



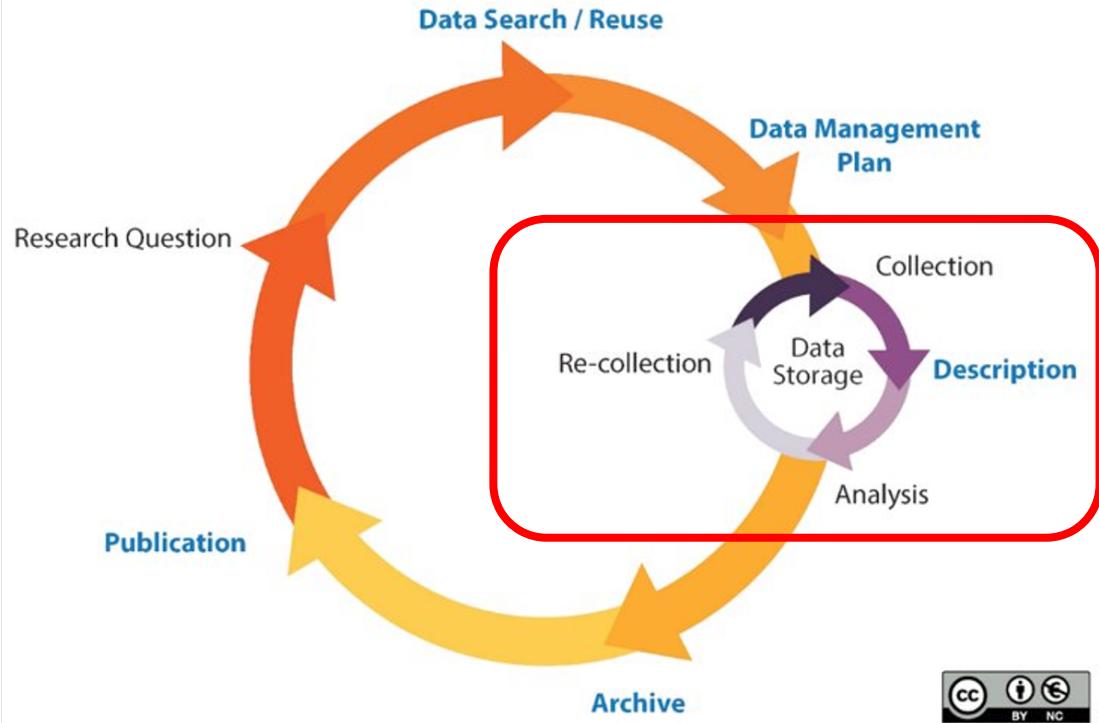
UiT The Arctic
University of Norway

Storage resources at UiT

Tromsø, 6. December 2021

Erik Axel Volland, IT department

Storing vs Archiving



Storing

- Collecting
- Raw data
- Active data
 - Analyse og bearbeiding
- Safekeeping

Archiving

- Deposit in archives
- Publishing
 - Data made findable and reusable

Adapted original source:
The University of California, Santa Cruz,
Data Management LibGuide, Research Data Management Lifecycle, diagram,
viewed May 2, 2016 at <<http://guides.library.ucsc.edu/datamanagement>>



3 main points of information security

- Confidentiality
 - Information is accessible only for users authorized for it
- Integrity
 - Information is protected from unauthorized deletion and manipulation
- Accessibility
 - Information is accessible to users when they need it



In practical terms

Data

- Classified according to confidentiality
- Stored in a system that protects against unauthorized change and deletion
- Stored on a backed-up system to prevent data loss



Classification

Informasjonssikkerhet og personvern ved UiT

UiT Norges arktiske universitet behandler store mengder informasjon innenfor forskning, utdanning, formidling og administrasjon. Det er avgjørende at vi klarer å ivareta informasjonssikkerheten på en god måte, ikke minst for å ivareta den tilliten UiT er avhengig av som forsknings- og utdanningsinstitusjon. Dette skal skje uavhengig av om informasjonen behandles fysisk eller digitalt.

Ønsker du komme i kontakt med faggruppe for personvern og informasjonssikkerhet? Kontakt oss på e-post sikkerhet@uit.no.

<https://uit.no/sikkerhe>

Ledelsessystem for informasjonssikkerhet og personvern

Vedlegg til ledelsessystemet (retningslinjer, rutiner)

Risikovurderinger

Melde avvik

IT-tjenester og systemer - hva har du lov til å bruke? Og når?

Opplæring og veiledning

Personvern

Sikkerhetstiltak

Om UiTs arbeid med sikkerhet og personvern



- Information must be classified. UiT Information Security Governance System Chapter 3
 - [Guidelines in Chapter 3 \(In norwegian\).](#)
- 4 classes:

Grønn	Gul	Rød	Svart
<i>Åpen</i>	<i>Intern</i>	<i>Fortrolig</i>	<i>Strengt fortrolig</i>
- The information owner is responsible for classifying

Criteria for classification classes

Detailed descriptions of the various confidentiality classes:

	Open
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This information *can* or *must* be available to anyone without special access rights.

Most of the information UiT manages is in the Green (Open) class because of the purpose of the university's activities or instructions relating to transparency in acts, regulations and other documents regulating public administration and the university's activities. Information may be classified as Green even though it is not openly available to everyone.

Examples of such information are:

- a web page that presents a department or unit that is openly available on the internet
- study material for a course that is openly available, but which is marked with a given licence and/or copyright
- master's theses that do not need any protection
 - The faculty is responsible for assessing whether master's theses can/must be exempt from being made publicly available³, and as such shall be placed in a higher class.
- research data that does not require any protection
 - the researcher is responsible for this assessment. For projects involving several researchers, the project manager is responsible.
- teaching materials that do not need any protection
 - The teacher is responsible for this assessment.

Please note that although information in this class can be available to everyone, it is not necessarily the case that everyone shall be able to *change* the information. The integrity of the information must be safeguarded by only allowing authorised users to change the information (see the description of the various integrity classes). Moreover, information classified as open can not necessarily be distributed or used for other than its intended purpose.

	Internal use
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The information must have some degree of protection and may be available for both external and internal users, with controlled access rights. This class shall be used if it could cause a certain amount of harm to UiT or partners if the information becomes known to unauthorized persons. There is no statutory or internal requirement that the information shall be publicly available.

Examples of such information are:

- certain unfinished documents
- information that is exempt from being made publicly available
- marks/grades
- examination answer papers
- unpublished research data and research works
- unpublished proposals of research projects

	Confidential
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Red ("confidential") is used if it will cause harm to public interests, UiT, businesses, individuals or partners if the information becomes known to unauthorized persons. The information must be controlled with strict access rights.

Examples of such information are:

- certain strategy documents
- confidential information
- certain special categories of personal data (formerly known as "sensitive personal data"), such as health data
- certain information of significance to building security and/or information security
- examination question papers before they are given
- certain types of research data and research works
- certain applications for research funding

	Strictly confidential
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Black ("strictly confidential") is used if it will cause *significant* harm to public interests, UiT, businesses, individuals or partners if the information becomes known to unauthorized persons. The information must be controlled with the strictest access rights.

This category shall only be used when strictly necessary and always in consultation with the information security adviser at UiT.

Examples of such information are:

- large amounts of special categories of personal data (formerly known as "sensitive personal data"), such as health data
- health registers of a certain scope
- research data and research works of high economic value
- information about people with requiring special protection, e.g. "secret addresses"



Services allowed

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- Risikovurderinger
- Melde avvik
- IT-tjenester og systemer - hva har du lov til å bruke? Og når?
- Opplæring og veiledning
- Personvern
- Sikkerhetstiltak
- Om UiTs arbeid med sikkerhet og personvern

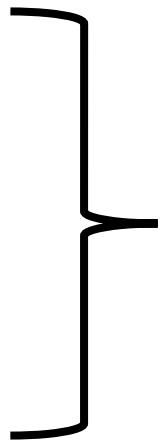


Services allowed

System / tjeneste	Åpen/Grønn	Intern/Gul	Fortrolig/Rød	Strengt fortrolig/Svart	Databehandler (hvis aktuelt)
Canvas	OK	OK	ikke godkjent	ikke godkjent	Instructure
Ephorte	OK	OK	OK	OK	Egen drift
E-post (office 365)	OK	OK	ikke godkjent	ikke godkjent	Microsoft
EUTRO	OK	OK	OK	OK	Egen drift
Fellesområder	OK	OK	ikke godkjent	ikke godkjent	Egen drift
Felles Studentsystem (FS)	OK	OK	ikke godkjent	ikke godkjent	Unit
Forms (office 365)	OK	OK	ikke godkjent	ikke godkjent	Microsoft
Hjemmeområdet (H:\)	OK	OK	ikke godkjent	ikke godkjent	Egen drift
Mediasite	OK	OK	ikke godkjent	ikke godkjent	Unit
Nettskjema / Sikkert nettskjema	OK	OK	OK ¹	ikke godkjent	UiO
OneDrive for Business (office 365)	OK	OK	OK ²	ikke godkjent	Microsoft
Request Tracker (RT)	OK	OK	ikke godkjent	ikke godkjent	Egen drift
Sharepoint (office 365)	OK	OK	OK ²	ikke godkjent	Microsoft
Stream (office 365)	OK	OK	ikke godkjent	ikke godkjent	Microsoft
Sway⁵ (office 365)	OK	ikke godkjent	ikke godkjent	ikke godkjent	Microsoft
Teams (office 365) - filer	OK	OK	OK ²	ikke godkjent	Microsoft
Teams (office 365) - møter	OK	OK	OK ³	ikke godkjent	Microsoft
TOPdesk	OK	OK	OK ⁶	ikke godkjent	TOPdesk
Tjeneste for sensitive data (TSD)	OK	OK	OK	OK	UiO
WiseFlow	OK	OK	OK ⁴	ikke godkjent	UNIwise
Yammer (office365)	OK	ikke godkjent	ikke godkjent	ikke godkjent	Microsoft
Zoom	OK	OK	ikke godkjent	ikke godkjent	Uninett



Integrity
• Availability



Store data on a secure
backed-up system

Office 365

Office 365 is UiT's primary collaboration and storage tool

Departmental shared disks will be moved to Teams/Sharepoint in
2021

- The home folders will be moved to OneDrive



Office 365 for research data

Teams/SharePoint – groups and projects

**OneDrive
UiT!** – personal storage. NB!! **Is deleted** when users leaves



Office 365 lets you share data

- Users you are sharing with must have an Office 365 account and can be invited as guests
- You administer sharing yourself
 - ITA can help you
- To send (large) files: Uninett Filesender
 - <https://filesender.uninett.no>



Local storage resources

- Research data service
 - Not directly mountable on client computers
 - Up/Download via terminal server client
 - Contact the helpdesk for space

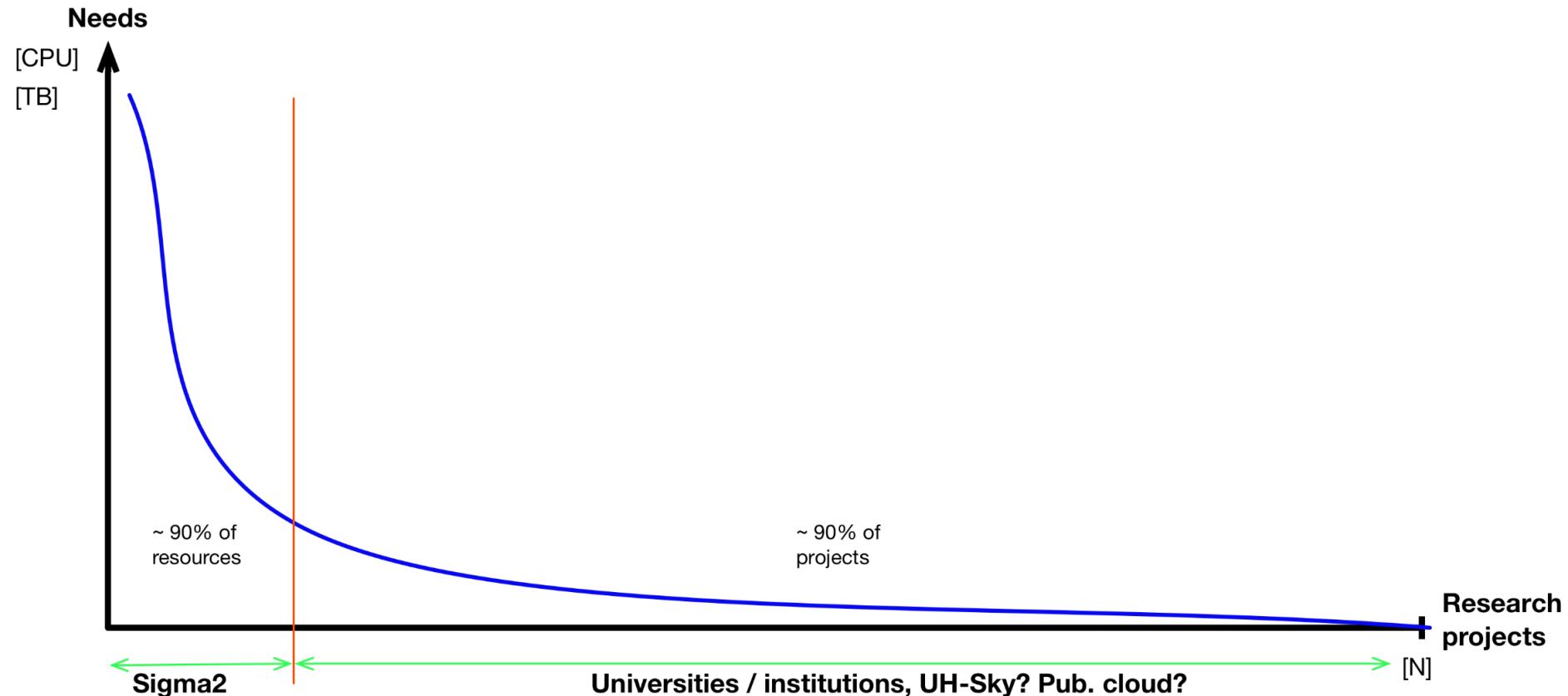


Governance

- Base quota of 5 TB free storage per user.
- Pricing model for large projects (0.5 – 1 NOK/GB/Year)



Projects with LARGE storage needs



Credit: H. Eide, UNINETT Sigma2



National e-infrastructure for high-performance computing and storage

- Supercomputers in Tromsø og Trondheim
- Storage through **NIRD** - National e-Infrastructure for Research Data
 - For storage needs from 10TB and above
- Has its own resource allocation procedures
 - More info: <https://www.sigma2.no/>

Storing sensitive data

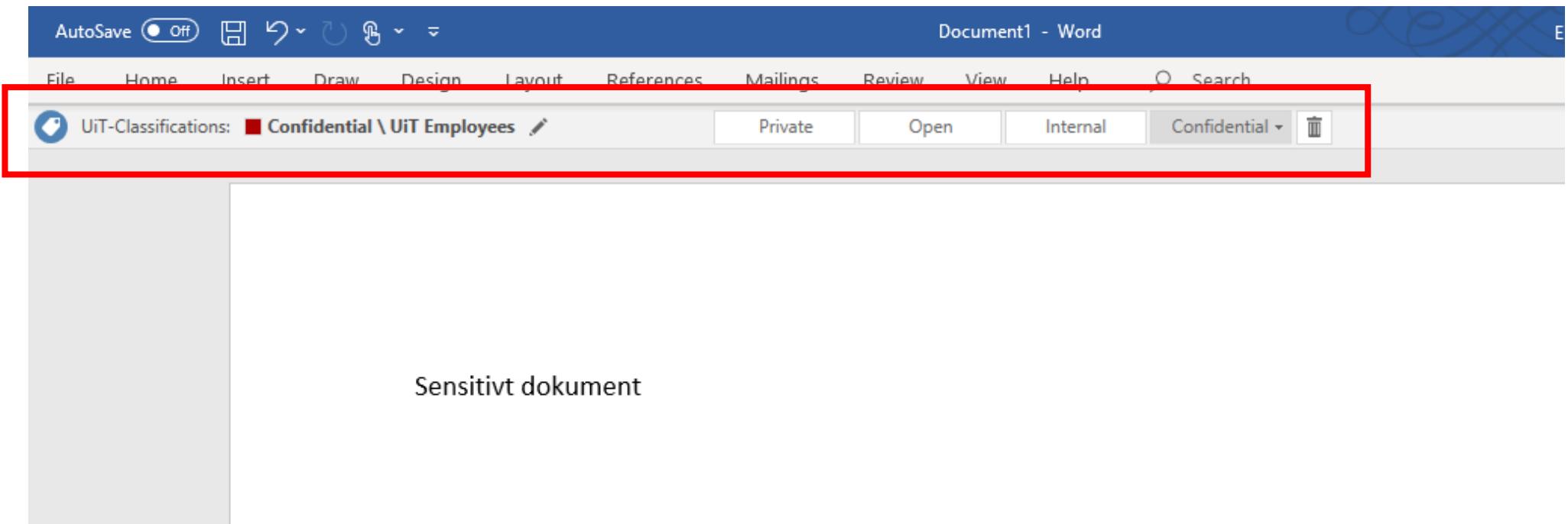
Red data can be stored in Office 365 on 2 conditions

1. Your account must be set up with 2-factor authentication – all employees are
2. Data must be protected with Azure Information Protection (AIP)
 - Built in tool in Office programs (Word, Excel)
 - Can protect other file formats through a manual procedure
 - Requires decrypting before you can work on file



Azure Information Protection

- Built in tool in Office programs like Word, Excel
- Encrypts data according to classification



Services for Sensitive Data

- UiT buys this service from UiO
- Closed environment for storage and analysis
 - Statistics
 - NVIVO
- Very high level of security
 - Strict controls of data import and export
 - All projects totally isolated from other projects
- Nettskjema can send encrypted forms directly to TSD
- Smartphone Dictaphone app can send directly to TSD
- For more info : [TSD web pages](#)
- Cost for projects: NOK 15000 / year
- UiT ITA can give limited local support.



ITA work in progress

Cloud-based services – the future of ITA at UiT

Applications and storage – increased flexibility and dynamics

Cloud-based student labs

Departmental shared drives moving to SharePoint

Home folders moving to OneDrive

Better tools for red data

HUNT Cloud will be available for UiT users

Remote Desktop-tjeneste for red data – «TSD Light»



E-learning on Office 365

<https://app.xtramile.no/courses/uitnorgesarktiskeuniversitet>

The screenshot shows the Xtramile e-learning platform interface. At the top left is the UiT/NORGES ARKTISKE UNIVERSITET logo. The main navigation bar includes 'Erik Axel Volland' (user profile), 'FILTRER' (filter), and 'KURS' (courses). Below the navigation, there are four main course categories:

- OBLIGATORISK FOR ALLE / OBLIGATORY FOR EVERYONE (2 kurs)**: Includes 'Obligatorisk for ansatte' (with 716 participants) and 'Obligatorisk for studenter' (with 118 participants).
- INFORMASJONSSIKKERHET, PERSONVERN, GDPR (NORSK) (4 kurs)**: Includes 'Nasjonal sikkerhetsmåned' (with 36 participants), 'Nye personvernregler fra 2018' (with 104 participants), 'Informasjonsikkerhet' (with 48 participants), and 'GDPR - Hvorfor, hvordan og hva' (with 91 participants).
- OFFICE 365 (NORSK) (9 kurs)**: Includes 'Office 365 - norsk' (with 232 participants), 'Teams - Kom i gang med Microsoft Teams' (with 82 participants), 'Teams - Gør samhandling enklere' (with 49 participants), 'Teams - Administer medlemmer og innhold' (with 58 participants), and 'Planner - norsk' (with 27 participants).
- WORD, EXCEL, POWERPOINT, OSV (NORSK) (10 kurs)**: Includes five thumbnail images related to Microsoft Office applications.

At the bottom left is a Creative Commons Attribution (CC BY) license logo, and at the bottom right is the text 'Research data @ UiT'.

This is a detailed view of the 'Obligatorisk for ansatte' course page. The header features the UiT/NORGES ARKTISKE UNIVERSITET logo and the user 'Erik Axel Volland'. The main title is 'UIT NORGES ARKTISKE UNIVERSITET SELVBETJENINGSKURS Obligatorisk for ansatte'. On the left is a sidebar with 'KURS', 'MINE KURS', 'MIN PROFIL', and 'LOGG UT' buttons. The main content area has a large image of a person standing on a rocky peak under a cloudy sky. The section title 'KURSBESKRIVELSE' is followed by a description: 'Obligatorisk for ansatte. Samling av leksjoner som er obligatoriske for UiT ansatte. You need to know this content. Collection of lessons that are obligatory for UiT employees.' Below this is a section titled 'VELG LEKSJONER' with three listed items:

- Klassifiser filene dine! – Leksjon (with a 'FULLFØRT' button)
- Klassifiser filene dine - hvordan – Leksjon (with a 'FULLFØRT' button)
- Office 365? Hva for noe? – Leksjon (with a 'START NÅ' button)

