

NETWORK ATTACHED STORAGE

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LANDSCAPE STUDY

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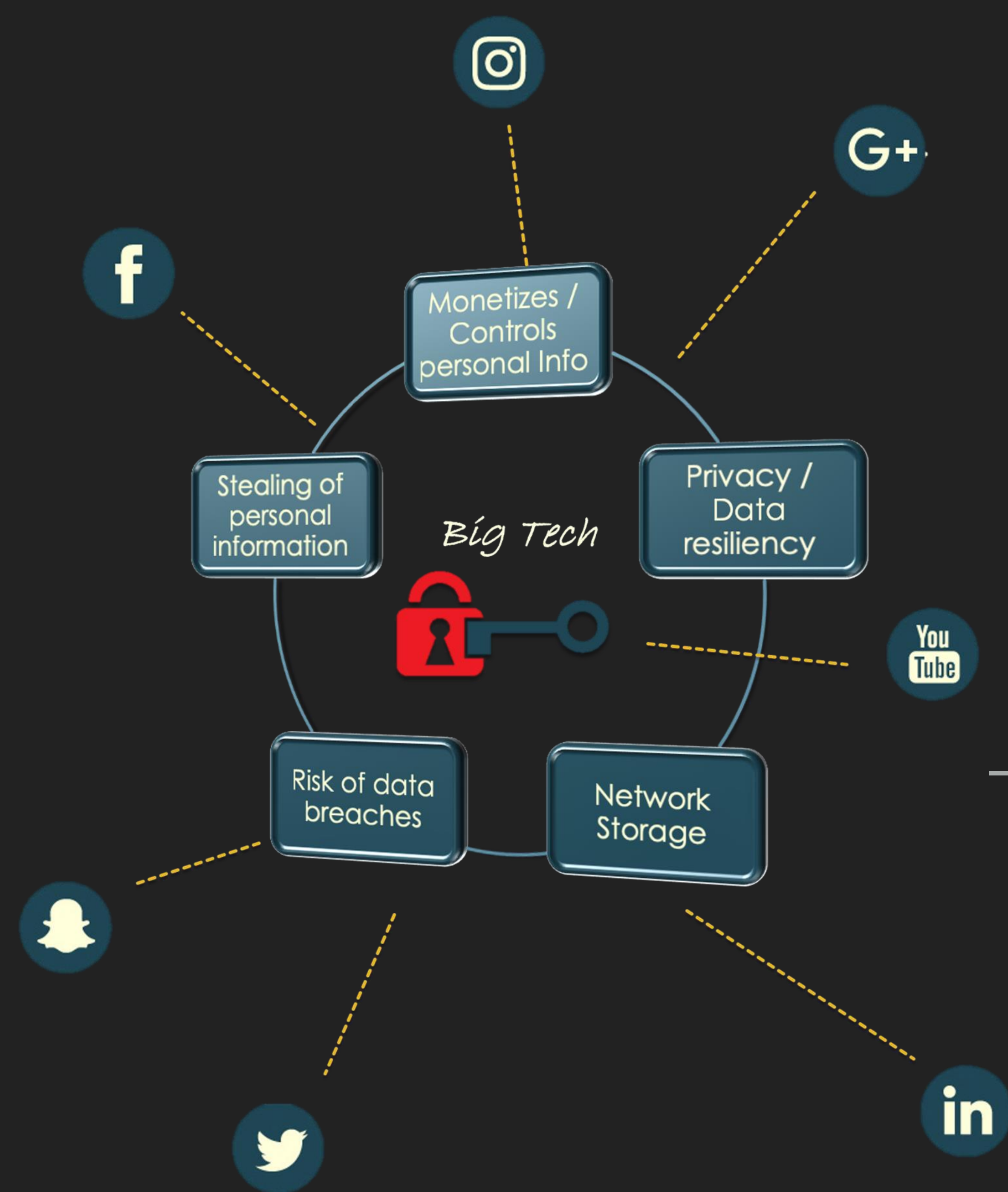
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WHAT'S THE PROBLEM WITH STORAGE THESE DAYS?

WHY DO YOU WANT TO CONTROL YOUR DATA?

- ▶ Companies and fraudsters are monetizing your data without you knowing
- ▶ Bad actors can use your data to influence your behavior in negative ways
- ▶ Dark web costs for data is extremely high:
 - ▶ Hacked Coinbase: **\$610**
 - ▶ Complete Health Record: \$250
 - ▶ Personal Email: up to \$89
 - ▶ Hacked Facebook: \$65

Demographic		Cost per person	% of population
Sex	Male	\$0.15	48.59%
	Female	\$0.14	51.41%
Age	18-24	\$0.36	11.92%
	55	\$0.05	32.32%
Ethnicity	Middle Eastern	\$0.62	1.21%
	Hispanic	\$0.01	8.09%
Family Income	\$40k - \$55k	\$0.02	4.94%
	\$120k - \$150k	\$0.33	1.84%

Record Type	Average Price
Health Care Record	\$250.15
Payment Card Details	\$5.40
Banking Records	\$4.12
Access Credentials	\$0.95
Social Security Number	\$0.53
Credit Report	\$0.31
Basic PII	\$0.03

WHAT IS NETWORK ATTACHED STORAGE (NAS)?

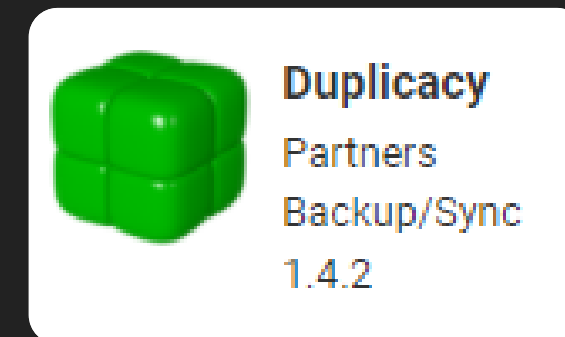
- ▶ Storage Device + CPU plugged into and accessible from a local network
- ▶ Useful for syncing/backing up data locally
- ▶ Typically “dumb” with simple features and interface



WHAT DO PEOPLE TYPICALLY STORE ON A NAS TODAY?

- ▶ File syncing

- ▶ Basic data backup
- ▶ Photo management
- ▶ Media library



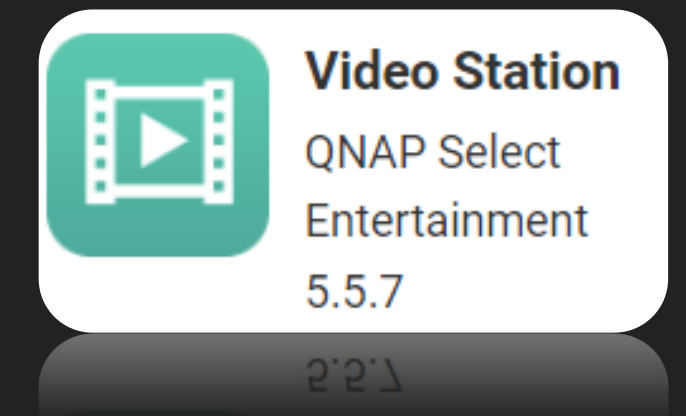
- ▶ Productivity and collaboration

- ▶ Office documents
- ▶ Chat logs



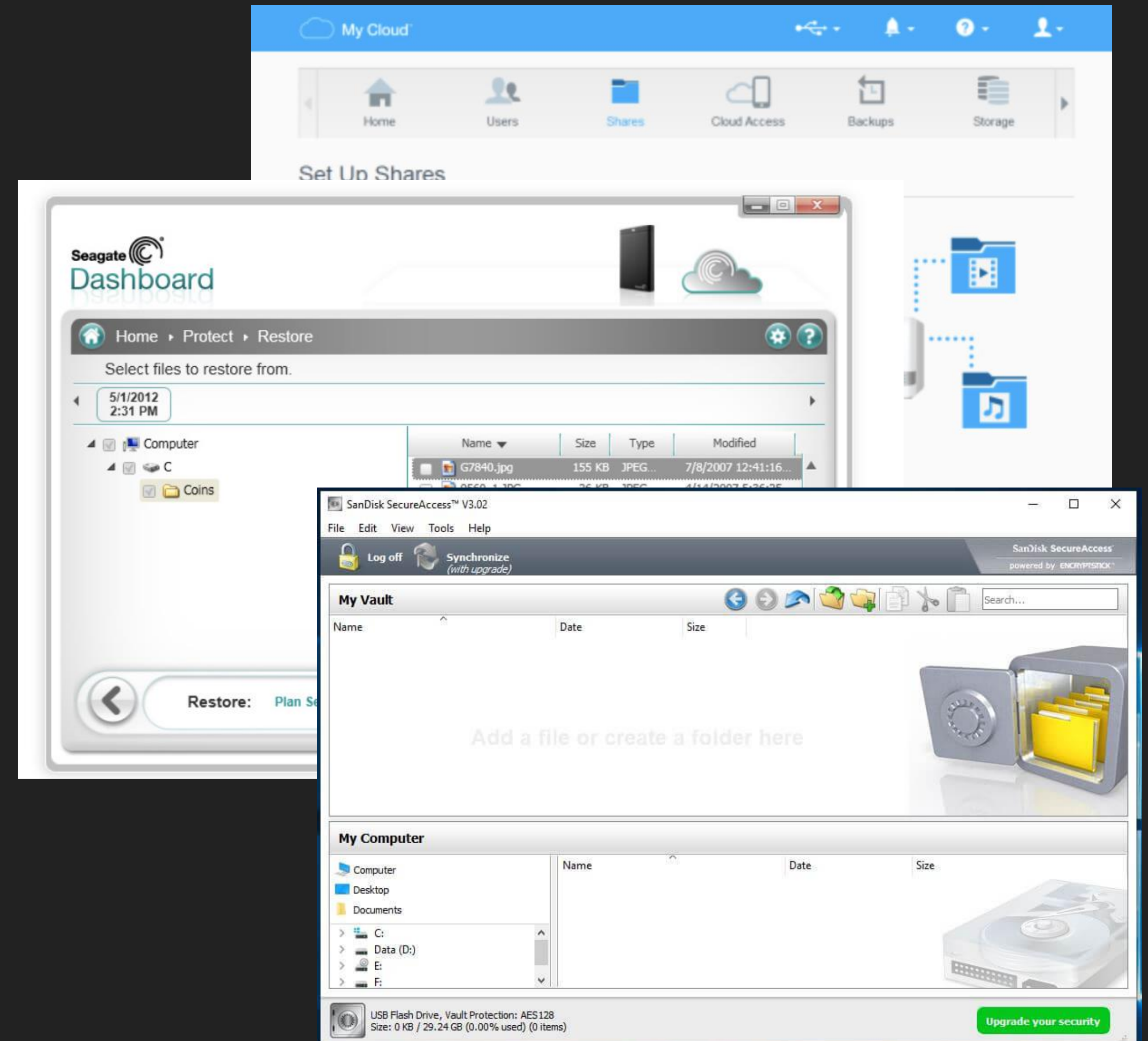
- ▶ Large video files

- ▶ Surveillance videos
- ▶ Locally backup up videos
- ▶ Video production



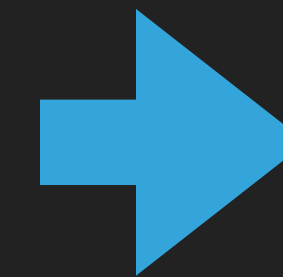
SHORTCOMINGS OF THE CURRENT NAS

- ▶ Simple file storage
- ▶ “Dumb” with poor UI
- ▶ Undifferentiated products
- ▶ “Complex” products not user friendly



WHERE IS THE OPPORTUNITY FOR A "SMART NAS"?

- ▶ **SMARTER** than just a plain storage device with a beautiful UI
- ▶ **Automatic and Easy** - Backup your important things regardless of source transparently (phone, social media, videos, photos)
- ▶ **Discoverability** - Make your data easy to find automatically



OPPORTUNITIES AROUND SMART NAS IDEAS

▶ Discoverability

- ▶ Personalized Search Engine
- ▶ ML auto-classification

▶ Storage

- ▶ Automatic data backup from devices AND social media networks
- ▶ Reassured your personal data is **YOURS**

▶ Media

- ▶ Built in media player and library
- ▶ Remote access and sync of your content

▶ Easy to use

- ▶ As easy to use as your iPhone
- ▶ It knows what you want and need

QUICK, CAN YOU NAME A NAS COMPANY?

- ▶ Probably not
- ▶ The products are completely undifferentiated
- ▶ Can somebody be the Apple of NAS?

DELL
Technologies

 **HITACHI**

IBM®



SEAGATE

WD Western
Digital

NETGEAR®

BUFFALO™

Synology®

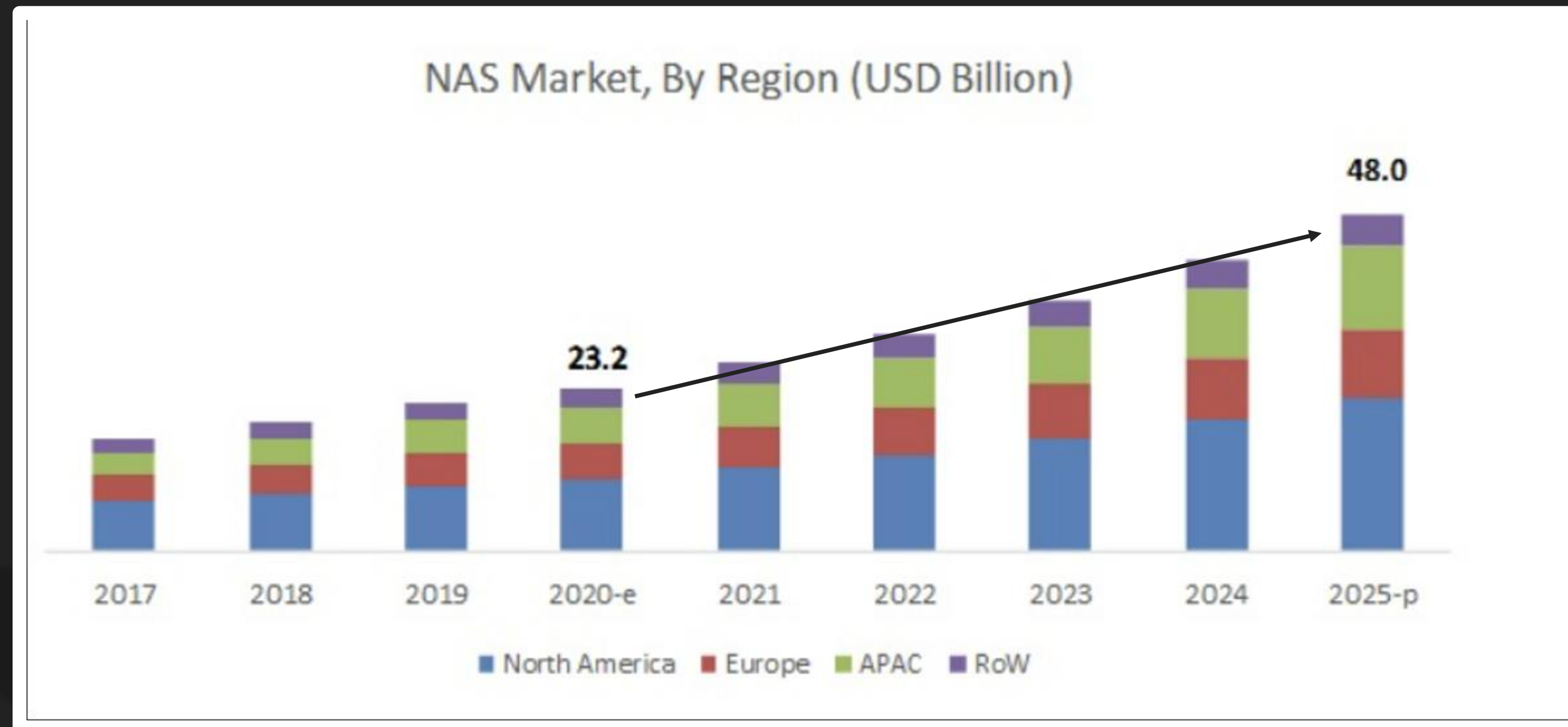
drobo

QNAP

asustor
ASUSTOR Inc.

THE NAS MARKET IS GROWING!

- ▶ Due to 5G, mobile devices, and larger data formats - there is a need for more storage
- ▶ Biggest driver for NAS growth
- ▶ Relatively even distribution of market share across companies



BUT, FOR NOW, THE PERSONAL CLOUD MARKET IS GROWING FASTER

- ▶ Personal data cloud growth from \$26.8B in 2019 to \$161.39B **(502%)** in 2027
- ▶ NAS market growth from \$23.B in 2019 to \$40.8B **(71.4%)** in 2026
- ▶ **502% vs 71%**



PRODUCTIZATION: HOW DOES A NAS GET SMART?

- ▶ Solve your customer's biggest pain point **first**
- ▶ **Help** them find old content posted online and permanently archive it
- ▶ Build on successes with phases

Phase 1

Automated
download/back
up/archive of
social media
content

Phase 2

Indexing of
automated
archived
content

Phase 3

Sharing of
archived
content outside
of the social
ecosystem

Phase 4

Build an
attribution
system and
publishing
system for
content

Phase 5

Build an app
store so
developers can
add more
functionality to
system

CONCLUSION

- ▶ Making a smarter NAS increases the total addressable market (TAM)
- ▶ New features can provide more secure personal data storage and sharing
- ▶ Synology and Qnap have best application support and UI today