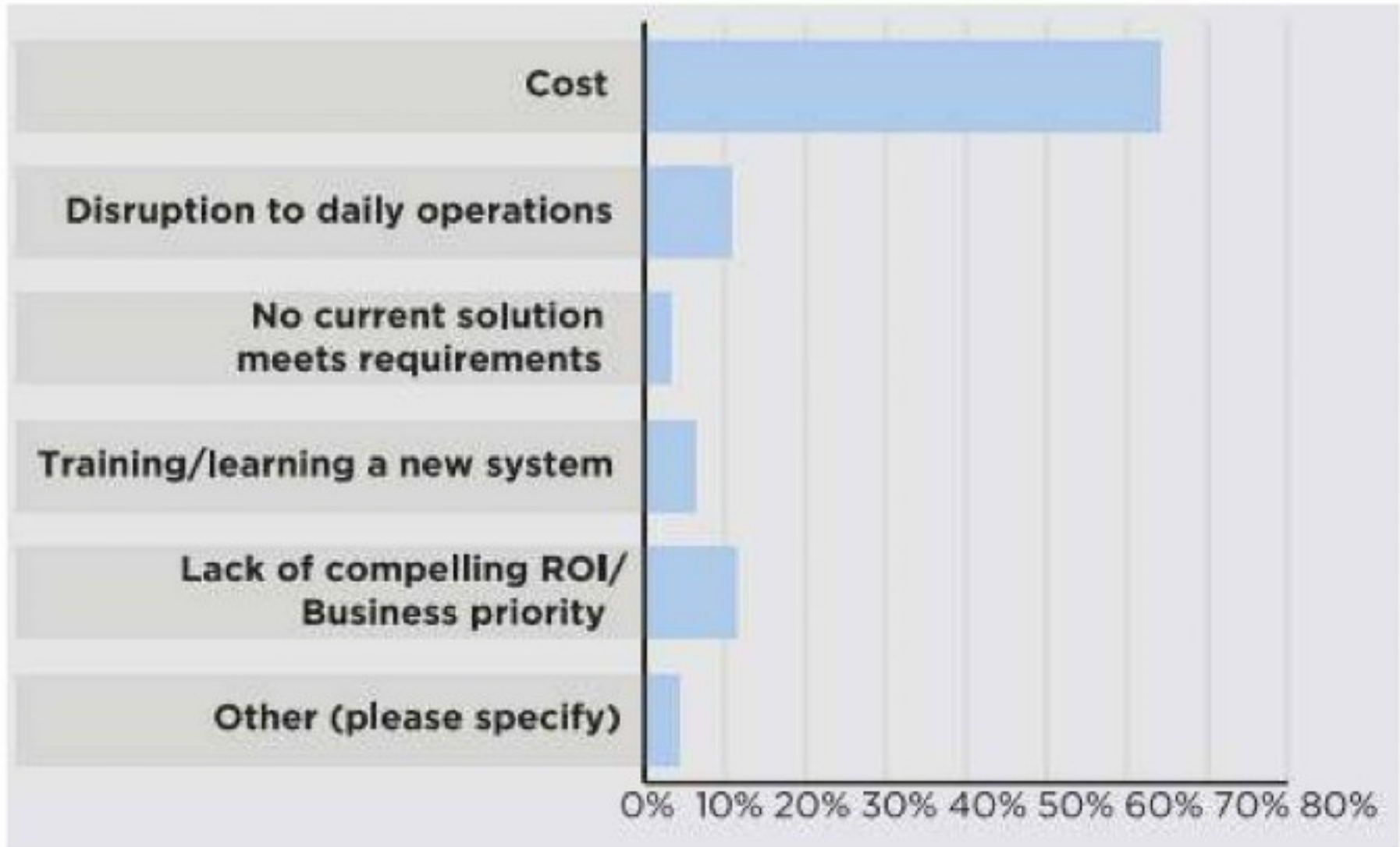


# Biggest obstacle to upgrade of PACS

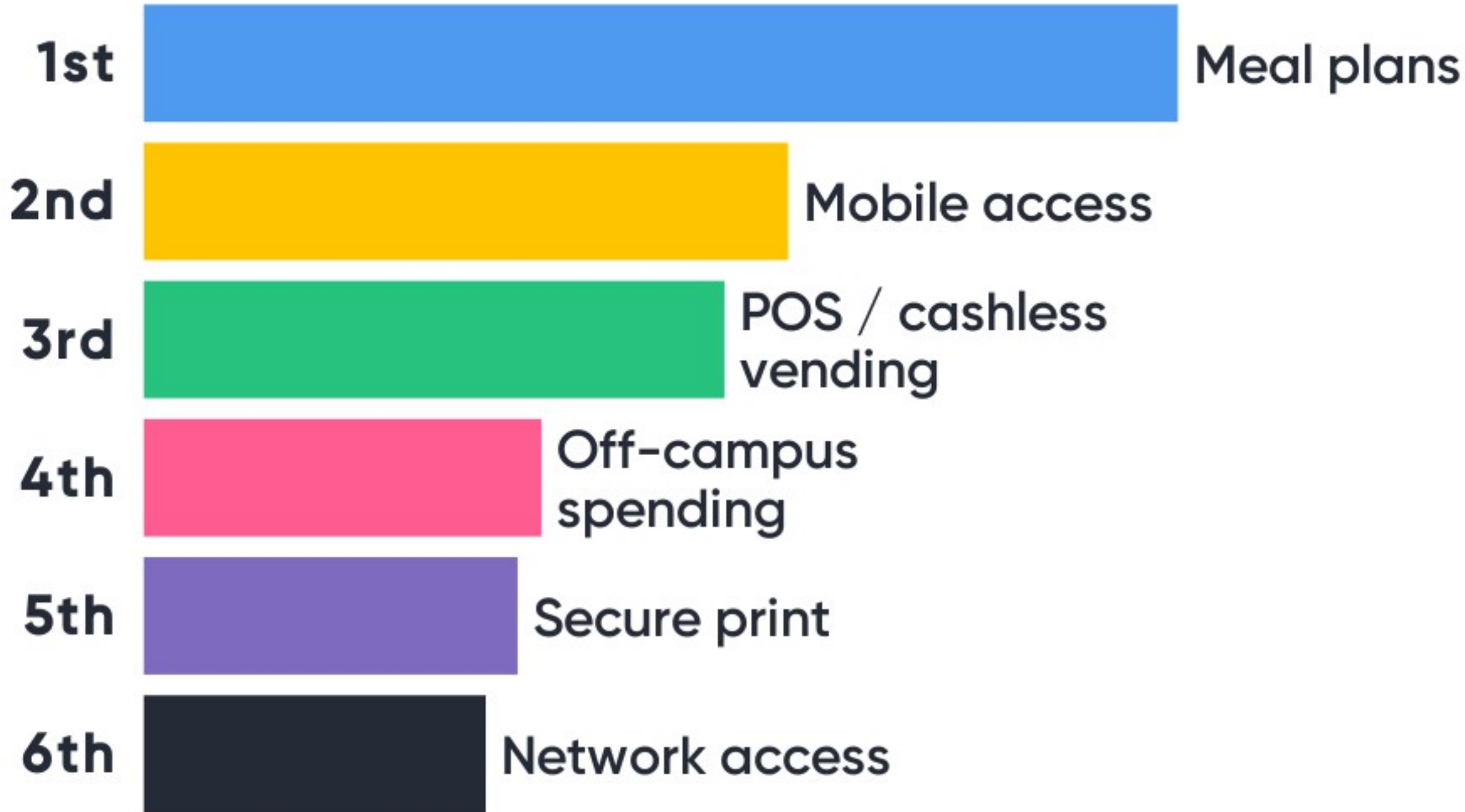


C O L O R I D

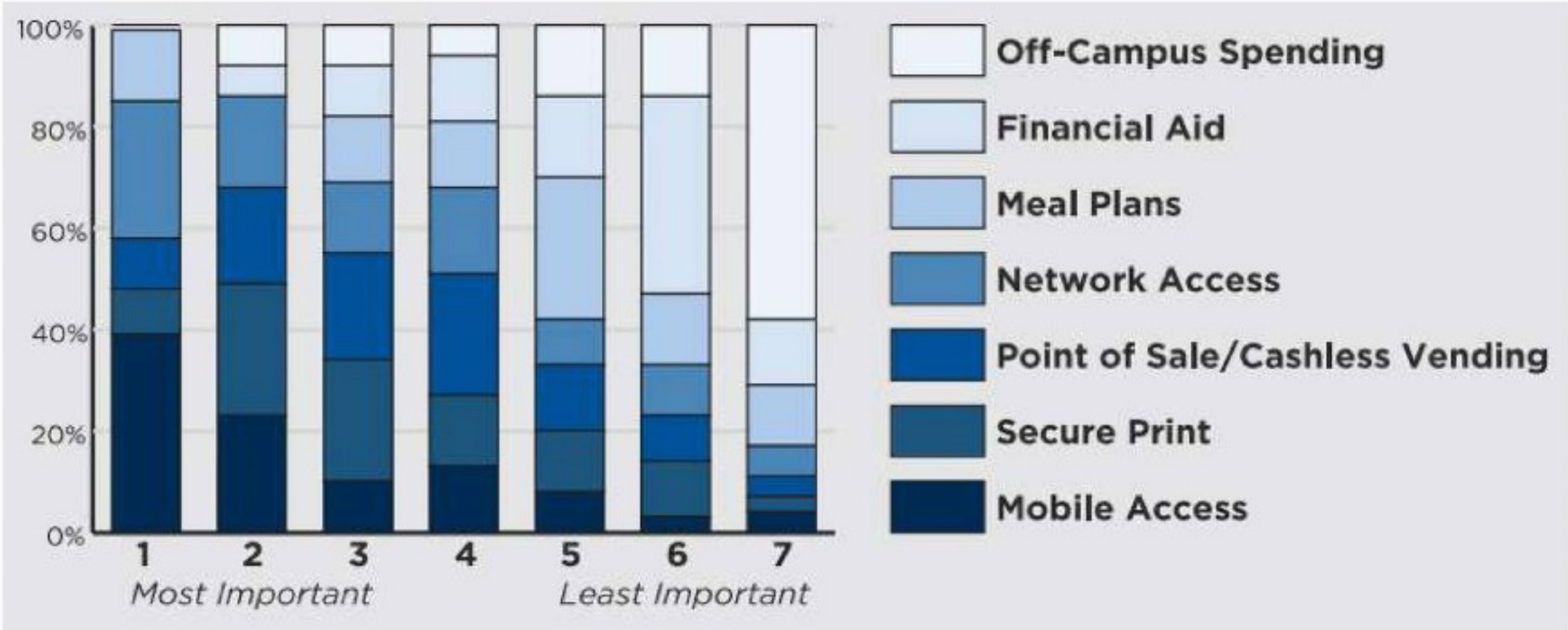
# BIGGEST OBSTACLE TO UPGRADE



# Order by importance



# COLORID ORDER BY IMPORTANCE



# SURVEY OF MOBILE RIGHT NOW AND WHAT YOU CAN DO RIGHT NOW

Or at least, some options to consider

# COLORID HID MOBILE

- BLE and NFC credentials
  - BLE only on iPhone



C O L O R I D

## HID MOBILE

- HID Mobile ID portal (Origo) business model:
  - New subscription portal
  - Credentials can be pulled back from phones
    - Expired, lost, revoked
  - Old model - one-time credential purchase
    - No replacement credentials
    - Losing or replacing your phone requires new credential
  - New model
    - Annual subscription
    - Credential per cardholder lasts all year, regardless



# COLORID

## HID READERS FOR MOBILE

- Readers are ordered with BLE modules
  - They can also be added later
- HID Reader Manager app for phones
  - No more flash cards!
- BLE and NFC, one or both
- BLE up to 8 ft. – good for parking
  - Can be dialed down to short range, or turned off
- Runs on both phone OS



C O L O R I D

## ALLEGION SCHLAGE MOBILE

- Introduced in 2013
- NFC on Android only
- Works on Schlage locks and wall-mount readers
- Schlage NDE and LE locks have BLE
  - Only for configuration and updates with mobile device
  - Not for access credentials
  - Access is by cards - prox, MIFARE, DESFire

C O L O R I D

## KEYS AND MOBILE SIDEBAR

- Unique encryption key for each site or institution
  - In both credentials and readers
- Keys
  - Encryption key is like a password that protects data
  - Any data can be encrypted
  - Key has to be known by reader
- Mobile credentials and readers can be even less interoperable than contactless smart cards
- **But phones can carry multiple credential apps!**

C O L O R I D

## APPLE AND TRANSACTION (BLACKBOARD)

- Only Transact has access to Apple NFC
  - NFC only, no BLE
  - Apple credentials only work on Transact readers
    - Encryption key
- Rumor of full compliance across campus
  - University provides properly configured NFC readers everywhere cards are read
  - This solves a lot of interoperability problems!
- \$5M upgrade at Duke
- 3000 new readers at Alabama
- NDA...



C O L O R I D

## SAFETRUST

- Mobile app with BLE
- Sabre Decal
  - Converts Bluetooth to prox signal
- Sabre replacement reader covers
  - Turn almost any legacy reader into BLE mobile
  - Prox, iCLASS
- Issuance portal with additional features
  - Tracking of mobile credential use
    - Geo, time, date
- SafeTrust wallet for multiple credentials



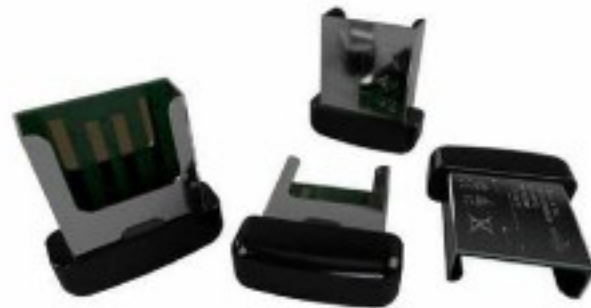
C O L O R I D

# SAFETRUST

- SafeTrust provides BLE to:
  - WaveLynx readers
    - LEAF
  - RF IDEas readers
  - ISONAS readers



- Logical access dongle for Windows, Mac, Linux



## NFC – PHONES AND READERS

- There seems to be some confusion
  - NFC is a broad standard
    - Two standards, one for passive cards (tags) and one for powered devices
    - Readers can read NFC from phones and some or all of these:
      - MIFARE
      - MIFARE DESFire EV1 and EV2
      - HID Seos
      - iCLASS SE
      - iCLASS
      - Prox

**BLE**

C O L O R I D

## WHY BLUETOOTH LOW ENERGY?

- BLE
- Supported by all mobile platforms
- Range – inches to 30 ft.
- Does it burn more battery?
- No fees to Mobile Network Operators
- BLE is open, but data can be encrypted

## COLORID OTHER MOBILE PROVIDERS

- Lenel BlueDiamond
  - Issue credentials from OnGuard
  - BlueDiamond readers
  - Cards – Prox, MIFARE, DESFire



C O L O R I D

## SALTO LOCKS

- Bluetooth module for SALTO locks
  - Can be added without removing lock
  - Readers can still read cards



C O L O R I D

## ID123

- Card is visual image on phone
- Moving visual elements
- Remote management
  - Expire, renew, revoke
- Barcode show and scan
- Front and back
- Selfie
- Offline and online



# COLORID KORNUKOPIA / IDENTIFIED

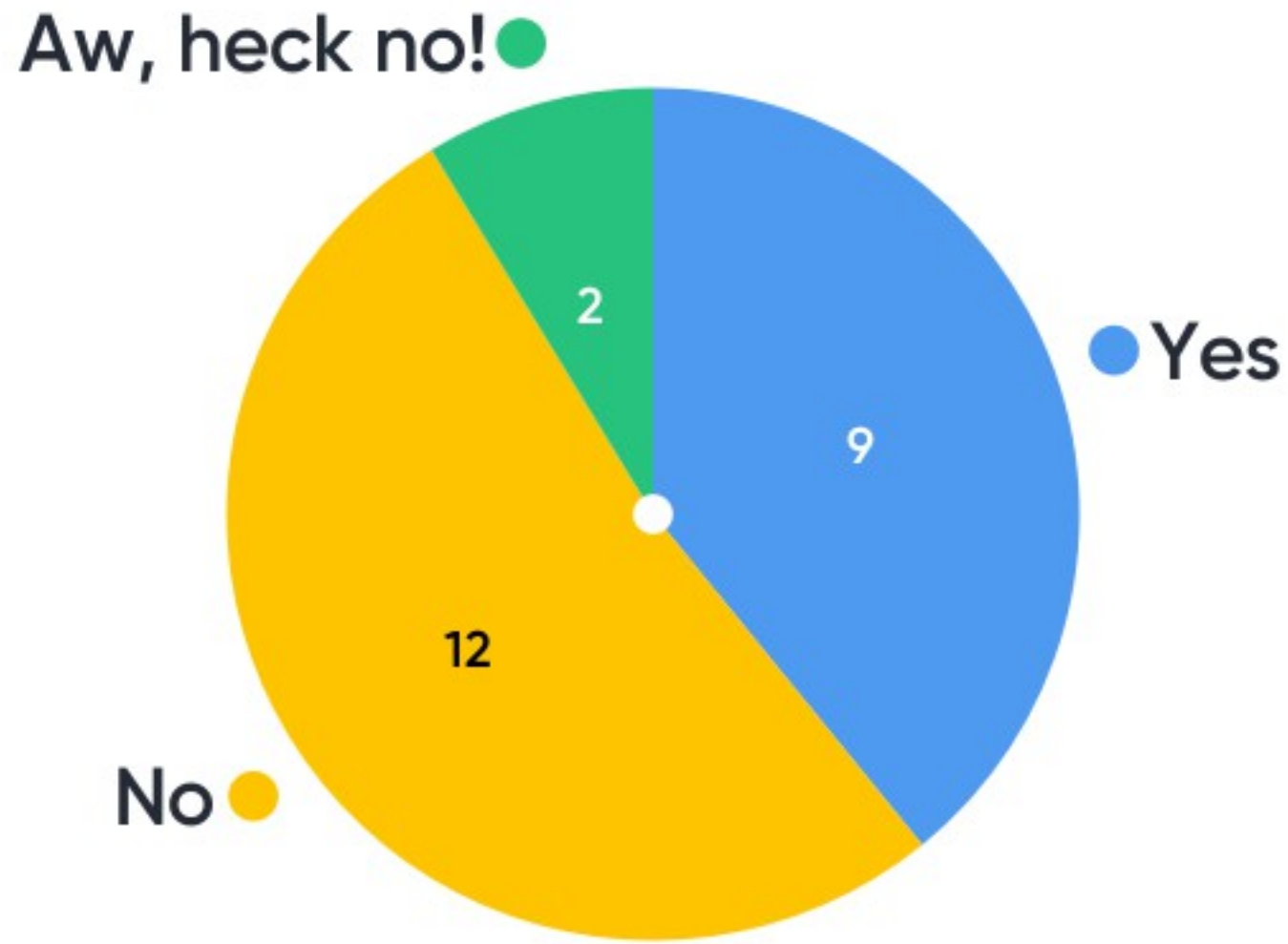


# COLORID GOVERNMENT ID FOR MOBILE

- Developing standards
- Requires 2<sup>nd</sup> channel verification
- Louisiana, Iowa, Delaware, Oklahoma, many others



# Would you consider a mobile-only campus?



C O L O R I D

## FLASHBACK - MOBILE SHORTCOMINGS

~~Lack of visual identification~~

~~Sense of belonging with ID card~~

~~Legacy Mag and Barcode Systems~~



# COLORID DUPLICATE CREDENTIALS

- Mobile
  - Phone
  - Watch
- Card too?

C O L O R I D  
CONSIDERATIONS WITH MOBILE ID

Consider  
This

---

In many cases, mobile credentials and/or readers can be more expensive than a traditional card

---

Current hardware decisions need to be made with mobile in mind

---

Work with Partners who are familiar with these technologies and can provide complete solutions

C O L O R I D  
APPLE MOBILE NEWS



**University of Texas student government pines for mobile ID**

02 November, 2018 By: Andrew Hudson CATEGORY: CARD ISSUANCE, DIGITAL ID, MOBILE

News of Apple devices now supporting mobile credentials on the iPhone and Watch has turned quite a few heads. Now, a student government push at the University of Texas at Austin wants to usher in the era of mobile IDs.

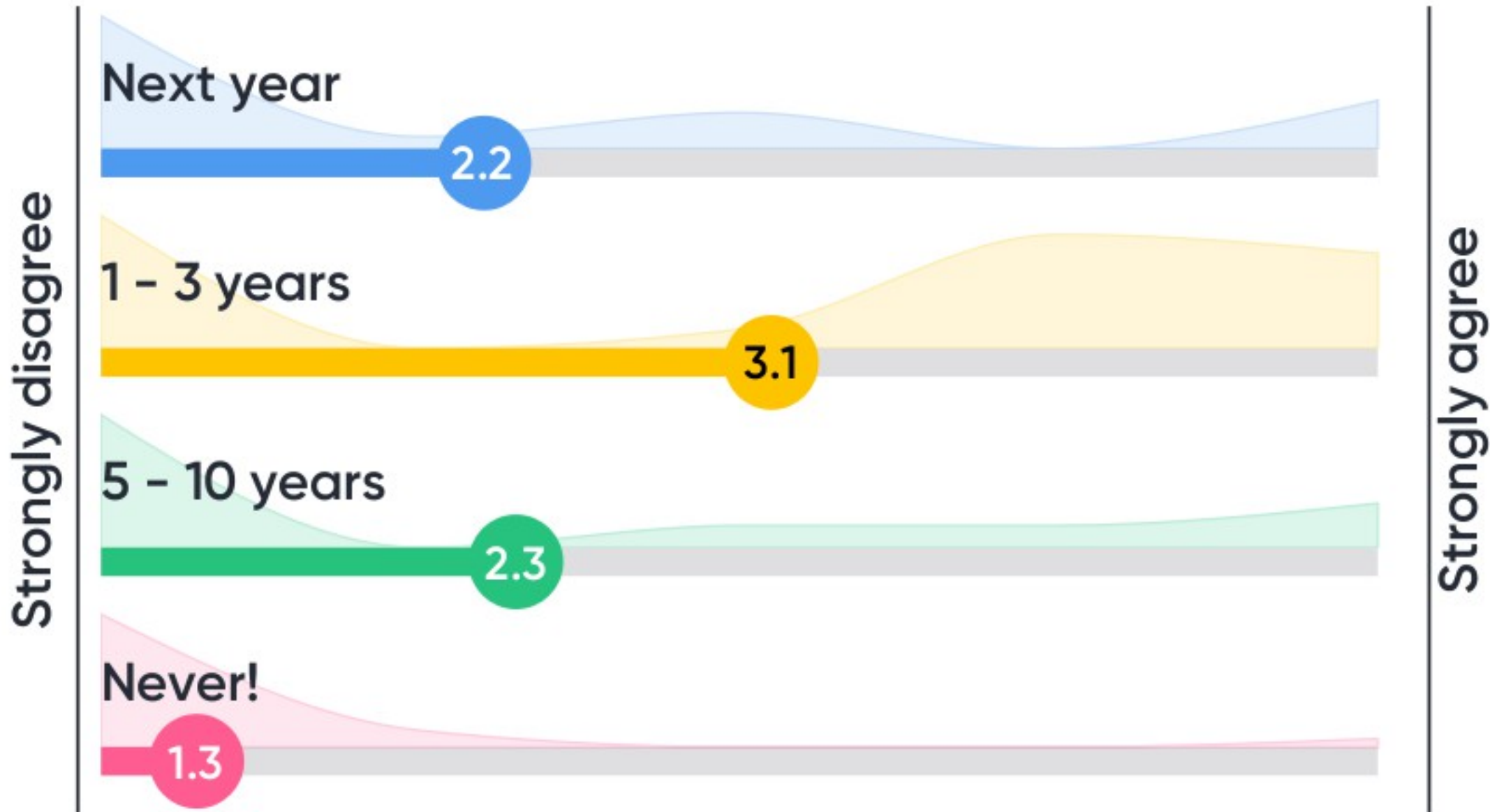
As reported by [The Daily Texan](#), the university's student government has started an initiative to bring mobile IDs to UT after being inspired by an article detailing the Blackboard Mobile Credential at Duke University, the University of Oklahoma and the University of Alabama. A representative for Texas' student government has even gone so far as to reach out to Apple directly to find out how to incorporate mobile IDs on UT's campus.

<https://www.cr80news.com/news-item/university-of-texas-student-government-pines-for-mobile-id/?tag=email>

## COLORID WHAT DO WE KNOW?

- Strong interest in convenience over security
- Cost is an obstacle
- There are many options
- Hardware replacement and integration can be big projects
- A campus could leapfrog to mobile from mag stripe or prox
- Mobile apps can provide access to multiple systems in ways cards can't

# How soon do you think your campus will adopt mobile?



# Mobile ID makes me feel...



# Please rate the following:

