

# **NGUPP REPORT**

## **Development of a System Dynamics Simulation Model**

### **Development of the qualitative model**

The development of the simulation model followed the procedure that is outlined below:

1. Initial discussions, definition of scope and boundaries of the model
2. Initial development of the Causal Loop Diagram model
3. Meeting with all the project partners for feedback and insights into their work and how it could be translated into the System Dynamics model
4. Initial development of the quantitative System Dynamics model
5. Data acquisition by the partners
6. Scenario generation based on the data provided by the partners

All these steps are described in more detail in the following paragraphs.

#### **1. Initial discussions, definition of scope and boundaries of the model**

At the beginning of the development phase, there were several meetings with the project coordinator in order to get a full understanding of the scope of the project and how it could be translated into a System Dynamics model. Moreover, the coordinator's team discussed in detail the Italian judicial system at various levels, described the problems that are encountered and where they envisaged potential interventions along with thoughts on what the consequences of these interventions could be.

#### **2. Initial development of the Causal Loop Diagram model**

Following the discussions with the project coordinator, an initial Causal Loop Diagram (CLD) was developed that illustrated at a very high-level the system under study. The CLD is depicted in the figure below.

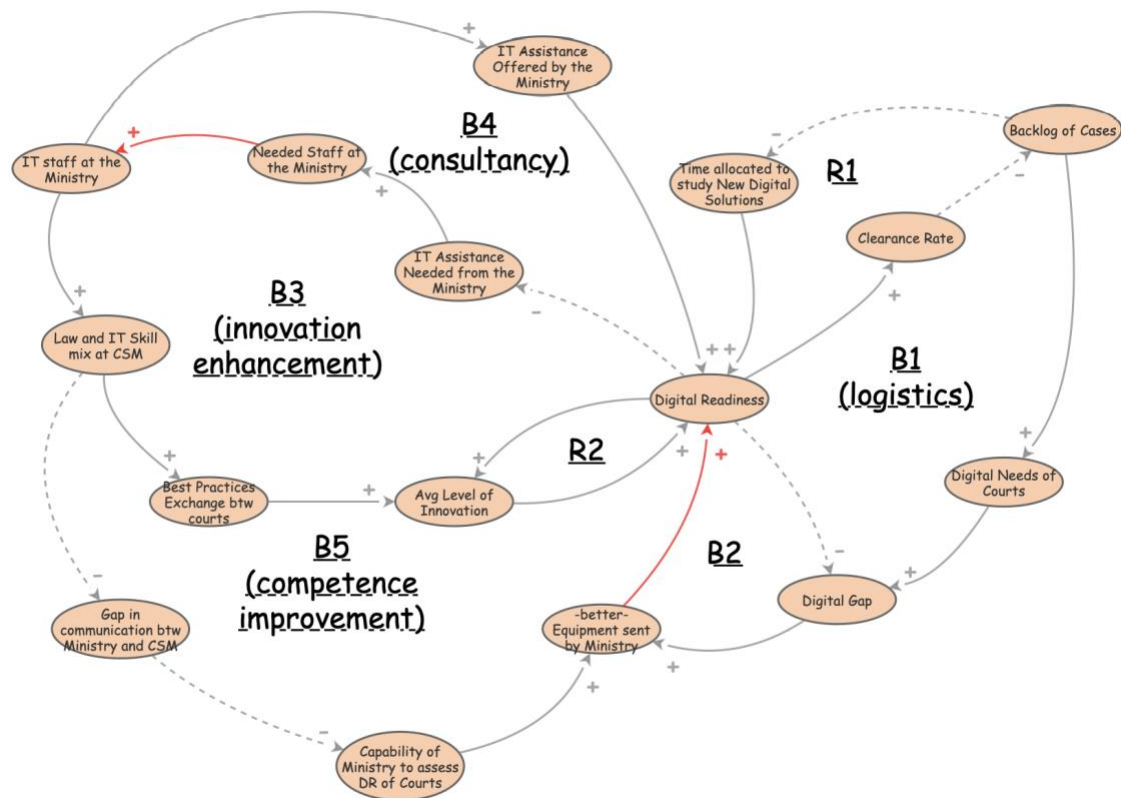


Figure 1 Initial CLD

### 3. Meeting with all the project partners for feedback and insights into their work and how it could be translated into the System Dynamics model

Once the initial CLD was developed, a series of meetings was held with all the project partners with the purpose of understanding their work, explaining the model and gaining insights into potential policies. Once the meetings were finalized, a new expanded Causal Loop Diagram was developed and the potential policies were mapped into the new diagram.

Table 1 below illustrates the contributions of the project partners on the area of potential policy design, while Figure 2 illustrates the new and updated CLD and where these policies fall within the model scope.

Table 1 Partners' contributions in the area of policy design

University	Contribution
Politechnic of Milan	<ul style="list-style-type: none"> <li>• Connection between court's president and local support</li> <li>• UPP insights</li> </ul>
University of Brescia	<ul style="list-style-type: none"> <li>• UPP insights</li> </ul>
University of Bergamo	<ul style="list-style-type: none"> <li>• Data on Cases</li> <li>• Verification of the courts' process</li> </ul>
University of Milan "Bicocca"	<ul style="list-style-type: none"> <li>• Knowledge Management of courts</li> <li>• Communication between offices of Innovation and Process Management at the Ministry Level</li> </ul>
Politechnic of Turin	<ul style="list-style-type: none"> <li>• Data on Cases</li> <li>• UPP insights</li> </ul>
University of Eastern Piedmont	<ul style="list-style-type: none"> <li>• Tools that are used by Courts</li> <li>• Processing time of cases</li> </ul>
University of Genova	<ul style="list-style-type: none"> <li>• Perspective on Costs</li> </ul>
University of Turin, Computer Engineering	<ul style="list-style-type: none"> <li>• By Digitization, the whole workflow, costs and times get reduced and in this way chancellors could even do smart-working</li> </ul>



#### 4. Initial development of the quantitative System Dynamics model

Following the updated CLD, a quantitative model was developed. In typical System Dynamics methodological framework, the model was developed, tested, validated and verified.

The quantitative model closely follows the detailed Causal Loop Diagram that preceded.

In essence the following structures are present in the quantitative model:

- Operational Level: It represents the process within a court. Cases enter the court, they are processed by chancellors then move to the judges level where they are tried and resolved through various means. This part of the model entails the following categories of people: (1) UPP, (2) Chancellors and (3) judges. The required time for each case to go through each level depends on the productivity of each personnel category (i.e. how many cases per month they can handle)
- Factors affecting the productivity of the personnel: This part of the model entails the factors that increase and decrease the productivity of each type of person. It depends on time and an assumption was made that the overall Digital and Innovation Capacity of the court directly affects the productivity. This variable is a general way to represent all these digital and innovative aspects that could increase productivity and it depends on several factors: (1) training that is provided to personnel, (2) the Digital and innovation capacity of other courts and the judicial system overall (3) the connection of the courts with local SMEs providing digital assistance and equipment (4) the digital and innovation assistance and equipment provided by the ministry (5) One of the most important variables/structures of the model is the behavior of the court's president. After discussions with the coordinator and the partners, it was revealed that each new court president, once installed in their position, might have an incentive to abolish all the previous digitization efforts and start anew
- CSM level: The CSM level is meant to represent the digital and innovation capacity of the judicial system overall. The model structure assumes that innovation can be thought of as a "virus". As more and more courts/judicial prefectures become digital and innovative, the rest have incentives to follow. Important aspects of this structure is the communication between CSM and courts and CSM and the ministry. This quantitative variable can be set as an input (between 0 and 1) from the user, or the user can decide that this variable will vary based on specific functions in the model (more explanations in the following paragraphs)
- Ministry level: This part of the model represents in a generic form the processes within the ministry. It includes the way that the ministry receives requests from CSM and/or courts for equipment and assistance, how they are processed and how (or when) they are sent back to the courts. This part of the model includes the IT department that is responsible for assisting courts with requests, support etc.

There are several noteworthy assumptions and limitations within the model and these are:

##### a. Assumptions

- *No economics/financial aspects are explicitly modelled.*

For example, the performance of the court could be enhanced by hiring more judges but that would increase the operational costs substantially

#### **b. Limitations**

- *The incoming cases that are modelled are homogeneous.*

The model does not account for cases that might be difficult thus, requiring more time to handle/solve

- *The KPI Disposition Time represents the average time it takes for a case to be handled from beginning to end.*

Due to the nature of the model and the limitation of the homogeneity of cases, the KPI should not be considered an accurate representation of reality. Rather its overall behavior should be analyzed, especially when potential policies are tested.

Thus, the model can be used in the following setting in a way that the user can take the following roles:

- i. The role of the simulated court's president. With this role you can influence how the processes and people within the court are structured.

**VERY IMPORTANT:** As a president you have the option to abolish all previous digital structures that were in place or not. This is a decision of the utmost importance since it will determine the productivity of all court staff and its Digital Capacity.

- ii. The role of a policy maker at the ministry level. With this role you influence the communication among the various judicial levels and the hiring of IT people

The quantitative model was presented to the project coordinator, along with scenarios that illustrated how it worked with generated data. The team of the coordinator, expressed their thoughts and provided insights into the KPIs that should be included in the model, along with correct naming of variables.

## **5. Data acquisition by the partners**

Once the model was validated by the coordinator's team, a list of variables was extracted in order to ask for real-life data from the project partners. The data were separated into two categories:

- Data for the model variables
- Data and/or variables that represent potential policies to be tested in the model

The list of variables is the following:

Table 2 Data on the model variables

Variable	Value	Explanation
Number of UPP		Number of UPP at the court under study
UPP training period		How much does the training period for UPP last?
Delay to hire UPP		How much time is required to hire UPP
UPP leaving rate		On average, how much time do UPP stay in their positions?
Number of incoming cases in a court per month (or year)		
For how much each case stays at the chancellorship level		On average from the data you have. If possible you can also indicate min and max values
How many cases can a chancellor handle per month (or year)		On average. If not known please make an estimated guess
How many cases can a judge handle per month (or year)		On average. If not known please make an estimated guess
What percentage of cases (or number of cases) are entering the courts but are solved through negotiation between the parties		On average. If not known please make an estimated guess
What percentage of cases (or number of cases) are entering the courts but at some point are returned to the parties for more information (reassessment etc.)		On average. If not known please make an estimated guess
How many cases each judge concludes (assess, preside over and make decision) per year		On average. If not known please make an estimated guess
Percentage of cases that move to the appeal's level after initial decision		

How many judges are in the court you are studying (or average number of judges in all courts at your prefecture etc.)		
How much time is required to hire and install a new judge		On average. If not known please make an estimated guess
What is the average time that a judge stays on the bench		On average. If not known please make an estimated guess
How many chancellors are in the court you are studying (or average number of judges in all courts at your prefecture)		
How much time is required to hire and install a new chancellor		On average. If not known please make an estimated guess
What is the average time that a chancellor stays on the court (either retires afterwards or leaves to work elsewhere)		On average. If not known please make an estimated guess
How many judicial prefectures do you consider to be digitally innovative? What is the percentage to the total judicial prefectures?		
How many IT people work at the ministry and can help with IT aspects of courts		On average. If not known please make an estimated guess
How much time is required between when a court asks for help from the IT department in the ministry and the help being delivered?		On average. If not known please make an estimated guess
How much time is required between when a court asks for equipment by the ministry and that equipment being delivered?		On average. If not known please make an estimated guess



How much time between the court (president) asking for service or equipment by external actors (SMEs, companies etc) and that service or equipment being delivered?		On average. If not known please make an estimated guess
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*Table 3 Data and/or variables on potential policies to be tested in the model*

<b>Policy at court's level</b>	<b>Value</b>	<b>Comments/examples/explanations</b>
Hire New UPP	Yes or No	
Hire New UPP Yes (How many per month (or year)		Example: Hire 1 UPP per month for the entire simulation time. Example 2: Hire 5 UPP per month for the first 12 months of the simulation time and then 0. It can also follow different rules: if backlog of cases at court bigger than [value] hire 10 UPP per month; otherwise 0
Percentage of the UPP personnel that are working with judges		It can be a fixed percentage (35%) or it can follow rules: If backlog of chancellors bigger than backlog of judges then percentage of UPP working with judges 30%. Inversely 65%
Percentage of the UPP personnel that are working with chancellors		Same as above
Percentage of UPP sent for training (percentage of those that are currently employed at working at the court)		Example: 20% of the UPP for entire simulation time. Example 2: 10 % for the first 12 months and 15% for the last 12 months of the simulation time
Hire new chancellors	Yes or No	
If Hire new Chancellors yes: How many per month or year?		Example: Hire 1 Chancellor per month for the entire simulation time. Example 2: Hire 5 Chancellor per month for the first 12 months of the simulation time and then 0. It can also follow different rules: if backlog of cases at court bigger than [value] hire 3 chancellors per month; otherwise 0

Percentage of working chancellors that are sent for training on digital tools		Example: 20% of the chancellor for entire simulation time. Example 2: 10 % for the first 12 months and 15% for the last 12 months of the simulation time. It can also follow different logic rules: if backlog of chancellor bigger than [value] 0%, otherwise 15%
Percentage of judges that are sent for training on digital tools		Example: 20% of the judges for entire simulation time. Example 2: 10 % for the first 12 months and 15% for the last 12 months of the simulation time. It can also follow different logic rules: if backlog of chancellor bigger than [value] 0%, otherwise 15%
Decision of court's president to abolish previous digital capacity and start installing new one	Yes or No	
Intensity of president's decision to abolish digital capacity and start installing new one		It takes values from 0 (not abolishing previous digital capacity) to 1 (abolish entire digital capacity and infrastructure of the court)
Timing of the abolishment of court's digital capacity		For example, every 8 years there is a new president who might abolish digital capacity of court
President's effort towards communicating with SMEs		It is a variable that represents how well the president of the court has established a network with local SMEs and provides business opportunities for collaboration with the court. It takes values from 0 (no communication) to 1 (very intensive and very costly collaboration with SMEs)
Multiplier effect for orders at the ministry		How much digital equipment and software the president is asking from the ministry/CSM. It takes values $\geq 1$ . The higher the number the higher the order (quantity of equipment and software from the CSM/Ministry)
<b>Policy at System's level</b>	<b>Value</b>	<b>Comments/examples/explanations</b>
Hire New IT people at CSM level	Yes or No	

Hire New IT people at CSM level Yes (How many per month (or year)		Example: Hire 1 IT per month for the entire simulation time. Example 2: Hire 5 IT per month for the first 12 months of the simulation time and then 0. It can also follow different rules: if number of innovative regions in Italy > than 50% people hire 0, otherwise hire 15 people per month until the number of innovative regions in Italy is more than 50%
Hire New IT people at ministry level	Yes or No	
Hire New IT people at ministry level Yes (How many per month (or year)		Example: Hire 1 IT per month for the entire simulation time. Example 2: Hire 5 IT per month for the first 12 months of the simulation time and then 0. It can also follow different rules: if number of innovative regions in Italy > than 50% people hire 0, otherwise hire 15 people per month until the number of innovative regions in Italy is more than 50%
Communication between CSM and courts		It takes values from 0 {no communication at all} to 1 (totally synchronized communication. The model so far has two options for communication: a) input values between 0 and 1 b) count the number of IT people at CSM . The higher the number of IT people at that level the better the communication (assumption). If you can think of another type of formulation on how to represent communication kindly indicate it to us
Communication between CSM and ministry		It takes values from 0 {no communication at all} to 1 (totally synchronized communication. The model so far has two options for communication: a) input values between 0 and 1 b) count the number of IT people at CSM and ministry level. The higher the number of IT people at those two levels the better the communication (assumption). If you can think of another type of formulation on how to represent communication kindly indicate it to us

Several data points were provided by the partners, and there was a cleaning and aggregation process in order to accommodate the specific formats and needs of the quantitative model. The data that were actually used can be seen in the appendix.

## **6. Scenario generation based on the data provided by the partners**

To generate the various scenarios, both the coordinator team and the partners were consulted.

6 scenarios were simulated and they were judged on two important KPIs:

- Disposition time: average time that passes from when a case enters the court until it is resolved. Please keep in mind the limitations that were mentioned in the description of the model structure: The disposition time should not be considered as a point of prediction on exact values; rather its behavior (meaning whether its trajectory is upwards or downwards) and especially how it reacts to the various policies
- Clearance rate: the percentage of cases that are resolved over those that are entering the court. Similar limitations such as the disposition time also apply here.

The 6 scenarios are separated into 2 broad categories:

### Base scenarios

The base scenarios are meant to test how the introduction of the UPP could affect the operations of the simulated court.

1. No UPP are present in the courts processes
2. UPP are presented in the courts processes and moreover are hired according to the needs of the court (based on incoming cases)

### Policy scenarios

The policy scenarios are meant to illustrate how the court processes could be affected if different types of policies are applied. These policies are focused on a more systemic level where there will be an effort to gradually increase the Digital and Innovation capacity of the entire judicial system with the purpose of increase the productivity of courts.

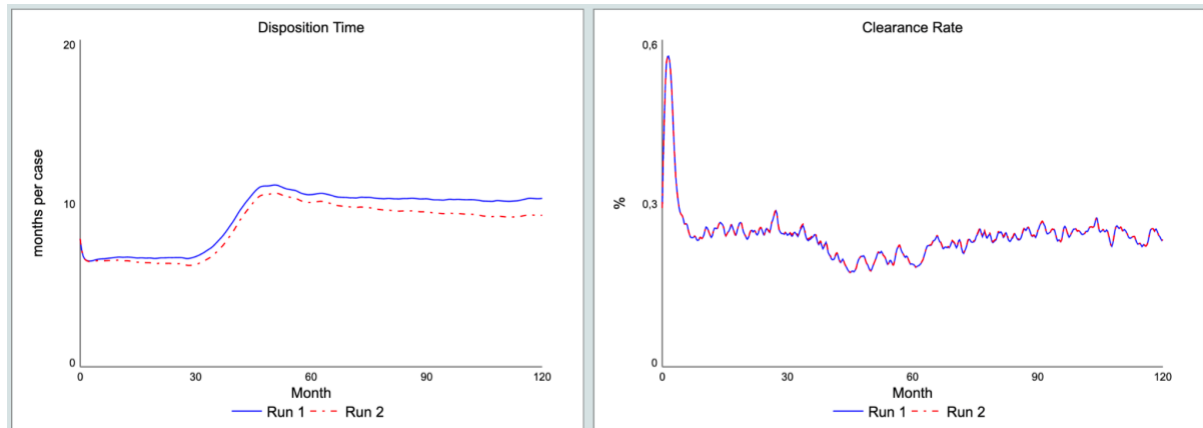
1. Increased contact with technology SMEs around the area of the courts with the purpose of providing assistance and equipment to the courts
2. Establishment of an IT department at the CSM level that would assist in all digital aspects of the courts' operations. The increased contact with SMEs remains
3. Introduction of technological training to chancellors and judges (when necessary) in addition to the CSM IT department and the increased contact with SMEs
4. The creation of a Digital and Innovation Competence Center that would preserve all the digital and innovation capacity of the courts, facilitate communication among the various levels and departments, and finally attempt to act as a institutional Knowledge Center that would counteract the negative effects of the new presidents' decisions to abolish all previous digital capacity (all the previous aspects of policy scenarios remain).

It should be stated that the new presidents' decision to abolish previous digital and innovation aspects of the courts is applied at month 24 of the simulation time. The choice of the timing is such so that the reader can observe both the long and short term effect of this decision. In addition, the model is simulated for 10 years.

Finally, the two base scenarios are presented and discussed and each subsequent policy scenario is simulated and the differences with the base ones are discussed.

### Base scenarios

For the base scenarios, the results for the two KPIs are illustrated in the figure below.



*Figure 3 KPIs for the two base scenarios*

As it can be observed, the introduction of UPP has a positive effect on the Disposition time, however it is not significant. Moreover, the improvement on the Clearance rate is marginal (or even non existent). The important insight that is revealed with the base scenarios is the effect that the new president's decision can have on the both KPIs; it is substantial and negative overall. This is represented with the upward trajectory of the disposition time and the drop of the clearance rate.

Hence, in principle the introduction of UPP could be beneficial for the courts, however, the model does not account for the cost of such an introduction and finally, the improvement on the KPIs cannot be regarded as substantial.

## Policy Scenarios

### - Policy Scenario 1

The first policy scenario that is tested is with an increased contact and collaboration with local SMEs that could provide support and equipment with regards to the courts' digital capacity. The results are illustrated in the figure below.

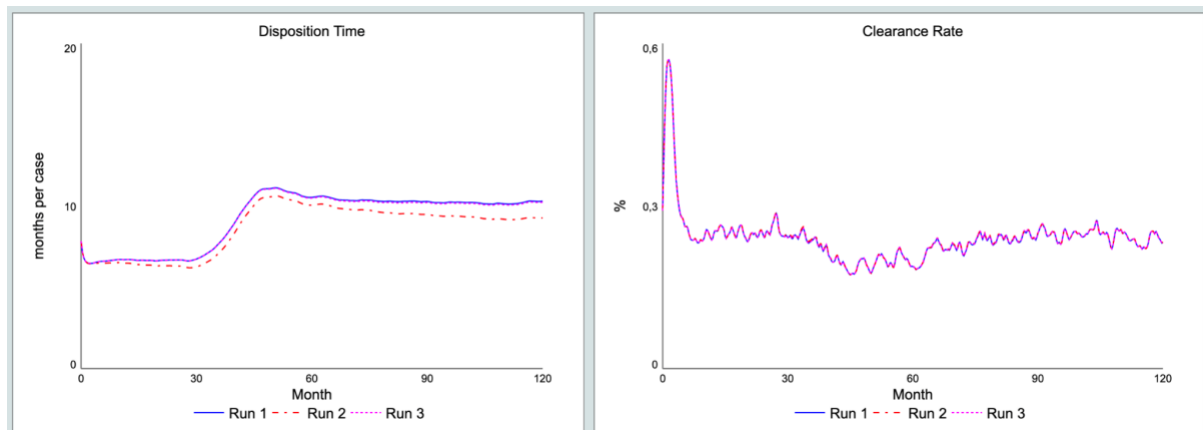


Figure 4 KPIs for the two base scenarios (Runs 1 and 2) and the first policy scenario (Run 3)

The first policy scenario performs almost similar to the base one without UPP. Thus, simply trying to engage technological SMEs without any systemic and systematic approach will have no effect on the performance of the courts.

### - Policy Scenario 2

In the second policy scenario, in addition to the increased contact with technological SMEs, an IT department is also established at the CSM level with people of appropriate background that could also assist in the provision of assistance and equipment to courts. The results are illustrated in the figure below.

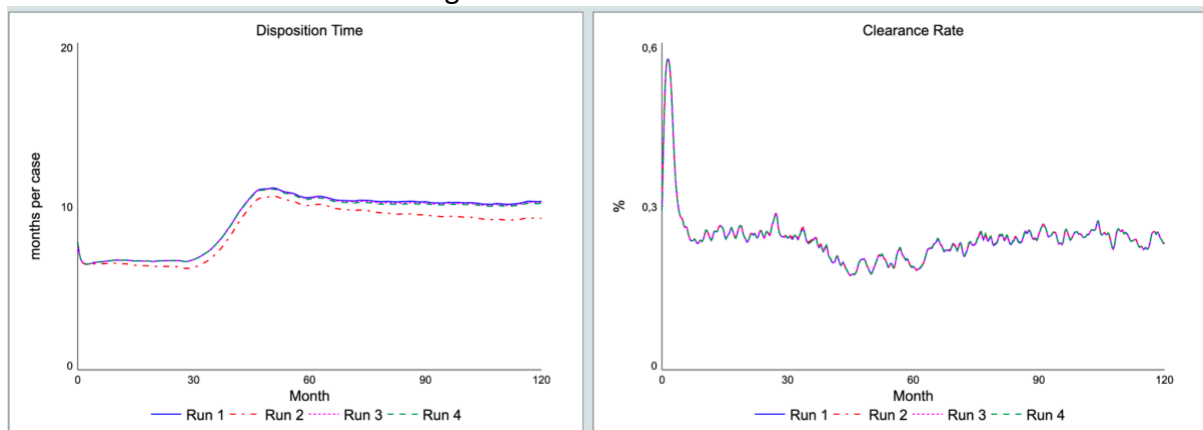


Figure 5 KPIs for the two base scenarios (Runs 1 and 2), the first policy scenario (Run 3) and the second policy scenario (Run 4)

Once again, the establishment of an IT department at CSM level improves the situation only marginally compared to Policy Scenario 1 and Base Scenario without the UPP, but it performs worse than the Base Scenario where there is an introduction of UPP.

- Policy Scenario 3

The third policy scenario further introduces training and education of judges and chancellors with the purpose of familiarizing themselves with the newest digital equipment and increasing their productivity. The results of Policy Scenario 3 are illustrated in the figure below.

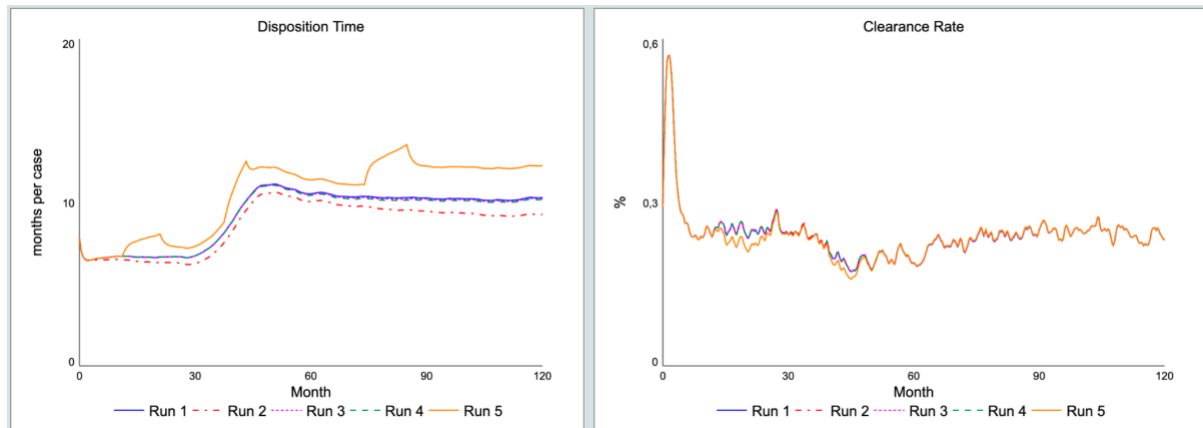


Figure 5 KPIs for the two base scenarios (Runs 1 and 2) , the first policy scenario (Run 3) , the second policy scenario (Run 4) and the third policy scenario (Run 5)

This new policy has the worst result so far in the model and this is not unexpected. Providing education and training to judges and chancellors means that they will not be able to perform their judicial duties at the maximum level of their time. Thus, there will be an impact (negative) on both the disposition time and the clearance rate. For any such policy to actually perform there has to be a detailed policy analysis so that training will not interfere with the judicial duties and should be performed only where there is a drop in the backlog of cases.

- Policy Scenario 4.

So far, the introduction of UPP has been the best policy to both decrease disposition time and increase (even marginally) the clearance rate. However, the testing of the various policies themselves revealed that applying individual (and uncoordinated ) policies at CSM level is not beneficial, especially since the decision of a new president to abolish previous attempts at digitization and innovation appears to be the biggest driver in the model.

Hence, one could imagine a new department or centre at the CSM level (or in parallel with the CSM level) that could act as the institutional memory of the judicial system in matters of digital and innovation capacity. Such a center could coordinate and perform the following actions:

- Coordinate the network with the technological SMEs
- Provide support and equipment to the courts
- Coordinate with the IT department of the ministry
- Keep inventory of the most important and useful tools that would not be affected by a new president's decision to abolish previous digital and innovation attempts

The results for such a level/center/policy are illustrated in the figure below.

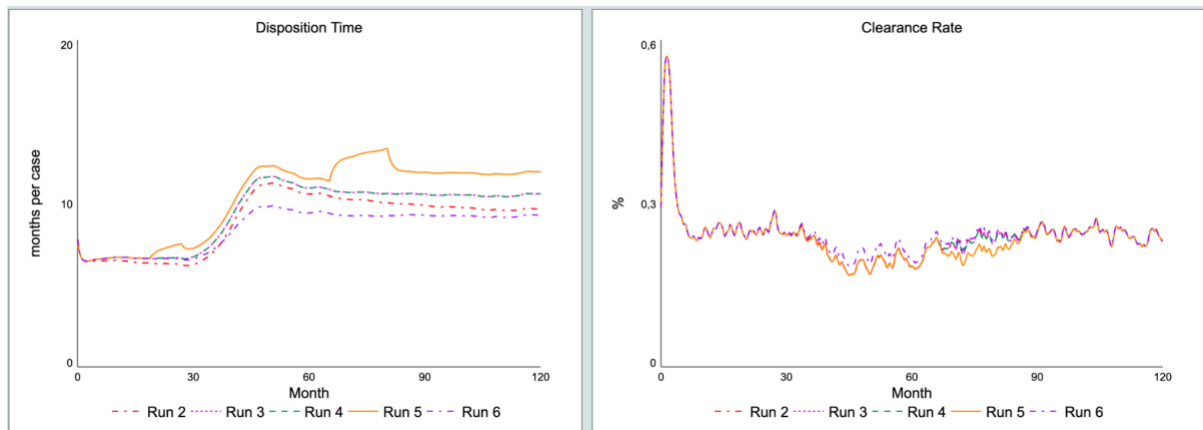


Figure 5 KPIs for the two base scenarios (Runs 1 and 2), the first policy scenario (Run 3), the second policy scenario (Run 4), the third policy scenario (Run 5) and the fourth policy option (Run 6)

The fourth policy option with the center has the best results of all the scenarios, since it improves both the disposition time and the clearance rate. Even more interestingly, the fourth policy seems to decrease the negative effect of any new president's decision to abolish previous attempts at digitization and innovation.

As it was mentioned, the policy performs better than all the policies/scenarios and compared to the Base scenario with the introduction of UPP it is better at both KPIs and more importantly, the introduction of UPP only at the end of the simulation time (10 years) seems to be reaching near the levels of performance that Policy Option 4 has after only 3 years of application.

Of course, these 6 scenarios could be further elaborated and expanded with the combination of UPP and a Digital and Innovation Center, the optimization of training of judges, UPP and chancellors etc.

## 7. Conclusions and future developments

The purpose of the current report was to present the process for the development of a simulation model on the judicial process and gain insights into the potential impacts of introducing UPP in the courts' processes with regards to Disposition time and Clearance rate. In addition, the quantitative model offered the opportunities to test more systemic and systematic policies that focused on increasing productivity of current personnel (judges and chancellors) by proceeding with Digital Transformation and increasing the courts' innovation capacity.

The model was developed in collaboration with the project partners and moreover, they provided basic data points that were used as input to the model.

6 scenarios were tested, two considered as Base scenarios whose focus was the impact of the UPP introduction. The other four were focused on more systemic policies focused on the utilization of digital transformation and how it could affect the productivity of the courts.

The main conclusions are the following:



1. Introducing UPP to the courts is beneficial to the disposition time more and less to the clearance rate
2. Individual or uncoordinated policies do not perform well.
3. However, the introduction of a Digital and Innovation Center at CSM level which would act as the Center for the Institutional Memory of the judicial branch with regards to Digital Transformation and Innovation produces the best results. Moreover, such a center would act as a coordinator between ministry and the courts, would improve the collaboration with local SMEs that could offer assistance and equipment to the courts and more importantly it would reduce the negative effects from a new president's decision to abolish previous digitization efforts.
4. The decision of new president's to abolish previous Digital and Innovation efforts and introduce new ones, produces a negative effect on the basic KPIs of the model.

Future directions for the research include:

- a. The development of a Graphical User Interface that would allow any policy maker to adapt the model parameters to specific instances and test specific policies
- b. The simulation of even more scenarios and policy variations
- c. The introduction of new KPIs of interest that could enrich the picture with regards to the performance of a court such as the Backlog of cases to the judges etc.

## Appendix

The data that were provided by the partners and were used for the simulations are depicted on Tables 4 and 5 below.

Table 4 Data provided by the partners (1/2)

	Number of UPP	UPP training period [Months]	Number of incoming cases in a court per month	How many cases can a cancellor handle per month	How many cases can a judge handle per month	What percentage of cases (or number of cases) are entering the courts but are solved through negotiation between the parties	How many cases each judge concludes (assess, preside over and make decision) per year	Percentage of cases that move to the appellate level after initial decision	How many judges are in the court you are studying (or average number of judges in all courts at your prefecture etc.)	How many cancellors are in the court you are studying (or average number of judges in all courts at your prefecture)	How many judicial prefectures do you consider to be digitally innovative? What is the percentage to the total judicial prefectures?
Case 1	13	5	631,666667	89,166667	49,333333	0,2	7221	0,059	13	8	1
Alessandria	7				36,13				26	6	
Asti	8				33				24	6	
Biella	3				34				11	3	
Novara	0				42				16	11	
Verbania	2				40				9	7	
Vercelli	0				39				14	12	

Table 5 Data provided by the partners (2/2)

	Average duration of months for all types of cases													
Year	Alessandria - Tribunale - Civile SICID	Alessandria - Tribunale - Civile SIECI C	Asti - Tribunale - Civile SICID	Asti - Tribunale - Civile SIECI C	Biella - Tribunale - Civile SICID	Biella - Tribunale - Civile SIECI C	Cuneo - Tribunale - Civile SICID	Cuneo - Tribunale - Civile SIECI C	Novara - Tribunale - Civile SICID	Novara - Tribunale - Civile SIECI C	Verbania - Tribunale - Civile SICID	Verbania - Tribunale - Civile SIECI C	Vercelli - Tribunale - Civile SICID	Vercelli - Tribunale - Civile SIECI C
2014	9,60	37,25	7,75	18,29	10,15	31,65	5,14	19,82	11,01	19,52	7,49	35,70	11,18	55,06
2015	8,64	41,52	6,52	18,57	10,67	48,95	4,96	22,98	13,78	23,91	6,46	35,60	11,12	47,00
2016	11,04	36,91	6,49	21,39	11,32	40,91	5,54	26,94	11,80	22,23	8,28	30,25	8,91	48,46

2017	9,60	40,56	7,44	24,16	14,32	34,63	7,78	30,40	12,32	27,12	7,36	34,86	8,66	48,46
2018	7,92	39,41	6,20	28,35	10,57	47,81	6,79	30,63	13,10	34,23	8,25	36,29	7,73	54,04
2019	8,16	33,89	6,17	31,00	13,79	44,36	6,95	28,89	11,68	32,96	6,98	34,52	8,74	33,04
2020	10,56	46,78	7,19	32,45	17,08	29,99	7,80	32,53	11,80	37,28	8,28	38,48	9,67	40,44
2021	10,80	40,63	6,23	34,04	14,40	44,66	9,80	30,92	12,13	38,65	6,97	47,90	8,62	45,73
2022	11,76	31,80	6,65	34,78	17,99	35,25	8,95	30,64	10,57	31,71	5,96	39,22	9,00	31,42
	Incoming Cases/Solved Cases per month													
Year	Alessandria - Tribunale - Civile SIECI C	Alessandria - Tribunale - Civile SIECI C	Asti - Tribunale - Civile SIECI C	Asti - Tribunale - Civile SIECI C	Biella - Tribunale - Civile SIECI C	Biella - Tribunale - Civile SIECI C	Cuneo - Tribunale - Civile SIECI C	Cuneo - Tribunale - Civile SIECI C	Novara - Tribunale - Civile SIECI C	Novara - Tribunale - Civile SIECI C	Verbania - Tribunale - Civile SIECI C	Verbania - Tribunale - Civile SIECI C	Vercelli - Tribunale - Civile SIECI C	Vercelli - Tribunale - Civile SIECI C
2014	778,00	268,25	683,50	267,83	345,25	162,17	686,92	226,17	563,25	210,83	322,08	117,42	479,75	168,17
2015	746,42	299,83	674,50	216,83	315,75	118,58	611,50	167,83	535,50	214,50	305,42	85,58	469,92	174,25
2016	734,25	282,17	640,08	186,42	334,25	90,33	652,25	171,83	544,17	180,92	317,50	75,83	434,58	172,25
2017	730,08	299,33	598,92	192,08	321,92	93,42	642,92	198,75	513,17	211,50	323,00	74,83	459,67	156,25
2018	669,17	311,08	595,75	180,75	272,50	90,42	588,08	171,42	500,00	225,33	289,33	84,92	406,83	144,58
2019	649,58	298,42	576,33	187,25	283,58	71,33	582,92	158,25	501,83	199,50	283,08	68,75	397,42	141,17
2020	505,75	193,42	478,33	132,75	213,33	59,58	470,50	119,33	366,75	130,42	292,25	50,58	331,17	68,25
2021	616,08	207,17	585,00	194,75	241,17	68,08	527,33	119,33	457,58	147,25	251,92	58,17	364,50	120,50
2022	636,17	232,25	553,08	197,17	245,25	64,92	524,33	144,25	420,58	137,75	239,83	59,92	375,00	143,92
Average	673,94	265,77	598,39	195,09	285,89	90,98	587,42	164,13	489,20	184,22	291,60	75,11	413,20	143,26
Total	939,71		793,48		376,87		751,55		673,43		366,71		556,46	
Judges	26		24		11				16		9		14	
Cases per judge per month	36,1428063		33,0617284		34,2609428				42,0891204		40,7458848		39,7473545	