

CRIS or Crisis?: How Did We Build a CRIS CRM System to Support Inquiries from Researchers?

Ruhama Amouyal

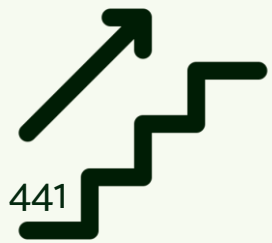


Bar-Ilan
University
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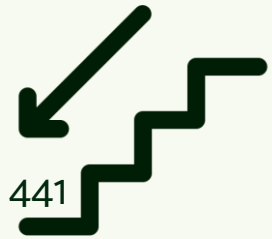
The Libraries
and Information
Division

Pyramidenkogel Tower

How to climb up?



How to climb down?



Who am I?

I'm Ruhama Amouyal

Computing Systems & Technological Applications Coordinator at Bar-Ilan University

- ◆ B.A. Internet Technologies and Information (Bar-Ilan University)
- ◆ M.A. Knowledge Management and Organizational Information (Bar-Ilan University)
- ◆ Academic Course in UX Design (Netcraft Academy)



Agenda



What is a CRIS?



Challenges



Development of the CRIS
CRM System



How to Get Started?



What is a CRIS?





CRIS is a **C**urrent **R**esearch **I**nformation **S**ystem

- ✓ Reduces the manual workload across the entire research function
- ✓ Enable transparency of publications and data
- ✓ Reduces duplication of data entry
- ✓ Give academic institutions more control over their own research, profiles, and output data.



What is a CRIS?

Examples of CRIS Platforms:

System	Description	Company
<u>Pure</u>	Proprietary adaptable research information management system	Elsevier 
<u>Converis</u>	Proprietary research information system by Clarivate	Clarivate 
<u>Symplectic</u>	Research information system supporting Open Access workflows	Digital Science 
<u>Haplo</u>	Closed source development platform for information applications. In the process of being open sourced	Haplo 



Development of the CRIS CRM System

Why do we need this?

- ◆ Help researchers manage their profiles and publications efficiently
- ◆ Guide researchers to add publications in different ways
- ◆ Support and monitor the academic activity of researchers
- ◆ Give researchers an initial training to master the management of their profiles
- ◆ Offer technical support to perform an action or resolve an issue

Vegetarian ideology in Talmudic literature and traditional biblical exegesis

Shemesh, Y., 2010, *Genesis*. p. 107-127 21 p.

Research output: Chapter in Book/Report/Conference proceeding > Chapter

Vegetarian Ideology in Talmudic Literature and Traditional Biblical Exegesis

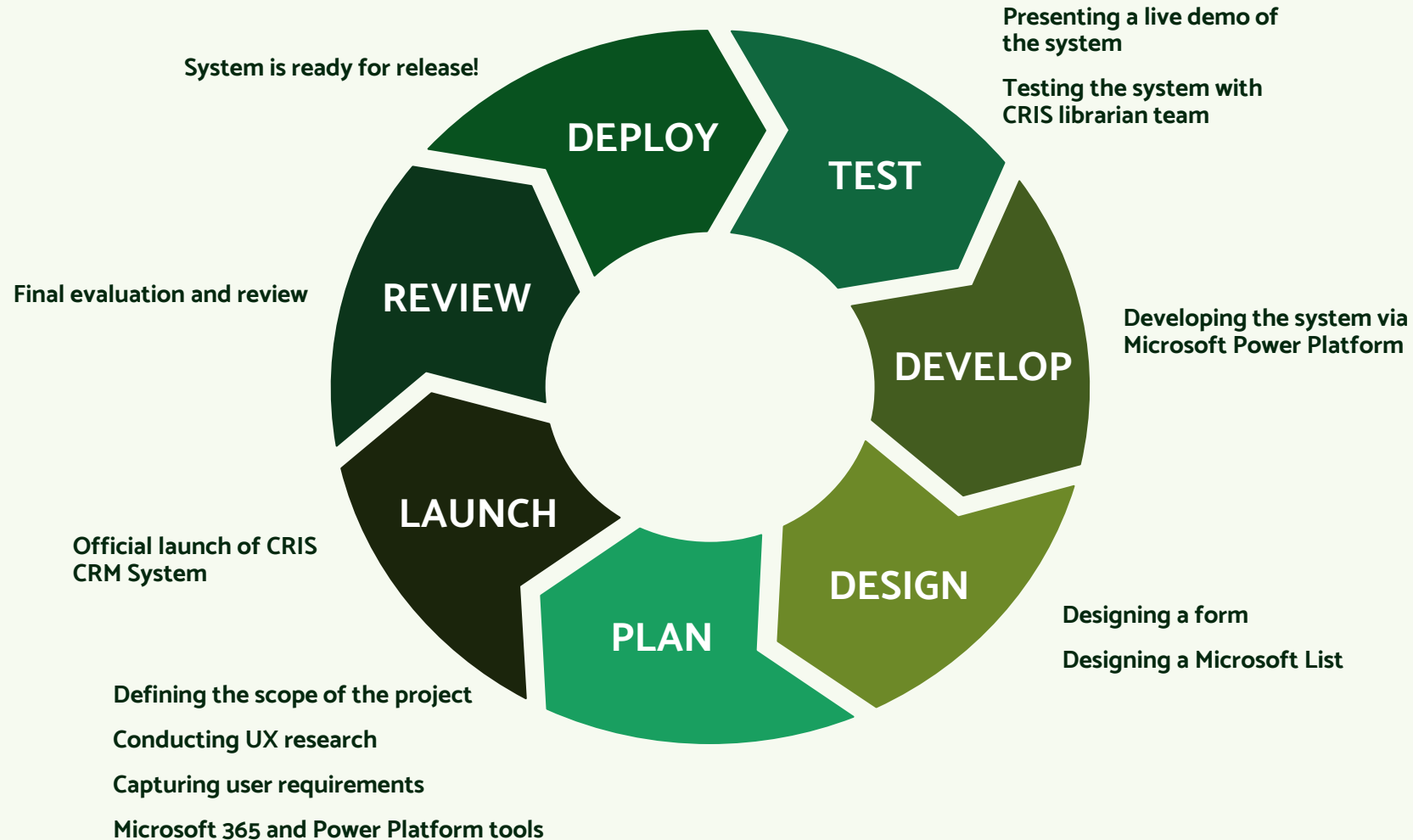
Shemesh, Y., 2010, *Minneapolis: Fortress Press*. Shemesh, Y. (ed.). p. 107-127

Research output: Chapter in Book/Report/Conference proceeding > Chapter > peer-review



Development of the CRIS CRM System

Agile Methodology



Development of the CRIS CRM System

Plan

Plan

- ◆ Define what is the purpose of the CRIS CRM System
- ◆ Conduct user interviews and gather user requirements
- ◆ Decide which librarian(s) will be responsible for each department(s), faculty(ies), and study program(s)
- ◆ Collect and define the most popular type of applications in the form
- ◆ Choose Microsoft 365 and Power Platform tools



Development of the CRIS CRM System

Plan

Microsoft 365 and Power Platform tools

Microsoft Forms



Microsoft Lists



Microsoft Power Automate



CRIS CRM System



Development of the CRIS CRM System

Design

Design

- ◆ Design an applications form for faculty members and researchers
- ◆ Ask general questions and define which fields are required



Bar-Ilan University | The Libraries and Information Division

CRIS System - Applications Form for Faculty Members and Researchers

* Required

1. ID Number *

2. First and Last Name of the Applicant *

3. PURE ID




Development of the CRIS CRM System

Design

Design


- ◆ Add a list of all the faculties, departments, and study programs at Bar-Ilan University
- ◆ Create a list of 14 multiple choice types of applications (!)

4. Faculty / Department / Study Program * 

Select your answer 

5. Active Personal Email Address * 

Enter your answer

6. Phone Number 

Enter your answer

7. Type of Application * 

- Personal profile update, for example: Name, photo, link to personal website, and more
- Identifiers update: ORCID, Scopus ID, Researcher ID
- Add publication via import candidates
- Add publication via BibTEX or RIS files
- Add publication by manual typing
- Edit or correction of publication in personal profile
- Remove publication from personal profile or delete duplicate publication



Development of the CRIS CRM System

Design

Design

- ◆ Allow researchers to add a description of the application and upload a screenshot

- Associate publication in system to personal profile by adding your name to author field (if omitted from publication)
- Human response to perform a certain action in the personal profile
- Incorrect information in personal profile
- Manage Fingerprints in personal profile or publication
- Academic activity update
- Update relations between records in the system, for example between publication and conference, between publication and award
- Technical problem (it is recommended to upload a screenshot)
- Other

8. Description of the Application

Enter your answer

9. Upload a Screenshot (Non-anonymous question)

Upload file

File number limit: 1 Single file size limit: 10MB Allowed file types: Word, Excel, PPT, PDF, Image, Video, Audio

Submit



Development of the CRIS CRM System

Design

Design

Design an applications list for CRIS CRM System

The screenshot shows the Microsoft Lists interface for a list named 'CRIS CRM System'. The interface includes a top navigation bar with 'Microsoft Lists' and a search box. Below the navigation bar is a toolbar with options like '+ New', 'Edit in grid view', 'Share', 'Export', 'Automate', and 'Integrate'. The main content area shows a list with columns: ID, Date, ID Number, Researcher Name, PURE ID, Faculty/Department/Study Program, Email, Phone Number, Type of Application, Description, and Attachments. The list is currently empty.

Microsoft Lists

Search this list

+ New Edit in grid view Share Export Automate Integrate

All Items

My lists

CRIS CRM System

ID	Date	ID Number	Researcher Name	PURE ID	Faculty/Department/Study Program	Email	Phone Number	Type of Application	Description	Attachments
----	------	-----------	-----------------	---------	----------------------------------	-------	--------------	---------------------	-------------	-------------

Development of the CRIS CRM System

Design

Design

Design an applications list for CRIS CRM System

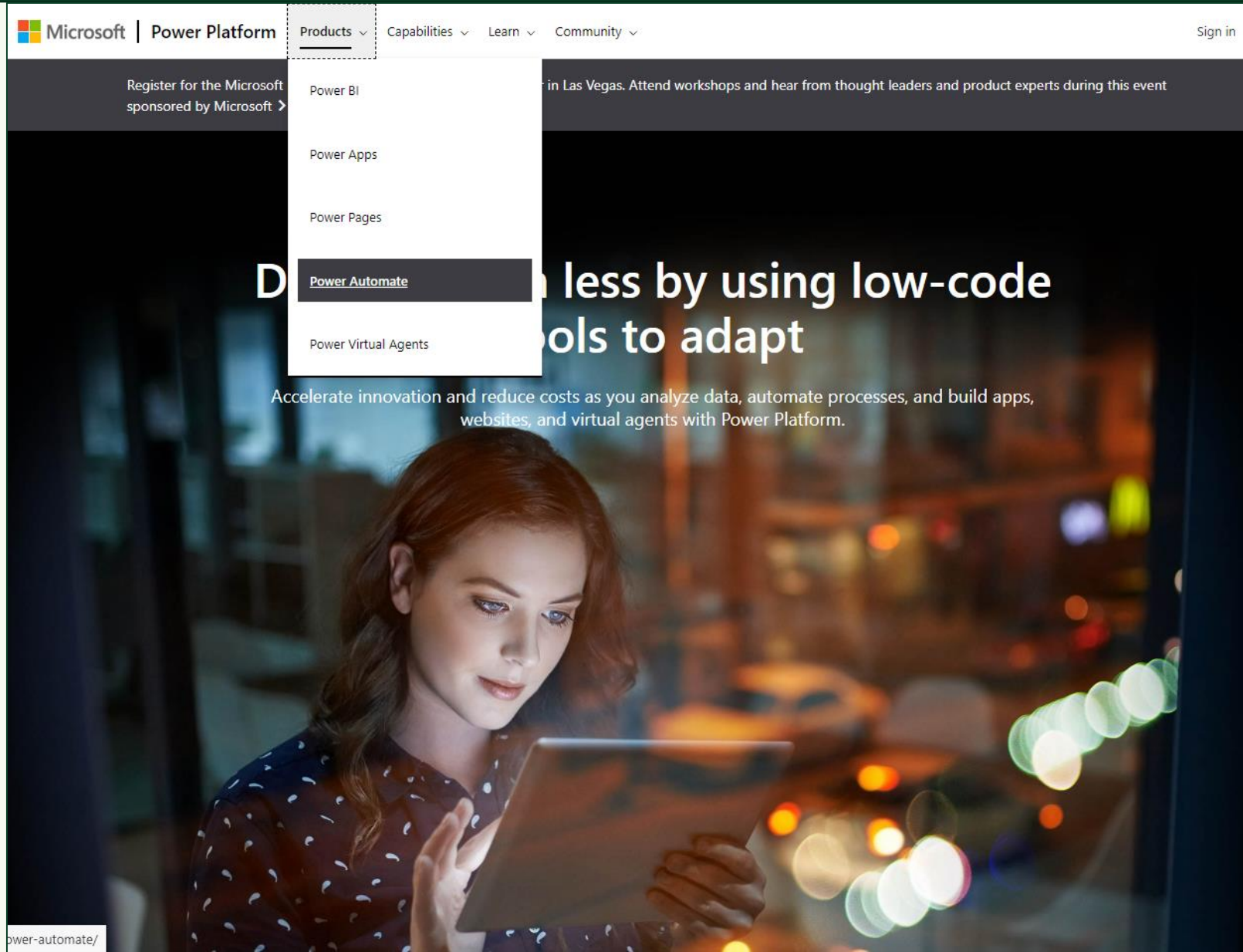
The screenshot shows the Microsoft Lists interface for a list named "CRIS CRM System". The top navigation bar is purple and contains the "Microsoft Lists" logo, a search bar labeled "Search this list", and user profile information. Below the navigation bar is a toolbar with options: "+ New", "Edit in grid view", "Share", "Export", "Automate", and "Integrate". The main content area shows a list with the following columns: "Phone Number", "Type of Application", "Description", "Attachments", "Status", "Tier", and "Resolution". The list is currently empty.

Development of the CRIS CRM System

Develop

Develop

Create automatic flows
via Microsoft Power Automate



Power Automate. (2023). Microsoft. Retrieved August 6, 2023, from <https://powerplatform.microsoft.com/en-us/>

power-automate/

Development of the CRIS CRM System

Develop

Develop

Select a type of flow

Power Automate Search

Environments Bar Ilan University (defa... ? רוחמה אמויאל

Home **1** Create

Templates Learn My flows Approvals Solutions Process mining AI models Desktop flow activity More Power Platform

Three ways to make a flow

Start from blank **2**

- Automated cloud flow**
Triggered by a designated event.
- Instant cloud flow**
Triggered manually as needed.
- Scheduled cloud flow**
You choose when and how often it runs.
- Describe it to design it (preview)**
Describe the flow you want and AI builds it for you
- Desktop flow**
Automates processes on your desktop environment.
- Process mining**
Evaluate and optimize your existing processes and tasks.

Install

Start from a template

Search all templates

Top picks Remote work Email Notifications Save to cloud Approval

- Follow up on a message**
By Microsoft
Instant 40448
- Schedule a reply**
By Microsoft
Instant 244333
- Save a message to OneNote**
By Microsoft
Instant 126196
- Create a Planner task when a channel post starts with TODO**
By Microsoft
Automated 83074

Development of the CRIS CRM System

Develop

Develop

Build an automated cloud flow

- ◆ Add flow name
- ◆ Choose the flow's trigger
- ◆ Create the flow

Build an automated cloud flow

Free yourself from repetitive work just by connecting the apps you already use—automate alerts, reports, and other tasks.

Examples:

- Automatically collect and store data in business solutions
- Generate reports via custom queries on your SQL database

Flow name

CRIS CRM System

Choose your flow's trigger *

Search or select a trigger from the list below to create a flow. (Required)

when a new response

- When a new response is submitted (Microsoft Forms)
- When a new task is created (Planner)
- When a new section is created (OneNote (Business))
- When a new email arrives (V2) (Outlook.com)
- When a new channel message is add...

5 Skip **Create** Cancel

Development of the CRIS CRM System

Develop

Identify the form that a new response was submitted

When a new response is submitted

* Form Id

Get response details

* Form Id

* Response Id

Get the response details according to the response ID

Select - call type

`json(outputs('Get_response_details')['body/r737cd734f7844cf2b967f447b07f0c33'])`

* From

* Map

Value	Item
Enter key	Enter value

Select the type(s) of application(s) to match the choices in the type of application column at CRIS CRM System list



Development of the CRIS CRM System

Develop

Create a list item at CRIS CRM System with all the populated fields

Each new form submission will get the status value "New"

Create item

* Site Address

* List Name

* Date

* Faculty/Department/Study

* Email

Title

ID Number

Researcher Name

PURE ID

Phone Number

Call Type

Description

Status Value

Call Closed Date

Tier Claims - 1

Resolution

Moved to Next Stage Claims

Dynamic content allows to choose dynamic content of fields from the previous step(s)

Dynamic content Expression

Search dynamic content

Get response details

- מספר טלפון זמין
Answer to the question above
- העלאת צילום מסך
Answer to the question above
- תיאור הפנייה
Answer to the question above
- כתובת דוא"ל אישית פעילה
Answer to the question above
- שם פרטי ושם משפחה של הפונה
Answer to the question above
- מספר ת"ז
Answer to the question above



Development of the CRIS CRM System

Develop

Create 29 parallel conditions for 48 various faculties, departments, and study programs

The screenshot displays a web-based interface for managing conditions. At the top, a grey header bar contains a tree icon, the text 'Condition 9', and a three-dot menu icon. Below the header, a blue tree view on the left shows a single node with a checkbox. To the right of the tree, a list of four conditions is displayed, each with a checkbox, a 'Faculty/...' label with a close icon, the text 'is equal to', a dropdown arrow, and a value in Hebrew. The values are: 'המחלקה לגיאוגרפיה וסביבה', 'בית הספר לעבודה סוציאלית', 'המחלקה למדעי המדינה', and 'המחלקה לכלכלה'. Each condition has a three-dot menu icon to its right. At the bottom of the list is a '+ Add' button with a dropdown arrow.

Condition	Faculty/...	Operator	Value
<input type="checkbox"/>	Faculty/...	is equal to	המחלקה לגיאוגרפיה וסביבה
<input type="checkbox"/>	Faculty/...	is equal to	בית הספר לעבודה סוציאלית
<input type="checkbox"/>	Faculty/...	is equal to	המחלקה למדעי המדינה
<input type="checkbox"/>	Faculty/...	is equal to	המחלקה לכלכלה



Development of the CRIS CRM System

Develop



Tier name is added to CRIS CRM System item list according to the faculty/department/study program they are responsible to

Send emails to the researcher and CRIS librarian



Development of the CRIS CRM System

Develop

Send an email to a researcher (option to use HTML i.e., to support RTL Hebrew language)

```
<body lang=EN-US link="#0563C1" vlink="#954F72" style='word-wrap:break-word'>
  <div class=WordSection1>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'> שלום
    Researcher Name x ,</span> <span dir=LTR
      style='font-family:"Arial",sans-serif'>
    <o:p> </o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'>
    <o:p> &nbsp;</o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'> פנייה חדשה
    התקבלה &nbsp;<span style='font-family:"Arial",sans-serif'> Output x
    <o:p> </o:p> </span> </p> <span style='font-family:"Arial",sans-serif'> Email x
    <o:p> </o:p> </span> </p> <span style='font-family:"Arial",sans-serif'> Outputs x
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'>
    <o:p> &nbsp;</o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'> פנייתך תיענה
    בתוך 7 ימי עבודה
    מיום קליטתה במערכת. <o:p> </o:p> </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'>
    <o:p> &nbsp;</o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'>
    <o:p> &nbsp;</o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'> <o:p> </o:p>
    </span> </p>
    <p class=MsoNormal dir=RTL> <span lang=HE style='font-family:"Arial",sans-serif'> צוות מידעני </span> </p>
```





Development of the CRIS CRM System

Test

Test

- ◆ Present a live demo of the CRIS CRM System to CRIS librarian team for the first time
- ◆ Get an initial opinion on the system
- ◆ Feedback - request to add 2 columns to CRIS CRM System list
 - ◆ Add an application closed date when it is completed
 - ◆ Transfer the application to the manager's care in case of escalation

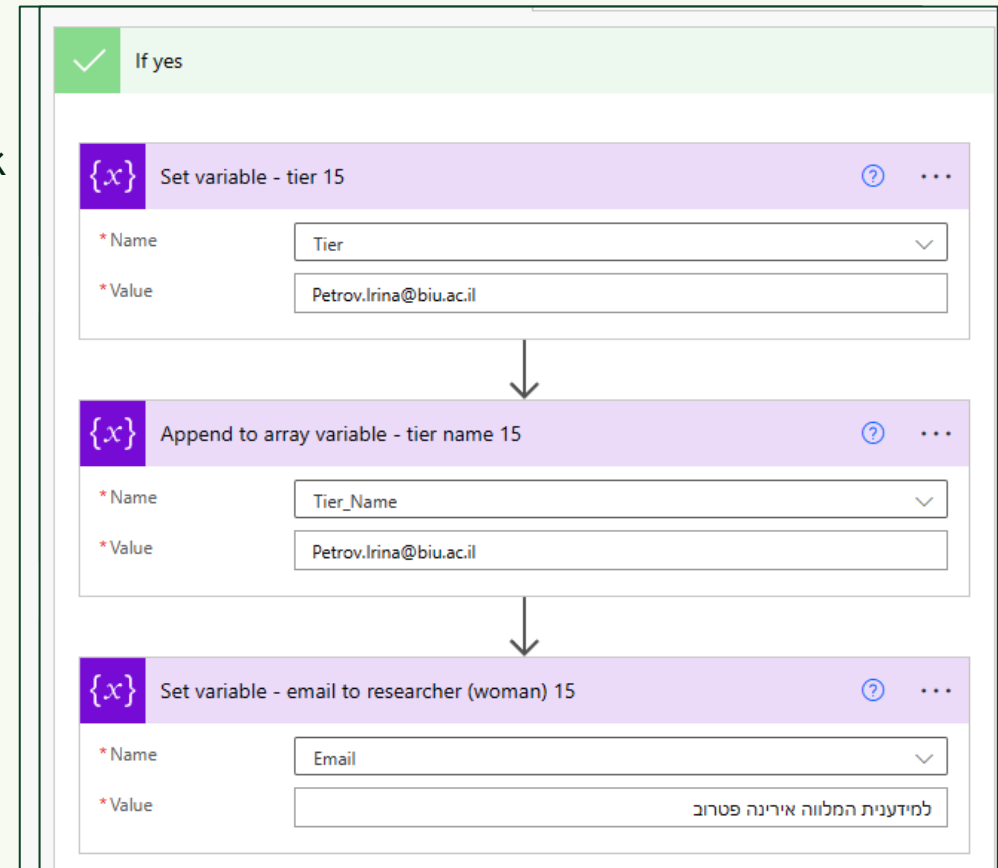
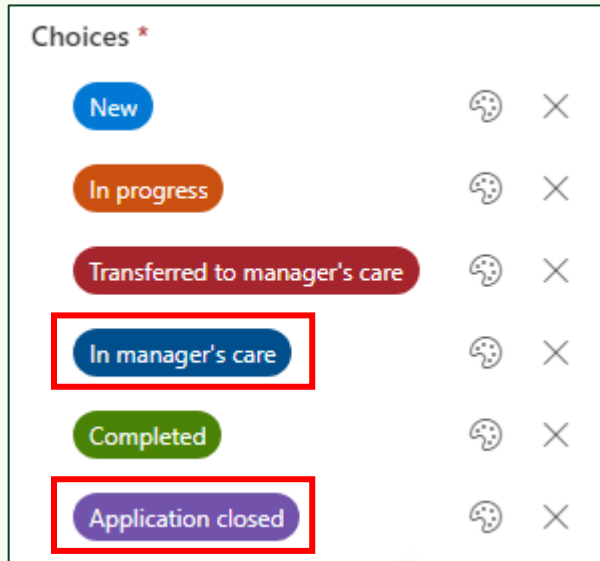
Application Closed Date ▾	Tier ▾	Resolution ▾	Moved to Next Stage ▾
	 יעלה דרור	I sent her videos according to the types of applications she requested.	
	 יעלה דרור	I sent him videos and answered his requests.	



SYSTEM DOWN

Challenges

- ◆ Figure out how to update the new fields of the columns in Power Automate flow
- ◆ Rebuild “CRIS CRM System” automatic flow from scratch!!! 🧐
- ◆ Update the tier name on CRIS CRM System list
- ◆ Initialize variables to retrieve the relevant data of tier, tier name, and email to researcher.
- ◆ Add 2 additional statuses to make the automatic flows work



Development of the CRIS CRM System

Test

Test

- ◆ Test the system with a UX focus group of 6 CRIS librarians
- ◆ Tasks:
 1. Submit the form as a “researcher”
 2. Reply to a researcher via email
 3. Update the status and add the resolution
 4. Simulate an escalation – transfer the application to a manager’s care



Development of the CRIS CRM System

Deploy

Deploy

The system is ready for release!

Microsoft Lists

Search this list

+ New Edit in grid view Share Export Automate Integrate

All Items

My lists
CRIS CRM System

ID	Date	ID Number	Researcher Name	PURE ID	Faculty/Department/Study Program	Email	Phone Number	Type of Application	Description	Attachments
1	25/06/2023	02356985	Mazal Levy	43044494	Department of Jewish Art	Mazal.Levy@biu.ac.il	03-5318413	Edit or correction of publication in personal profile Add publication via BibTEX or RIS files		
2	25/06/2023	32568741	Eyal Baruch	46875439	Department of Jewish Art	Eyal.Baruch@biu.ac.il	03-5318413	Identifiers update: ORCID, Scopus ID, Researcher ID Remove publication from personal profile or delete duplicate publication Incorrect information in personal profile	Can you please help with my applications?	
3	29/06/2023	02148569	Lior Klein		Department of Physics	kleinl@biu.ac.il	03-5317861	Academic activity update Add publication via import candidates Add 5 articles to my profile	I would like to add 5 articles to my profile.	
4	05/07/2023	45236987	Naomi Feldheim	63570142	Department of Mathematics	naomi.feldheim@math.biu.ac.il		Remove publication from personal profile or delete duplicate publication Manage Fingerprints in personal profile or publication Academic activity update		
5	12/07/2023	04125689	Atara Isaacson		Faculty of Education	atara.isaacson@biu.ac.il	03-5317986	Add publication via import candidates Add publication via BibTEX or RIS files Technical problem (it is recommended to upload a screenshot)	Please assist with the following applications.	
6	12/07/2023	247589635	Dov Schwartz		Department of Jewish Philosophy	Dov.Schwartz@biu.ac.il	03-5319562	Human response to perform a certain action in the personal profile Academic activity update	I would like to consult with a librarian regarding my applications.	

Development of the CRIS CRM System

Deploy

Deploy

The system is ready for release!

The screenshot displays the Microsoft Lists interface for a list named "CRIS CRM System". The interface includes a search bar, navigation options like "New", "Edit in grid view", "Share", "Export", "Automate", and "Integrate", and a list of items. Each item row contains columns for Email, Phone Number, Type of Application, Description, Attachments, Status, Application Closed Date, Tier, Resolution, and Moved to Next Stage. The items are color-coded by status: Application closed (purple), Completed (green), Transferred to manager's care (red), In progress (orange), and New (blue).

Email	Phone Number	Type of Application	Description	Attachments	Status	Application Closed Date	Tier	Resolution	Moved to Next Stage
Mazal.Levy@biu.ac.il	03-5318413	Edit or correction of publication in personal profile Add publication via BibTEX or RIS files			Application closed	04/07/2023	יעלה דרור	I sent her videos according to the types of applications she requested.	
Eyal.Baruch@biu.ac.il	03-5318413	Identifiers update: ORCID, Scopus ID, Researcher ID Remove publication from personal profile or delete duplicate publication Incorrect information in personal profile	Can you please help with my applications?		Completed		יעלה דרור	I sent him videos and answered his requests.	
klein@biu.ac.il	03-5317861	Academic activity update Add publication via import candidates Add 5 articles to my profile	I would like to add 5 articles to my profile.		Transferred to manager's care		נעה כהן	The instructor requested to add too many articles to his profile. Can you please advise?	חיה בינוסביץ
naomi.feldheim@math.biu.ac.il		Remove publication from personal profile or delete duplicate publication Manage Fingerprints in personal profile or publication Academic activity update			In progress		שרון אשד	I sent her the relevant videos.	
atara.isaacson@biu.ac.il	03-5317986	Add publication via import candidates Add publication via BibTEX or RIS files Technical problem (it is recommended to upload a screenshot)	Please assist with the following applications.		In manager's care		בועז פולצ'ק	I sent her the relevant videos, but she has a technical problem requiring the Pure team's involvement.	ישראל בלפר
Dov.Schwartz@biu.ac.il	03-5319562	Human response to perform a certain action in the personal profile Academic activity update	I would like to consult with a librarian regarding my applications.		New		אגנס שמש		

Development of the CRIS CRM System

Review

Review

Final evaluation and review of the system

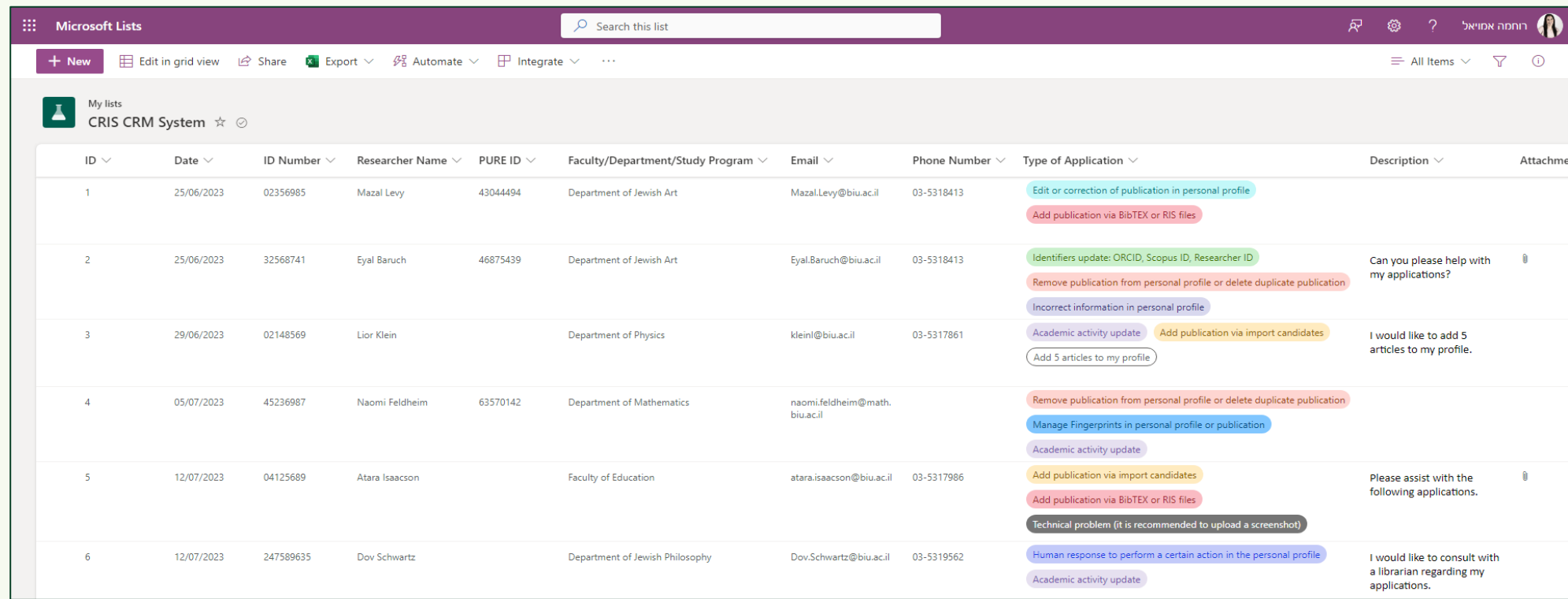
The screenshot displays a Microsoft Lists interface for a 'CRIS CRM List'. The main view shows a table with columns for Description, Attachments, Status, and Call Closed Date. A detailed view of an item is open on the right, showing a description in Hebrew and a status dropdown menu. The status menu includes options like 'תחילת עבודה' (Start of work), 'החלף לטיפול נוסף' (Change to further care), 'נכנס לטיפול' (Entered care), 'סגור' (Closed), and 'מקרה מסוגר' (Closed case). The interface is in Hebrew, and the system is being reviewed in a meeting, as indicated by the video call participants on the right side of the screen.

Development of the CRIS CRM System

Launch

Launch

Official launch of CRIS CRM System 



ID	Date	ID Number	Researcher Name	PURE ID	Faculty/Department/Study Program	Email	Phone Number	Type of Application	Description	Attachments
1	25/06/2023	02356985	Mazal Levy	43044494	Department of Jewish Art	Mazal.Levy@biu.ac.il	03-5318413	Edit or correction of publication in personal profile Add publication via BibTEX or RIS files		
2	25/06/2023	32568741	Eyal Baruch	46875439	Department of Jewish Art	Eyal.Baruch@biu.ac.il	03-5318413	Identifiers update: ORCID, Scopus ID, Researcher ID Remove publication from personal profile or delete duplicate publication Incorrect information in personal profile	Can you please help with my applications?	
3	29/06/2023	02148569	Lior Klein		Department of Physics	kleinl@biu.ac.il	03-5317861	Academic activity update Add publication via import candidates Add 5 articles to my profile	I would like to add 5 articles to my profile.	
4	05/07/2023	45236987	Naomi Feldheim	63570142	Department of Mathematics	naomi.feldheim@math.biu.ac.il		Remove publication from personal profile or delete duplicate publication Manage fingerprints in personal profile or publication Academic activity update		
5	12/07/2023	04125689	Atara Isaacson		Faculty of Education	atara.isaacson@biu.ac.il	03-5317986	Add publication via import candidates Add publication via BibTEX or RIS files Technical problem (it is recommended to upload a screenshot)	Please assist with the following applications.	
6	12/07/2023	247589635	Dov Schwartz		Department of Jewish Philosophy	Dov.Schwartz@biu.ac.il	03-5319562	Human response to perform a certain action in the personal profile Academic activity update	I would like to consult with a librarian regarding my applications.	



How to Get Started?

Tutorials by Microsoft

- ◆ [Get started with Power Automate](#)
- ◆ [Get started with Power Automate \(introduction + exercise\)](#)
- ◆ [Describe building automation with Microsoft Power Automate](#)

Microsoft Communities

- ◆ [Microsoft Power Automate Community](#)
- ◆ [Microsoft Power Platform Community](#)

Recommended YouTubers

- ◆ [Reza Dorrani](#)
- ◆ [Leila Gharani](#)
- ◆ [April Dunnam](#)
- ◆ [Kevin Stratvert](#)
- ◆ [Matthew Devaney](#)
- ◆ [Matthew Devaney's Blog](#)
- ◆ [2023 Power Automate Coding Standards For Cloud Flows \[Free eBook\]](#)



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Dina Baum

Dafna Fux

Yodfat Taase

Efrat Mor

Karina Masasa

Irina Petrov

Sabina Timkowitski

Natale Kocher

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Community



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**Bar-Ilan
University**
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**The Libraries
and Information
Division**