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KDTooling
Deployment Manager

Case Study

Automated CI/CD pipeline for Dynamics 365 CE with KDTooling Deployment Manager

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1. Introduction:

Many companies using Dynamics CRM still run their deployment process manually, which still works but carries many risks leading to failed deployments. Furthermore, planning and maintaining a manual deployment guideline is often a time-consuming and thankless task.

Project Overview:
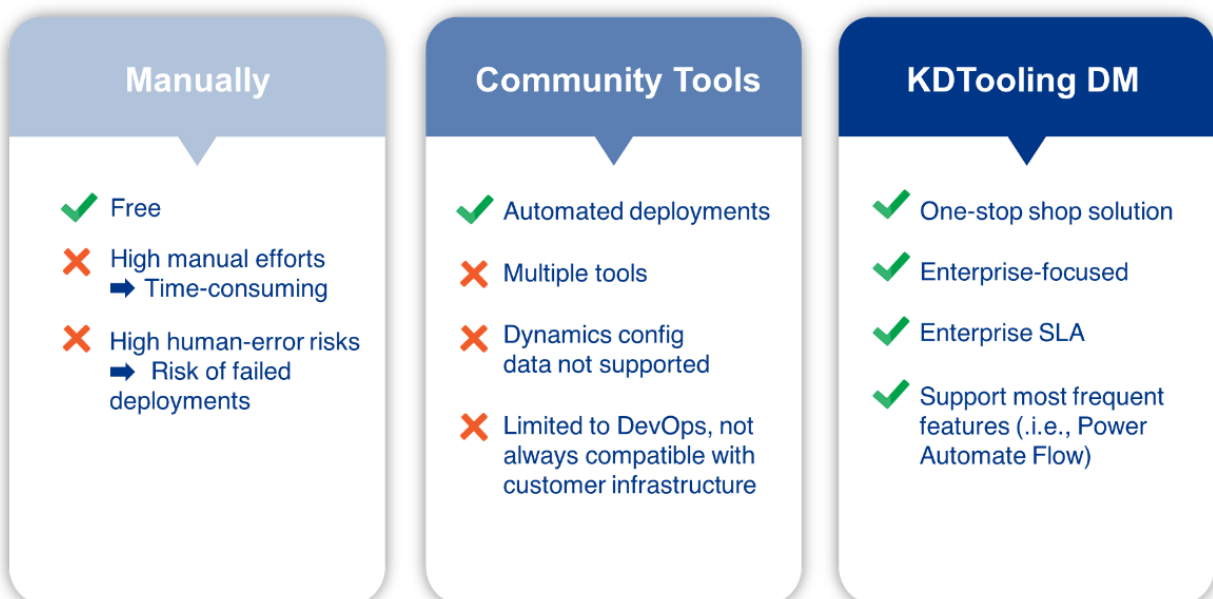Type: Enterprise project
Users: 1.000
Duration: 2 years

Primary Goals:
- Reduce technical efforts & resources
- 24h Test/UAT Feedback circle – scheduled deployments automatically (out-of-business-hour)
- Full end-to-end release management process
- Integrated to existing infrastructure (via Azure DevOps)

2. Common Approaches of Automated Deployments:

Scripting: Self-written scripts often lead to confusion and are very difficult for others to follow and use. Every time a deployment occurs, certain values must be adapted to a specific environment either before or after the deployment process, resulting in significant additional effort.

Deployment Software: The solution is to obtain a tool for an automated deployment process. After a single setup, the process runs automatically and with a much higher quality. However, whether you're using Microsoft SDK or community tools, there is usually one common problem: **switching between different tools for different tasks**. This could be time-consuming and sometimes still result in failed deployments.

Manually	Community Tools	KDTooling DM
✔ Free	✔ Automated deployments	✔ One-stop shop solution
✖ High manual efforts ➡ Time-consuming	✖ Multiple tools	✔ Enterprise-focused
✖ High human-error risks ➡ Risk of failed deployments	✖ Dynamics config data not supported	✔ Enterprise SLA
	✖ Limited to DevOps, not always compatible with customer infrastructure	✔ Support most frequent features (.i.e., Power Automate Flow)

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3. Manual Deployment vs. KDTooling Deployment Manager
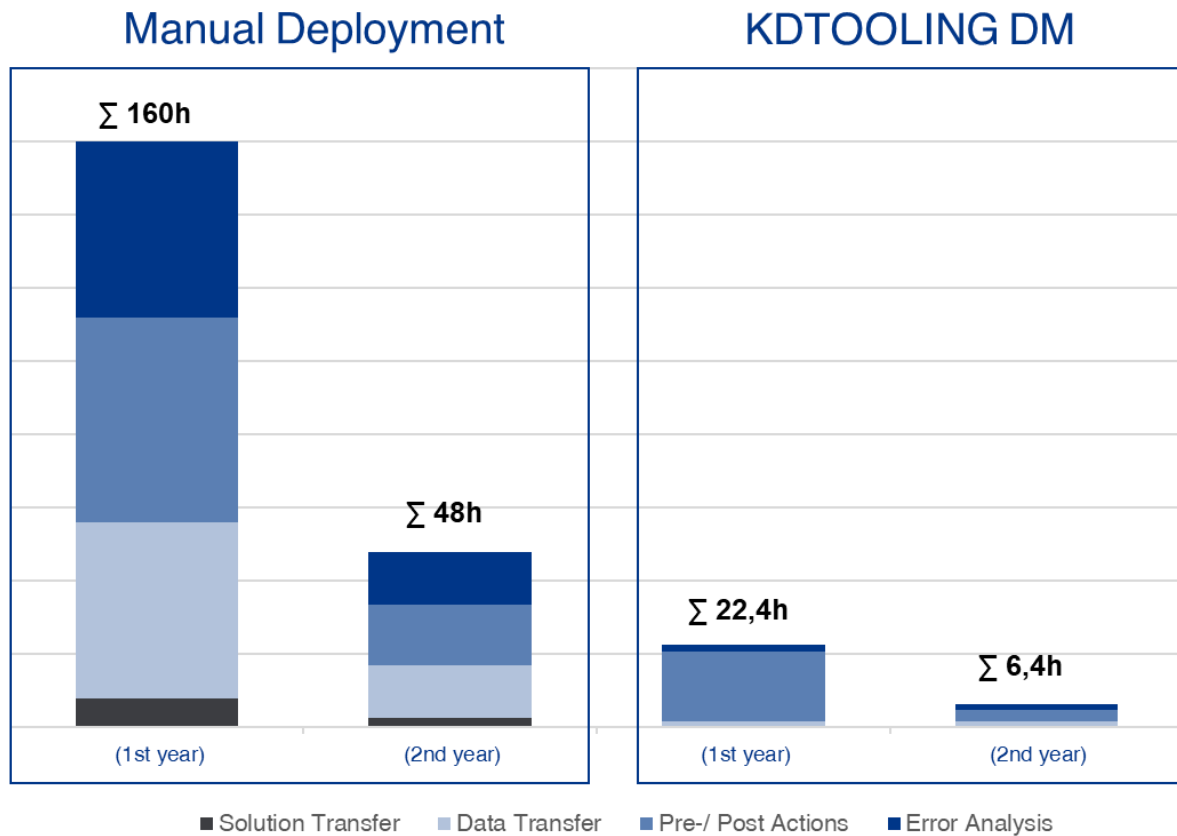
Common problems:

Manual Deployment	Automated Deployment
• Higher risk of documentation errors • Repeated pre/post deployment tasks • Simple errors, such as typos can lead to long troubleshooting	• Higher initial configuration effort • Technical & financial investment • Initial training effort

A good enterprise approach is to have at least 4 environments. Depending on the team and strategy, multiple deployments per week are necessary:

	Deployments/Month	Deployments/Year	h/Month	h/Year
DEV	10	120	5h	120h
INT	4	48	4h	48h
PrePROD	1	12	1h	12h
PROD	1	12	1h	12h
Total	**16**	**192**	**16h**	**192h**

*based on an avg. duration of 50 min – 1 hour per deployment.

More specifically, the deployment process usually consists 4 key categories including: solution transfer, data transfer, pre/post actions, error analysis. The detailed breakdown is on the next page:

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Manual Deployment

KDTOOLING DM

∑ 160h

∑ 48h

∑ 22,4h

∑ 6,4h

(1st year) (2nd year)

(1st year) (2nd year)

■ Solution Transfer ■ Data Transfer ■ Pre-/ Post Actions ■ Error Analysis

Effort per month (h)	Manual Deployment		KDTooling Deployment Manager	
	1st year	2nd year	1st year	2nd year
Solution Transfer	8	2,4	0	0
Data Transfer	48	14,4	1,6	1,6
Pre-/ Post Actions	56	16,8	19,2	3,2
Error Analysis	48	14,4	1,6	1,6
Total	160	48	22,4	6,4

* Calculations are made based on enterprise project experience.

Depending on project complexity, planning efforts and compliance regulations, a fully automated deployment pipeline can reduce **efforts up to 71%.**

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4. Cost Comparison:

Many enterprises tend to have external consulting services to handle their deployment processes, especially if they do not have an automated CI/CD pipeline. Hence, the cost below is based on total consulting hours for deployment tasks each year.

Consulting Costs (per h)	150 €
Average deployment hours – 1st year	192
Average deployment hours – 2nd year**	60

Costs (Enterprise-size)	Manual Deployment	KDTooling Pro	KDTooling Enterprise*
Monthly Licensing cost		180 €	980 €
Avg. monthly consulting costs in 2 years	1 575 €		
1st year	28 800 €	2 160 €	11 760,00 €
2nd year	9 000 €	2 160 €	11 760 €
Total costs	**37 800 €**	**4 320 €**	**23 520 €**

With KDTooling Enterprise, we guarantee supports for both product and non-product incidents with more affordable consulting service.

** In many cases, deployment efforts in the 2nd year decreased up to 70%. In this example, the total average hours for deployment in 2nd year is approx. 60 hours.*

More pricing information can be found **here**

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