



The Influence of the Use of Information Technology and Competence on Employee Performance at the Population and Civil Registry Service of Pagar Alam City

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Abstract

This research aims to determine the influence of information technology and competency on employee performance at the Pagar Alam City Population and Civil Registry Service. The dependent variable in this research is Employee Performance (Y) and the independent variables are Information Technology (X1) and Competency (X2). The population and research sample were 50 employees at the Population and Civil Registry Service of Pagar Alam City. The data obtained were analyzed using the PLS (Partial Least Square) analysis technique via SmartPLS Software and the SPSS 26 application. Where it was partially processed using the PLS analysis technique while it was simultaneously processed using the SPSS 26 application. Based on the research results it can be concluded that: (1) Information technology positive and significant effect on employee performance; (2) Competency has a positive and significant effect on employee performance; (3) simultaneously, information technology and competence have a positive and significant effect on employee performance.

INTRODUCTION

In Presidential Instruction Number 3 of 2003, E-Government is aimed at ensuring the integration of electronic document and information management and processing systems in developing a transparent public service system. Presidential Instruction No. 3 of 2003 concerning National Policy and Strategy for e-Government Development, mandates every Governor and Regent/Mayor to take the necessary steps in accordance with their respective duties, functions and authorities in order to implement e-Government development nationally. The implementation of E-Government in the implementation of government governance and public services certainly requires the use of information and communication technology along with reliable human resources in managing it.. One of the central government's strategies in preparing e-government is to organize the systems and work processes of the government and autonomous governments

holistically. What this means is the preparation of human resources in government to adapt to systems that utilize information and communication technology.

In relation to information technology, it is not only computer technology (hardware and software) that will be used to process and store information, but also includes communication technology to send or disseminate information. The application of IT not only in the business sector, but in the public sector, especially in providing services to the community, is absolutely necessary. (Odja et al, 2020). Information technology will help companies to improve organizational performance, only if the company actually uses information technology in an efficient manner, so that the application of new technology in an organization will have an impact on the entire organization, especially on human resources (Kang in Anggraini, 2022). Information Technology currently plays a role as the main supporting component of development in various fields. In government, ICT advances are adopted to support government performance through the e-Government (e-Govt) program (Martin in Odja et al, 2020). If information technology can have a positive impact on individual performance, the technology must be used appropriately and must be compatible with the tasks being supported.

Current developments in information technology make the need for information technology very important for both individuals and organizations. Information technology is "a technology used to process data, including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, namely information that is relevant, accurate and timely, which is used for personal, business and other purposes. government and is strategic information for decision making (Sutabri, 2014). Information systems and information technology are currently an inseparable part of the business world considering their role as tools to assist in speeding organizational decision making at various functional levels from lower to managerial levels (Salamah, 2012). According to Muslihuudin and Oktavianto (2016), computerized information technology indicators consist of hardware, software, data, procedures and people.

Linked to competence, competence is one of the internal factors of an individual, that competence is one of the capital for achieving effective performance. "Personal characteristics, skills, attitudes and knowledge are key components needed to be successful in any job," as stated by Marwansyah (2016). These can be measured according to agreed standards and improved through training and development. Competency serves as a guide to achieving success. Law Number 5 of 2014 concerning State Civil Equipment (ASN) confirms that the employee must have at least 3 main competencies, namely technical, managerial and socio-cultural. Technical competency is measured by educational and professional level, functional technical training, and technical work experience. Meanwhile, managerial competency is measured by level of education, structural or managerial training, and leadership experience. At the same time, sociocultural competence as measured by work experience is relevant to diverse communities such as religion, race and culture, so it has a racial perspective. The term competency refers to a person's attributes/characteristics that make them successful at work in the context of human resource management.

Based on the results of observations, information was obtained that the Population and Civil Registry Service of Pagar Alam City has implemented an electronic-based population administration information system to facilitate access and use of information and services to the community. The services provided include implementing online services and direct services in the field by going around the locations at the sub-district office in Pagar Alam City. However, there are several general phenomena that occur, there are problems related to the population administration information system that is implemented, including (1) there are still network connection problems in the information system itself which causes the system to be slow in processing data (2) digital-based services are not yet fully according to the user's wishes (3) the available human resources are not yet fully able to utilize Information Technology optimally even though there are several employees who have mastered Information Technology well because there is still a lack of human resources who have mastered the IT field.

Based on Law No. 23 of 2006, namely "Population Administration is a series of activities for structuring and publishing population documents and data through population registration programs, civil registration, managing population administration information and utilizing the results for public services and development of other sectors." In order to improve population administration services such as KTP, KK, KIA and Birth Certificates, the Pagar Alam City Population and Civil Registration Service is always making improvements so that it is hoped that population services to the community can continue to be improved. The aim of this research is to determine and analyze the impact of information technology and expertise on the performance of Pagar Alam City Population and Statistics Department employees. This research refers to previous research, based on research by Kurnia and Andi (2022) which found that competence had a significant effect on the performance of Tasikmalaya City Disdukcapil employees.

In other research, Mulyono (2013) found that the existence of Information Technology has a great influence on the management of Population Administration. Then research by Toyo et al (2022) stated that the use of information technology had a positive effect on teacher performance at SMPN 1 Tomia. Anggraini's research (2022) states that the use of information technology and competence has a positive and significant effect on the performance of employees at the Demak City Agriculture and Food Service. Next is research Suryani et al (2021) found that there was a positive and significant influence from the three hypotheses proposed, namely the relationship between competency and employee performance, competency with the use of information technology and between the use of information technology and employee performance. Research conducted by Odja et al (2020) states that competence and information technology have a positive and significant effect on employee performance at the Maskasar City Environmental Service.

Based on the background, the researcher determined the problem formulation to be how the use of information technology and competence partially and simultaneously influences the performance of employees at the Department of Population and Civil Registry of Pagar Alam City. In accordance with the problem formulation above, the aim of this research is to determine the effect of partial and simultaneous use of information technology and competence on employee performance at the Population and Civil Registry Service of Pagar Alam City.

LITERATURE REVIEW

Competence is the ability to carry out various work tasks based on good knowledge and skills supported by the work attitudes required by the job (Wibowo, 2016). Competence is a person's ability to do a job correctly and utilize problems related to knowledge, skills and attitudes (Edison et al. 2016). McClelland, in Rivai et al (2018) defines competencies as core characteristics that have a direct impact or can predict excellent performance. According to Wibowo (2016) competency indicators are: Skills, Knowledge, Self-concept, Trait and Motive. Human resources are a very vital organizational asset. To produce good employee performance, they need to be supported by competent government officials. This is necessary so that the agency runs as expected.

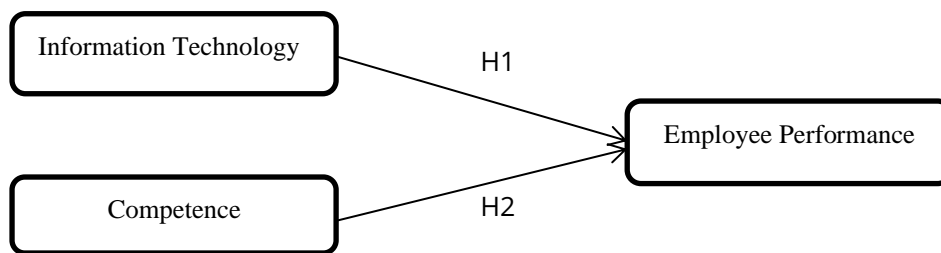
Employee performance is the result of work carried out by that person skillfully, expertly and sincerely in carrying out the tasks assigned to him and in his own time (Hasibuan, 2017). Performance is the result of the quality and quantity of work that an employee can achieve by carrying out tasks in accordance with the responsibilities given to him (Mangkunegara, 2017). Performance is the result of a person's work, an overall management process, where the results of that person's work must be shown in concrete and measurable evidence (Sedarmayanti, 2018). According to Mangkunegara (2017), indicators of employee performance are: Quality of work, Quantity of Work, Implementation of Duties, and Responsibility. Sinambela et al (2011) show that employee performance is defined as the employee's ability to perform certain skills. Performance achieved as a result of employee work is seen in terms of quality, quantity, working time and cooperation to achieve the goals set by the organization (Sutrisno, 2017). Performance is the work

results that a person has achieved in the tasks assigned to him and how much his contribution is to the organization (Sudaryo, 2018). Employee work efficiency is very necessary, because this performance shows how long the employee's ability to carry out the tasks assigned to him is known.

METHODS

This research was conducted in Department of Population and Civil Registration. located at Jl. Mintarjo Woman, Gunung Gare Office Complex, Pagar Alam City. The population is 50 people. According to Sugiyono (2017), population is a generalized area consisting of objects/subjects with certain quantities and characteristics that have been indicated by researchers to study and draw conclusions. In this study the entire population was used as respondents and the sampling technique was saturated sampling. Saturated sampling technique where all members of the population are used as samples. Sampling was carried out to the entire population amounting to 50 respondents by distributing questionnaires. In this research, the following thinking framework is used:

Figure 1. Conceptual Framework



The hypothesis proposed in this research is:

H1: Information technology and competence have a positive and partially significant effect on employee performance at the Pagar Alam City Population and Civil Registry Service.

H2: Information technology and competency have a positive and significant effect simultaneously on employee performance at the Pagar Alam City Population and Civil Registry Service.

Method The data analysis used is Partial Least Square (PLS) with steps:

Assessing the Outer Model or Measurement Model

There are three criteria for using data analysis techniques to evaluate external models with Smart PLS, namely convergent validity, discriminant validity and convergent validity.

Convergent Validity

The convergent validity of the measurement model with reflexive indicators was evaluated based on the correlation between item scores/component scores estimated by PLS software. A variable is highly reflective if it correlates more than 0.70 with the construct being measured.

Discriminant Validity

Discriminant validity is carried out to ensure that each latent variable concept is different from other variables. A model has good Discriminant Validity if each loading value of each latent variable indicator has the highest loading value compared to the loading values of other latent variables.

Evaluating Reliability and Average Variance Extracted (AVE)

Validity and reliability criteria can also be seen from the construct reliability values and AVE (Average Variance Extracted) values for each construct. A construct is said to have high reliability if the value is 0.70 and the AVE is greater than 0.50.

Structural Model Testing (Inner Model)

Testing the internal model or structural model looks at the relationship between constructs, significance values, and R-squared of the research model. The R-square of the dependent construct t-test and the significance of the structural path parameter coefficients were used to evaluate the structural model.

Hypothesis testing T test (partially)

The significance of estimated parameters provides very useful information about the relationships between research variables. The basis for hypothesis testing is the value contained in the output result for inner weight.

F test (simultaneously)

For the F test using the SPSS application, the F statistical test basically shows whether all the independent variables (X) consisting of information technology (X1) and competency (X2) included in the model have an influence together (simultaneously) in explaining the content of the information. on the dependent variable on employee performance (Y).

Respondent characteristics based on gender.

In table 1 below, information regarding data on respondent characteristics based on gender is presented.

Table 1. Characteristics of Respondents Based on Gender

No	Gender	Number (Souls)	Percentage (%)
1	Man	23	46 %
2	woman	27	54 %
	Amount	50	100

Data source: Primary data processed

Based on table 1 above regarding the characteristics of respondents based on gender, it can be seen that the number of respondents who were male was 23 people or around 46% of the total number of respondents and respondents who were female were 27 people or around 54% of the total number of respondents. This identifies that the majority of the respondents studied were women.

Based on last education

In table 2 below, information regarding data on respondents' characteristics based on education level is presented.

Table 2. Characteristics of Respondents Based on Education Level

No	Education	Number (Souls)	Percentage (%)
1	High school	11	22 %
2	D3	7	14 %
3	Bachelor	29	58 %
4	Masters	3	0.6 %
	Amount	50	100%

Source: Primary Data Processed

Based on table 2 above regarding the characteristics of respondents based on their latest education, it can be seen that the number of respondents with a high school education was 11 people or around 22% of the total number of respondents, respondents with a D3 education were 7 people or around 14% of the total number of respondents. There were 29 people with Bachelor's degrees or around 58% of the total number of respondents, 3 respondents with Master's degrees or around 0.6%. This shows that the majority of respondents were only able to complete their education up to a Bachelor's degree.

By age

In table 3 below, information is presented regarding data on respondent characteristics based on the respondent's age.

Table 3. Characteristics of Respondents Based on Age

No.	Age	Amount	Percentage (%)
1	30-40 years	28	56 %
2	41-50 years old	21	42 %
3	> 50 years	1	0.2 %
	Amount	50	100%

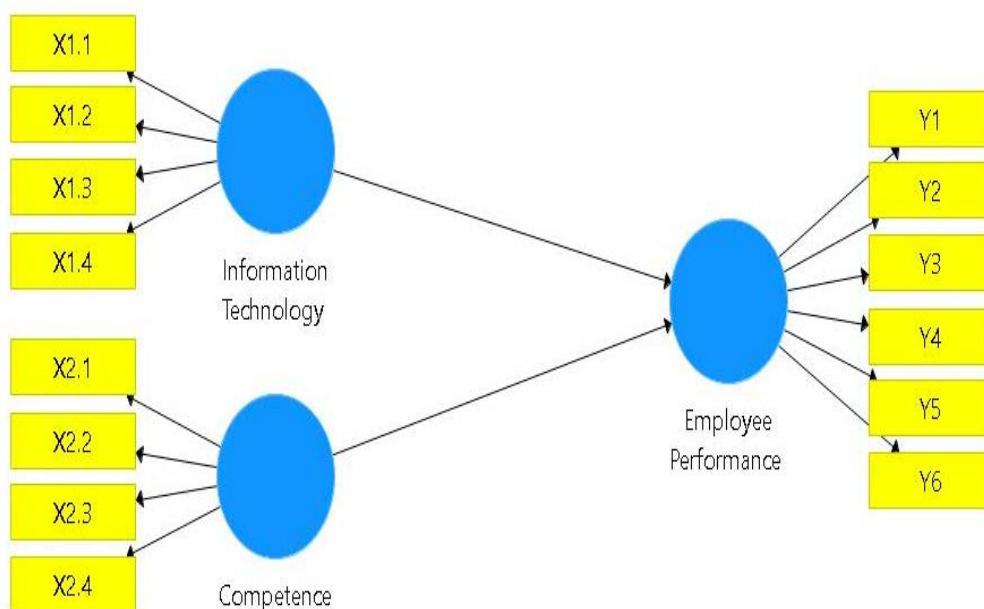
Source: Primary data processed

Based on table 3 above regarding the characteristics of respondents based on age, it can be seen that the number of respondents aged 30-40 years was 28 people or around 56% of the total number of respondents, respondents aged 41-50 years were 21 people or around 42% of the total The number of respondents, respondents aged > 50 years was 1 person or around 0.2%. This shows that most of the respondents were aged 30-40 years.

Data analysis

The model that has been designed in this research is as follows:

Figure 1. Designed Model



Data processing techniques using SEM based on Partial Least Squares (PLS) require 2 steps to assess the model fit of the research model (Ghozali, 2006).

These stages are as follows:

Assessing the Outer Model or Measurement Model

There are three criteria for using data analysis techniques to evaluate external models with SmartPLS, namely Convergent Validity, Discriminant Validity and Composite Reliability.

Convergent Validity

The convergent validity of the measurement model with reflexive indicators is evaluated based on the correlation between item scores/component scores estimated by PLS software. A variable is highly reflective if it correlates more than 0.70 with the construct being measured.

Early Models

Table 4. Outer Loadings (Measurement Model)

	Competence	Employee Performance	Information Technology
X1.1			0.920
X1.2			0.816
X1.3			0.901
X1.4			0.725
X2.1	0.855		
X2.2	0.841		
X2.3	0.858		
X2.4	0.813		
Y1		0.890	
Y2		0.826	
Y3		0.843	
Y4		0.915	
Y5		0.920	
Y6		0.844	

Source: Primary data processed

The results of SmartPLS processing can be seen in Table 4. The outer model value, namely the correlation between constructs and variables, is in accordance with *convergent validity*, because the loading coefficient indicator is above 0.70. This shows that the indicator can be said to be valid. Thus, this initial model has met the criteria *convergent validity* the good one.

Discriminant Validity

Discriminant validity is carried out to ensure that each latent variable concept is different from other variables. A model has good Discriminant Validity if each loading value of each latent variable indicator has the highest loading value compared to the loading values of other latent variables. The discriminant validity test results were obtained as follows:

Table 5. Discriminant Validity Values (Cross Loading)

	Competence	Employee Performance	Information Technology
X1.1	0.731	0.920	0.920
X1.2	0.387	0.734	0.816
X1.3	0.650	0.844	0.901
X1.4	0.630	0.627	0.725
X2.1	0.855	0.689	0.668
X2.2	0.841	0.571	0.553
X2.3	0.858	0.575	0.552
X2.4	0.813	0.681	0.616
Y1	0.606	0.890	0.762
Y2	0.498	0.826	0.733
Y3	0.680	0.843	0.747
Y4	0.759	0.915	0.815
Y5	0.731	0.920	0.920
Y6	0.650	0.844	0.901

Source: Primary data processed

Based on Table 5, it can be seen that several loading factor values for each indicator of each latent variable have the largest loading factor values which are combined with other latent variables and have positive values. This means that each latent variable still has good discriminant validity, and has a measure that is highly correlated with other constructs.

Evaluating Reliability and Average Variance Extracted (AVE)

Validity and reliability criteria can also be seen from the construct reliability value and the Average Variance Extracted (AVE) value for each construct. A construct is said to have high reliability if the value is 0.70 and the AVE is greater than 0.50. Table 6 shows the Composite Reliability and AVE values for all variables.

Table 6. Composite Reliability and Average Variance Extracted

	Composite Reliability	Average Variance Extracted (AVE)
Competence	0.907	0.709
Employee Performance	0.951	0.764
Information Technology	0.908	0.712

Source: Primary data processed

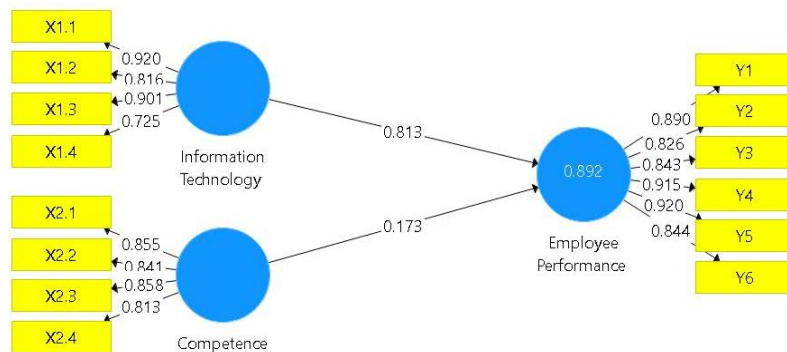
Based on Table 6, it can be concluded that all constructs meet the reliability criteria. This is indicated by Composite Reliability values above 0.70 and AVE above 0.50 as recommended criteria.

Structural Model Testing (Inner Model)

Inner model or structural model testing is carried out to see the relationship between constructs, significance values and R-square of the research model. The structural model was

evaluated using R-square for the t-test dependent construct as well as the significance of the structural path parameter coefficients.

Figure 2. Structural model that has been tested



Model estimation using PLS begins with the R-square of each dependent latent variable. Table 7 is the SmartPLS R-square estimation result.

Table 7. R-square value

	R Square
Employee Performance	0.892

Source: Primary data processed

Based on table 7, it shows that the R-Square value for the Performance variable is 0.892. These results show that 89.2% of employee performance variables can be influenced by Information Technology variables and Competency variables.

Hypothesis Testing T Test (partially)

The significance of estimated parameters provides very useful information about the relationships between research variables. The basis for hypothesis testing is the value contained in the output result for inner weight. Table 8 shows the output estimates for testing the structural model.

Table 8. Results for Inner Weights

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)
Competency -> Employee Performance	0.173	0.167	0.078	2,223
Information Technology -> Employee Performance	0.813	0.823	0.068	12,001

Source: Primary data processed

In PLS, statistical testing of each hypothesized relationship is carried out through simulation. In this case, the bootstrap method is carried out on the sample. Bootstrap testing also aims to minimize the problem of unusual survey data. The test results with bootstrapping from PLS analysis are as follows:

Hypothesis Testing 1 (Influence of Information Technology on Performance)

The results of testing the first hypothesis show that the relationship between information technology variables and performance shows a path coefficient of 0.813 and a t value of 12.001. This value is greater than the t-table (1.676). This result means that information technology has a positive and significant relationship with performance, which means it is in accordance with the first hypothesis where information technology improves employee performance. This means that hypothesis 1 is accepted.

Hypothesis Testing 2 (Effect of Competency on performance)

The results of testing the second hypothesis show that the relationship between the competency and performance variables shows a path coefficient value of 0.173 and a t value of 2.223. This value is greater than the t-table (1.676). This result means that competence has a positive and significant effect on employee performance, which means it is in line with the second hypothesis, where competence can improve employee performance. This means that hypothesis 2 is accepted.

F test (simultaneously)

For the F test using the SPSS application, the F statistical test basically shows whether all the independent variables (X) consisting of information technology (X1) and competency (X2) included in the model have an influence together (simultaneously) in explaining the content of the information. on the dependent variable on employee performance (Y). The results of the F test in this study can be seen in table 8 below:

Table 8. F test

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28,671	2	14,335	92,942	,000b
	Residual	7,249	47	,154		
	Total	35,920	49			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Competence, Information Technology

With a degree of confidence of 95%, Fcount (92.942) > Ftable (3.18) then simultaneously the independent variable X consisting of information technology (X1) and competency (X2) has an influence on employee performance (Y)

DISCUSSION

The influence of information technology on employee performance

Based on the calculation of statistical results, the construct of information technology has a positive and significant effect on employee performance at the Pagar Alam City Population and Civil Registration Service. This shows that Information Technology can improve employee performance at the Pagar Alam City Population and Civil Registration Service. The results of the research above were proven by partial testing, where the calculated t value for information technology was $12.165 \geq t$ table, namely 1.676, so it can be concluded that information technology has an effect on employee performance at the Pagar Alam City Population and Civil Registration Service. Thus, hypothesis H1 in this study is accepted. These results are in line with the results of research conducted by Mulyono (2013) which found that the existence of Information Technology

has a very big influence on the management of Population Administration. Then research by Toyo et al (2022) stated that the use of information technology had a positive effect on teacher performance at SMPN 1 Tomia. Anggraini's research (2022) states that the use of information technology and competence has a positive and significant effect on the performance of employees at the Demak City Agriculture and Food Service.

The Influence of Competency on Employee Performance

Based on the calculation of statistical results, it can be concluded that the competency construct does not have a positive and significant effect on the performance of Pagar Alam City Population and Civil Registry Service employees. This shows that competence does not result in an increase in employee performance at the Pagar Alam City Population and Civil Registration Service. The results of the research above were proven by partial testing, where the calculated t value for competence was $2.278 \geq t$ table, namely 1.676, so it can be concluded that competence influences employee performance at the Pagar Alam City Population and Civil Registration Service. Thus, hypothesis H2 in this study is accepted. These results are in line with research conducted by Suryani et al (2021) found that there was a positive and significant influence from the three hypotheses proposed, namely the relationship between competency and employee performance, competency with the use of information technology and between the use of information technology and employee performance. Research conducted by Odja et al (2020) states that competence and information technology have a positive and significant effect on employee performance at the Maskasar City Environmental Service.

CONCLUSION

From the results of the discussion in the research above, the following conclusions can be drawn:

1. Information Technology has a positive and significant effect on Employee Performance at the Pagar Alam City Population and Civil Registration Service.
2. Competency has a positive and significant effect on the performance of Pagar Alam City Population and Civil Registration Service employees.
3. The influence of information technology and competence on the performance of Pagar Alam City Population and Civil Registration Service employees simultaneously (as a whole) has a positive and significant effect.

Based on the results of the research, it is recommended that the leadership of the Population and Civil Registration Service of Pagar Alam City, the leadership should further increase the use of information technology in terms of improving the abilities and competencies of employees so that it has a positive influence on the performance of employees of the Pagar Alam City Population and Civil Registration Service.

LIMITATION

1. This research is limited to measuring the influence of the use of information technology and competence on employee performance at the Pagar Alam City Population and Civil Registry Service.
2. This research may suffer from respondent bias, where only employees who are more knowledgeable or have a positive view of information technology use and competence are willing to participate. This may influence the results of the study as it does not represent the views of all employees.

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