



12 **Contents**

13	<b>1 Intro</b>	<b>3</b>
14	<b>2 Generalized Use Cases</b>	<b>3</b>
15	2.1 User Uses Service (First Time in the Session) . . . . .	4
16	2.2 Already-Logged-in Optimization (SSO) . . . . .	6
17	2.3 User Uses Dashboard . . . . .	6
18	2.4 IdP Detected-Optimization (SSO) . . . . .	11
19	2.5 User Uses Service, Identity Selector Case . . . . .	11
20	2.6 User Uses Service, Local Login Case . . . . .	11
21	2.7 User Uses Service, Proxy IdP Case . . . . .	13
22	2.8 Consenting to PII Release or Manipulation . . . . .	13
23	2.8.1 Interaction on Front Channel . . . . .	14
24	2.8.2 Interaction on side channel . . . . .	14
25	2.8.3 Interaction via Dashboard . . . . .	17
26	2.9 Using Linking Service . . . . .	18
27	2.10 Choosing among Multiple Service Providers . . . . .	19
28	2.10.1 Simple Choice of Provider . . . . .	19
29	2.10.2 Trust and Privacy Negotiation Assisted by User Interaction	21
30	2.11 User-Not-Present Transaction . . . . .	22
31	2.12 User Present Delegation . . . . .	23
32	2.13 User-Not-Present Delegation . . . . .	23
33	2.14 Other Use Case Work . . . . .	23
34	2.15 Future Use Case Work . . . . .	24

---

# 35 1 Intro

36 (placeholder to get numbering to match tas3-arch document)

## 37 2 Generalized Use Cases

38 **Non-normative.** The simulated user interface screenshots in this sec-  
39 tion are NOT normative. They serve merely to illustrate one feasible  
40 way of designing the user interface. The user interface flows are also  
41 non-normative, for example the IdP detection or already-logged-in  
42 detection may follow different paths. Every step of the way, confir-  
43 mation questions, wizards, and other user interface devices may be  
44 inserted. Depending on business model and branding choices of the  
45 Trust Network, there may be some graphical guidelines and restric-  
46 tions, see [TAS3BIZ] and Governing Agreement of the Trust Net-  
47 work.

48 This section addresses *Req. D1.2-2.13-Easy*, among others.

49 These Use Cases deal with User Interaction, therefore they do not illustrate  
50 the rather large Web Services proportion that TAS<sup>3</sup> architecture mainly aims to  
51 address. Never-the-less, in a User Centric system, we must start with the user -  
52 without his impulse (direct or indirect) the back-end Web Services should never  
53 happen.

54 A general assumption has been that Single Sign-On (SSO) will be used,  
55 though some other approaches are foreseen as well. Long tail services should  
56 especially use SSO as it is unreasonable to ask for user registration for one-off  
57 service request.

58 **Methodology.** In the Story Boards that follow, the sequence de-  
59 scribes user's preception. It does NOT describe protocol flow, which  
60 can at times be quite different from User's preception. For example,  
61 many SSO protocols call for HTTP redirects, so technically speak-  
62 ing any transfer between screens should pass via User Agent. A big  
63 circle in diagram means a protocol step that usually is optimized so  
64 that no page is shown to the user (but astute users may notice some  
65 flicker). When the optimization for some reason does not work out,  
66 the regular user interface screen will be shown. We apply Cognitive  
67 Walkthrough method [Wharton94] to elaborate the story boards.

## 2.1 User Uses Service (First Time in the Session)

---

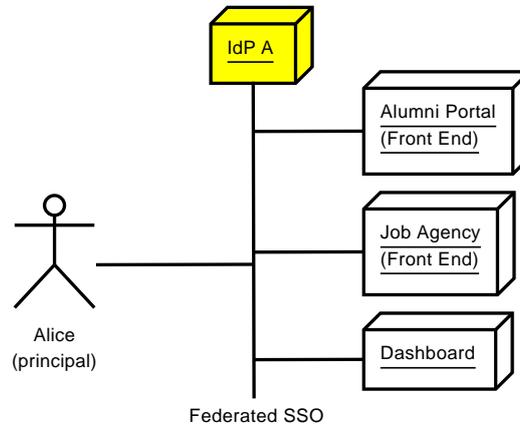


Figure 1: User accesses Front Ends using Single Sign-On.

## 2.1 User Uses Service (First Time in the Session)

The first time use of a service in a session consists of

- First the User interacts with the Front End (FE)
- The User is redirected to IdP (cf. Req 3.1 Existing Accounts)
- The User logs in at IdP
- The User is redirected back to the protected content

This means minimum three steps, but there could be more if there are confirmation questions.

**Trust Seals.** As can be seen, the user interface is expected to display trust seal of the Trust Network and may display TAS<sup>3</sup> seal as well. These are intended as visible indicators that public associates with trust. Their exact design and realization, including the possibility of not displaying them at all, will depend on the particular Trust Network.

### Cognitive Walkthrough

#### 1. Choice of IdP

**Motivation** User has taken initiative to perform a task he thinks can be accomplished using a web site. He realizes that some form of authentication or authorization will be required. When the User navigates to the task, a

## 2.1 User Uses Service (First Time in the Session)

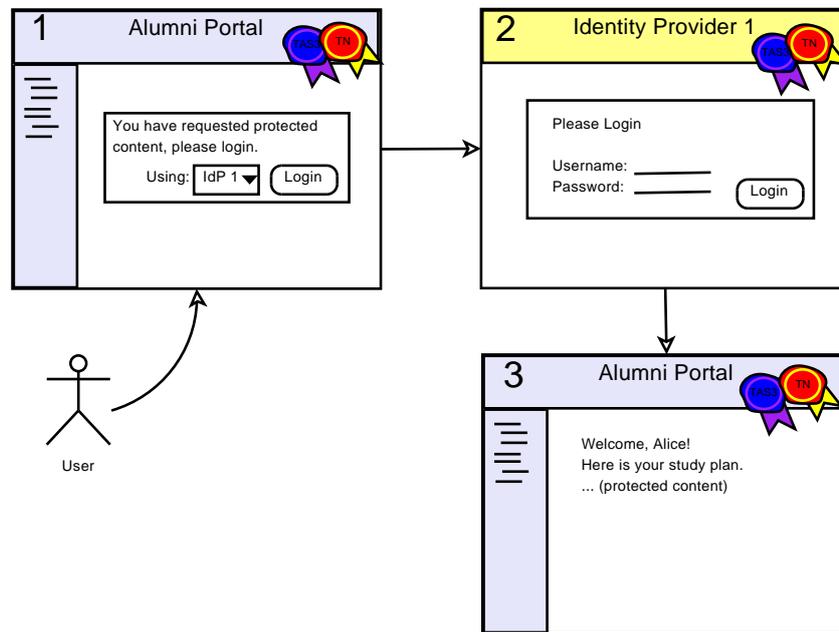


Figure 2: Story board: Using service for 1st time in a session.

87 dialog is presented asking for authentication so that authorization can be  
88 granted. User will consider engaging in this dialog because they feel the  
89 system is trustworthy, based on the Trust Seals and based on past successful  
90 experiences.

91 **Available and understandable** User will be guided by modality of the inter-  
92 action to a situation where he will either have to proceed with selection  
93 of an IdP or will have to abandon the task. Choosing another task that  
94 does not require authentication is also an option. The interaction should  
95 be structured such that the requirement for authentication will become  
96 evident early on, so that User avoids performing work only to find out  
97 that he is unable to proceed.

98 **Feedback** The available IdP choices that are presented should be as narrow  
99 and relevant as possible. Federated SSO research recognizes IdP selec-  
100 tion as a major problem. Once IdP is chosen and button is pressed, clear  
101 feedback is provided that User has landed on the IdP web site. The IdP  
102 screen should provide contextual information about the task which moti-  
103 vated the authentication (such feedback is lacking in step 2 of Fig-2).

## 104 2. Login

105 **Motivation** User is in the mind set of completing a task and will perform this

## 2.2 Already-Logged-in Optimization (SSO)

---

106 step if he reasonably can. This mind set is reinforced by IdP providing  
107 feedback as to what task requires the authentication.

108 Biggest challenge and inconvenience for the User will be the necessity to  
109 present authentication credentials. This inconvenience can be mitigated  
110 by use of Single Sign-On.

111 **Available and understandable** Availability of the logon and the acceptable  
112 forms of credentials should be self-evident from the first screen of the  
113 IdP. First screen should lay visible all options and avoid any hierarchical  
114 navigation to arrive to the desired option.

115 **Feedback** Successful authentication will lead to User being returned to the  
116 Front End web site. This in itself is a form of feedback, but it should  
117 be reinforced by the web site providing a clear welcome greeting, stating  
118 that the User has been authenticated (and possibly authorized as well).

119 3. **Login complete.** This use case ends here, but an application specific use case  
120 will start here.

## 121 2.2 Already-Logged-in Optimization (SSO)

122 Same as above, but without IdP authenticating the user again. The flow does not  
123 need to stop at IdP at all. Optimized SSO use case, showing the full convenience  
124 of SSO, leading to 2 step process.

### 125 126 **Cognitive Walkthrough**

127 1. **Choice of IdP:** Same cognitive walkthrough as in previous section.

128 2. **Login:** No cognitive walkthrough needed as no user interface will be pre-  
129 sented.

130 3. **Login complete.** This use case ends here, but an application specific use case  
131 will start here.

## 132 2.3 User Uses Dashboard

133 This use case addresses Reqs. *D1.2-2.11-Transp* and *D1.2-3.3-Dash*.

134 In this use case the user interacts with the TAS3 Dashboard in order to deter-  
135 mine the status of a business process he is engaged in. It consists of the following  
136 steps:

- 137 • The user logs into the Dashboard (possibly using SSO)



## 2.3 User Uses Dashboard

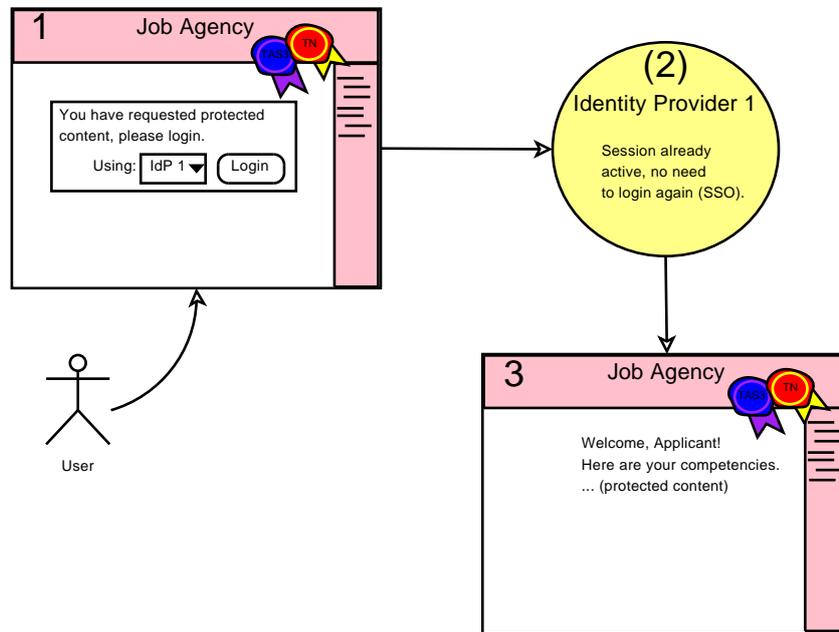


Figure 3: Story board: Using further services after logging in at IdP - Single Sign-On (SSO).

- 138 • The user sees a page with an overview of the transactions
- 139 • The user drills down to visualise a particular business process.
- 140 • The user views a particular audit trail and discovers a suspect item.
- 141 • The user requests a legally binding audit statement about the transaction.
- 142 • Competent authority requests further information about the transaction from
- 143 the Service Provider that holds the detailed audit trail.

### 144 Cognitive Walkthrough

#### 145 1. Engaging Dashboard and Choice of IdP

146 **Motivation** User has taken initiative to find out about the state of some busi-  
147 ness process or the handing of his PII. User understands, due to training  
148 or awareness campaigns, or because a notice was given in the beginning of  
149 the business process, that this is possible. User may have found out about  
150 the possibility by surfing the web or through a search engine. The mere  
151 possibility may spark the User's interest and get him to try the Dashboard  
152 out. User may also have noticed an irregularity or complained to some  
153 instance and been told to consult his Dashboard.

## 2.3 User Uses Dashboard

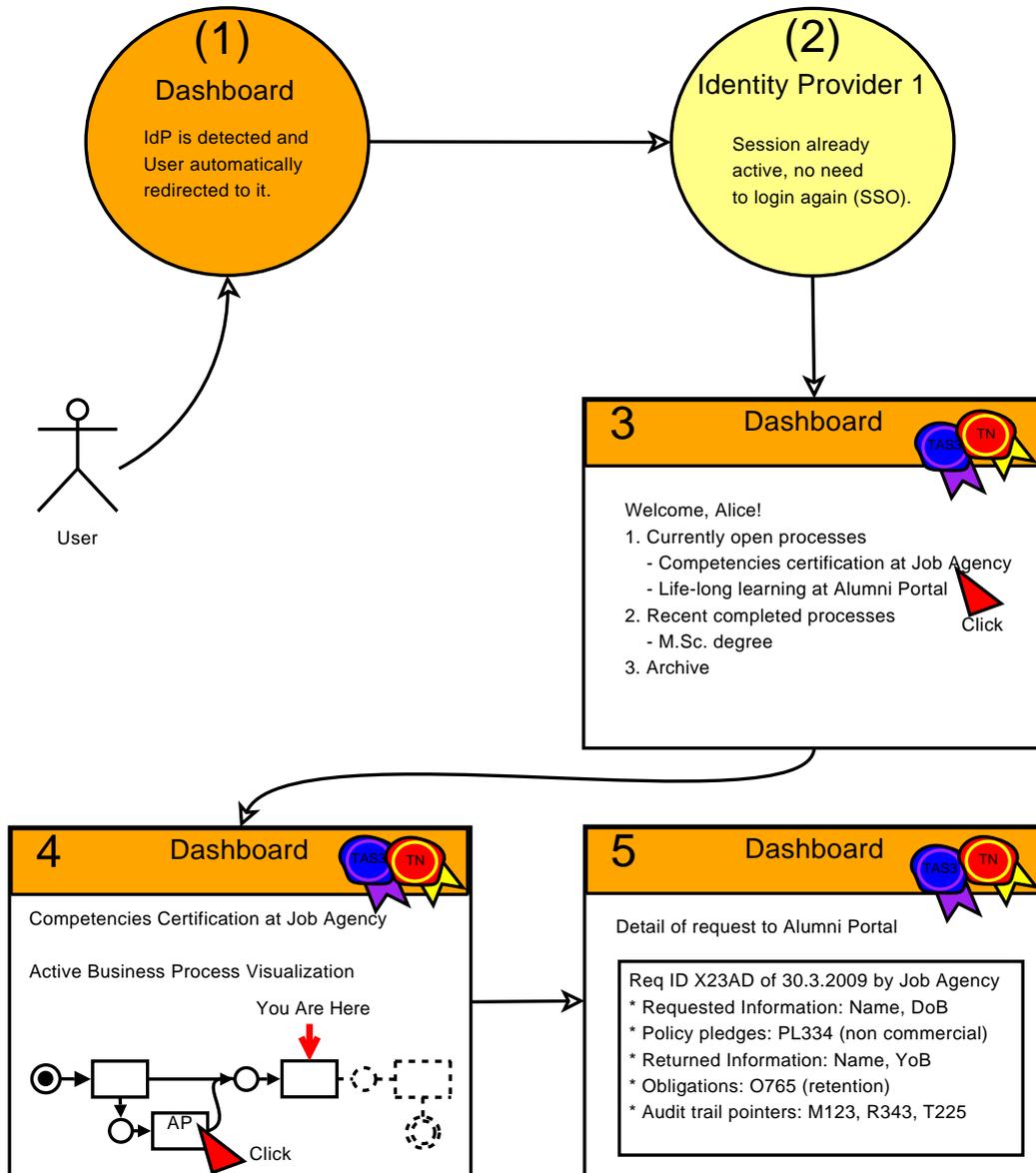


Figure 4: Story board: Using Dashboard to audit a business process.

- 154 **Available and understandable** Since User is assumed to take initiative, a major  
 155 hurdle will be how the user finds out about the Dashboard and how to  
 156 contact it. Some possibilities
- 157 a. A link to the Dashboard is provided as part of the user interface of  
 158 each business process.
  - 159 b. A link to Dashboard is provided in every web site that participates in

## 2.3 User Uses Dashboard

---

160 the Trust Network.

- 161 c. Trust Network operates some sort of a portal and the link can be
- 162 found there.
- 163 d. Dashboard engages in Search Engine Optimization (SEO) so that
- 164 User is sure to find the Dashboard through a popular search engine.

165 Once the user has found out about the Dashboard, the problem shifts to

166 the IdP selection and authentication. In Fig-4 we have assumed that IdP

167 can be detected and User is already logged in, as the case typically would

168 be immediately after engaging some Front End (e.g. the Job Agency).

169 However, if time has passed, user may need to choose explicitly an IdP

170 and explicitly authenticate, as in Section "User Uses Service (First Time

171 in the Session)". A confusing situation can arise where user has tried to

172 access the Dashboard, but the first screen he sees is the IdP authentica-

173 tion screen (because IdP detection worked, but user was not logged in

174 yet). This situation should be mitigated either by IdP providing enough

175 context about the operation that is motivating the authentication, or by

176 the Dashboard imposing a splash screen even when IdP choice is already

177 known.

178 **Feedback** If IdP was detected and user was already logged in, the first feed-

179 back will be Dashboard logged in welcome screen. If authentication

180 is needed, then the IdP context message or the splash screen solutions

181 should be adopted, as described in the previous paragraph.

- 182 2. **Login:** no specific cognitive walkthrough requirements. See discussion in in
- 183 the First Time use case.

### 184 3. **Choose Business Process to Audit**

185 **Motivation** User set out on his quest to perform this task.

186 **Available and understandable** The list of the business process instances

187 should be structured so that all business process instances are reachable

188 while at the same time the processes user is most likely to be interested in

189 are presented first or more prominently. Due to potentially large number

190 of processes, we may need to resort to hierarchy or search functions. An

191 ontology of business processes will help in setting up the hierachy and

192 search.

193 The business processes should be titled and described in language that the

194 User can relate to. In particular, while codes can be provided for accu-

195 racy and reference, every business process should have a human readable

## 2.4 IdP Detected-Optimization (SSO)

---

196 name. The resultant translation issues will have to be recognized and  
197 addressed.

198 **Feedback** Choice of a business process instance will lead to its visualization  
199 where User can clearly identify What, Who, When, and similar informa-  
200 tion so that user can confirm he has made the right choice. If choice was  
201 wrong, User should easily be able to choose another instance.

### 202 4. Choose Detail of Business Process Instance to Audit

203 **Motivation** Once user sees visualization of the business process instance, he  
204 will need to drill down to relevant detail. This may be driven by User's  
205 curiosity or perceived notion of culpable part.

206 **Available and understandable** The visualization has to be structured so that  
207 it honestly depicts the essence of the business process without cluttering  
208 the view with details that can be reached later. Every step that User is  
209 expected to perform (or has already performed) should be visible as well  
210 as major processing steps that are not in User's control, especially those  
211 that involve transfer or manipulation of PII.

212 All descriptions of the steps should be succinct and in human language,  
213 with translation issues addressed. Codes and references for the instance  
214 and steps can be provided for accuracy, but these should never supplant  
215 the human description.

216 To assist User in drilling into detail, the user interface should make it  
217 patently evident where this possibility exists, e.g. by using high-lighting  
218 techniques.

219 **Feedback** User is assisted in contemplating the choice of drill-in by high-  
220 lighting of available options. Once a step is chosen for scrutiny, user will  
221 see visualization of that step in great detail. The visualization will be  
222 titled in such a way that it is evident to the User that it pertains to the step  
223 he chose in the business process instance overview.

### 224 5. View detail and request audit item from Front End

225 **Motivation** User needs to get evidence about a step of a process

226 6. **View audit item** (not depicted in the figure)

227 7. **Escalate** (not depicted in the figure) (Req. *DI.2-6.9-Complaint*)

## 2.4 IdP Detected-Optimization (SSO)

---

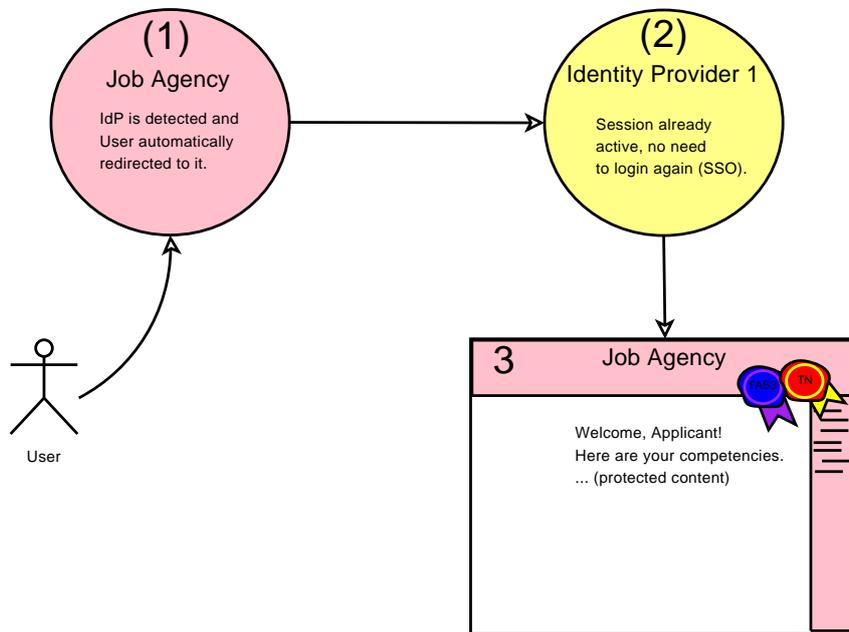


Figure 5: Story board: Fully automatic login - Single Sign-On (SSO) - when IdP can be detected.

### 228 2.4 IdP Detected-Optimization (SSO)

229 This flow, see Fig-5, can further optimize the already logged in case by allowing  
230 the Job Agency to detect that the user has already chosen IdP and therefore use  
231 the IdP to log the User in automatically. Essentially the ceremony becomes a one  
232 step process.

### 233 2.5 User Uses Service, Identity Selector Case

234 In the Identity Selector flow, see Fig-6, the User never interacts with the IdP di-  
235 rectly. Instead, the Identity Selector provides a user interface (step 3) for the IdP  
236 to query authentication credentials. User experience is entirely managed by the  
237 "ceremony" that the Identity Selector presents.

### 238 2.6 User Uses Service, Local Login Case

239 N.B. This use case is not recommended. You should use SSO based  
240 approaches instead. We document it here only to illustrate the prob-  
241 lems associated with multiple logins.

## 2.6 User Uses Service, Local Login Case

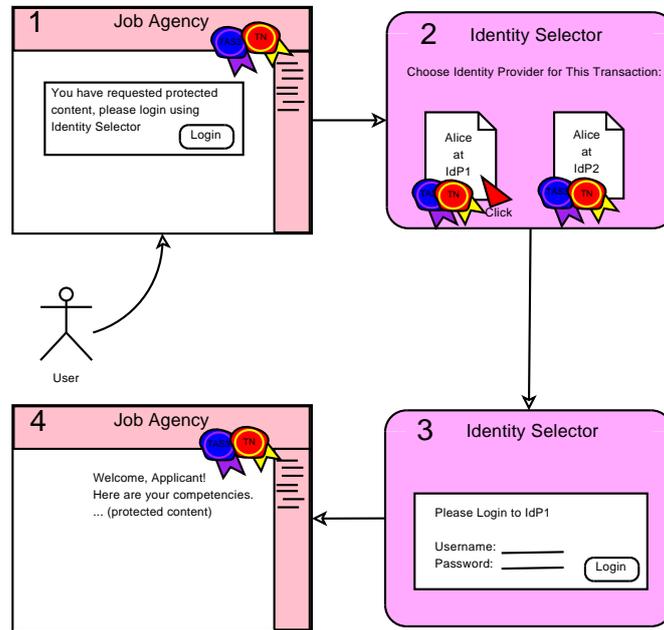


Figure 6: Story board: Identity Selector provides IdP User Interface.

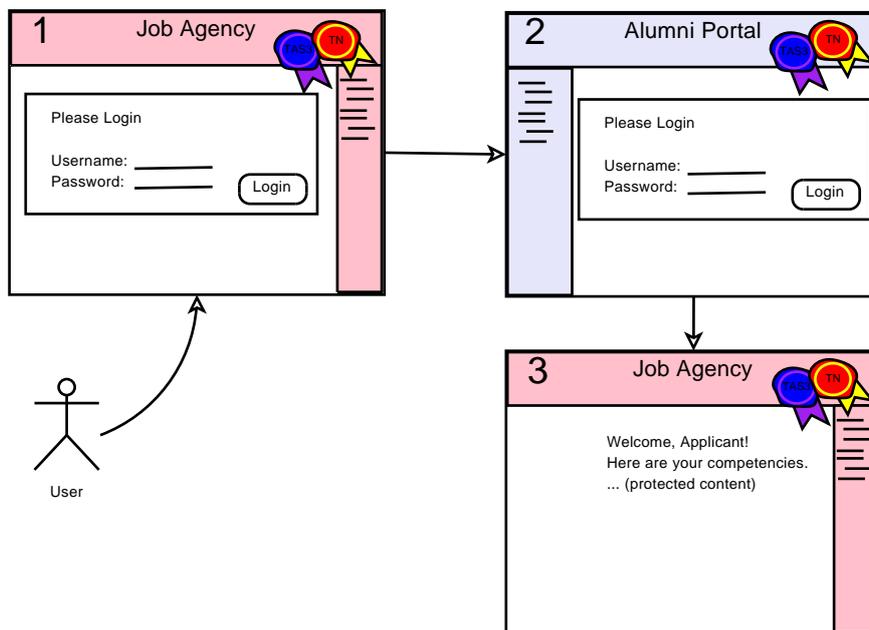


Figure 7: Story board: Using services with local login (not recommended).

242 The assumption is that the user will use more than one service. This highlights  
 243 the inconvenience of user having to authenticate separately to each service. There

## 2.7 User Uses Service, Proxy IdP Case

244 are further complications under the hood, not least of which are privacy threats.  
245 This scenario could be called explicit account linking. While we consider supporting  
246 this scenario to be in scope, we do not recommend it unless there is no  
247 alternative, or as temporary solution.

### 248 2.7 User Uses Service, Proxy IdP Case

249 This sequence, see Fig-8, illustrates the experience of a user logging in to SP that  
250 does not directly trust his IdP. The trust is mediated by the "middle" IdP that SP  
251 trusts.

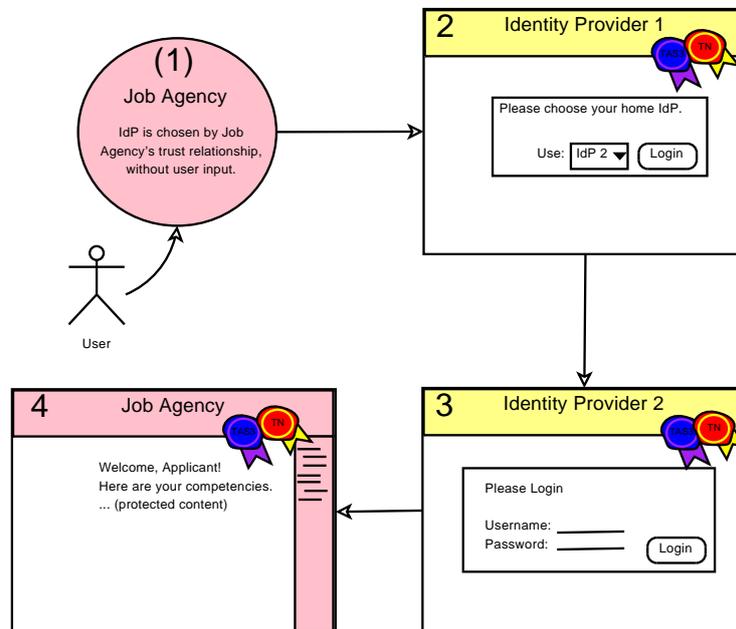


Figure 8: Story board: Login using IdP not trusted by Job Agency.

252 This sequence can be further optimized if the middle IdP can somehow au-  
253 tomatically detect which IdP is the home IdP (similar to Section IdP Detected  
254 Optimization SSO) and, of course, if the User is already logged in the SSO opti-  
255 mization of Section Already Logged-in Optimization SSO.

### 256 2.8 Consenting to PII Release or Manipulation

257 This section addresses Reqs. *D1.2-6.3-WhatHowWhyWho*, *D1.2-6.6-Consent*,  
258 *D1.2-6.7-Reconsent*, *D1.2-4.1-EnfUCPol*.

## 2.8 Consenting to PII Release or Manipulation

---

### 259 **2.8.1 Interaction on Front Channel**

260 The obvious choice of having the requesting SP collect User's consent has an  
261 obvious conflict of interest issue. In some legal contexts this may be acceptable,  
262 but in general we need a way for either the releasing party or some Trusted Third  
263 Party to collect the consent.

264 Alternatively, not shown here, the user may explicitly provide his consent by  
265 authenticating to the releasing party and authorising it to release the PII to the SP.  
266 Further user cases for accessing releasing parties who are repositories and autho-  
267 rised third party access to repository contents are provided in [TAS3D42Repo].

### 268 **Cognitive Walkthrough**

269 **1. IdP choice as usual**

270 **2. Authentication as usual**

271 **3. User triggers action, as usual**

272 **4. Consent to release of PII**

273 **Motivation** User will be motivated to take action because it is imposed to him  
274 by the modal flow of the interaction. User will be pleased to take action  
275 because asking consent is in his protection, but Users do get annoyed if  
276 you ask too often - to solve this we would need Privacy Agent, whose  
277 Use Cases are to be elaborated later (M30 D2.1?).

278 **Available and understandable** Presentation of the consent question is a ma-  
279 jor challenge. It needs to be succinct, yet comprehensive and legally bind-  
280 ing. Some Users will want high degree of detail and control, while others  
281 will be confused by too many options. Fig-9 depicts a dummied-down  
282 interface. This may not be appropriate for some users.

283 **Feedback** Once consent is given, User lands on page that uses the consented  
284 information. This may be sufficient in its own right, but could be en-  
285 hanced by high-lighting the information on the page the user just con-  
286 sented to.

287 **5. Business process continues with the PII as usual**

### 288 **2.8.2 Interaction on side channel**

289 This Use Case is similar to the previous one. Only difference is that the consent  
290 is asked using a Side Channel, such as mobile phone or instant messaging. The

## 2.8 Consenting to PII Release or Manipulation

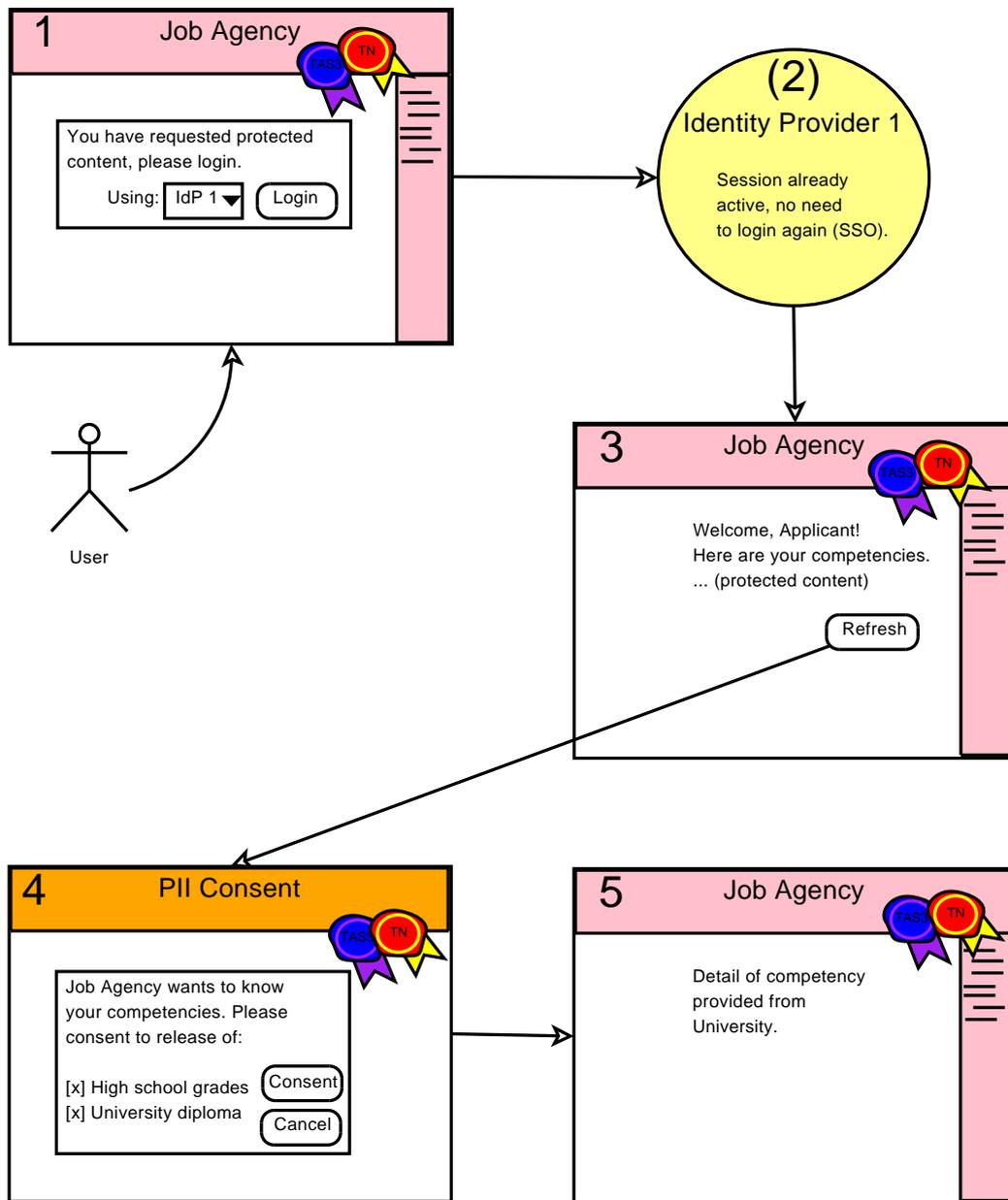


Figure 9: Story board: Presenting a PII consent question in Front Channel interaction.

291 side channel provides an independent means of communication, a type of second  
292 factor to the consent.

293 The Side Channel approach can also be convenient when consent needs to be  
294 asked deep in SOA Web Services calls where Front Channel is not available.

295 In User-not-present transaction the Side Channel may be the only option for

## 2.8 Consenting to PII Release or Manipulation

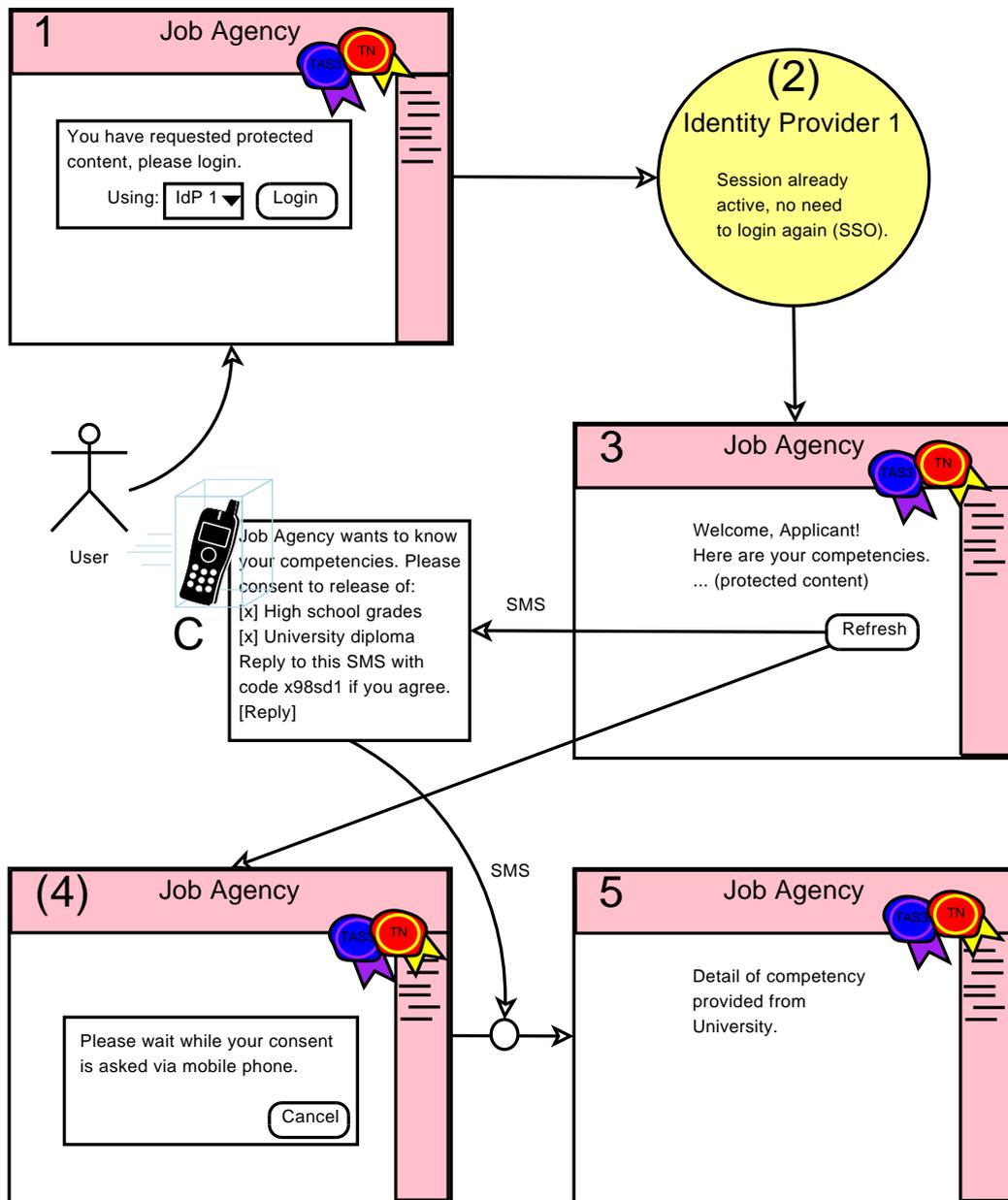


Figure 10: Story board: Presenting a PII consent question using Side Channel interaction.

296 asking user's consent, or else the business process needs to be stopped until user  
 297 provides consent via Dashboard.

## 2.8 Consenting to PII Release or Manipulation

---

### 298 **2.8.3 Interaction via Dashboard**

299 In User-not-present transaction the business process may stop until user provides  
300 input or consent via Dashboard. This alternative will be covered in a future version  
301 of this document.

### 302 **2.9 Using Linking Service**

- 303 1. The Linking Service should be user friendly. It may be the only interface that  
304 users see for linking their attributes together (other approaches are possible,  
305 see "pull model").
- 306 2. A welcome screen explains the purpose of the Linking Service and guides the  
307 user through the process of attribute linking. It has
  - 308 a. Picking list for choosing IdP
  - 309 b. "Connect" button
  - 310 c. "View linked accounts" button
  - 311 d. "Make linked accounts available to services" button
  - 312 e. Notice or pledge about respecting User's privacy
- 313 3. When the user selects the "Connect" button, the linking service will redirect  
314 the user to the selected IdP, allowing the user to login. After login, the user  
315 will be redirected back to the linking service welcome screen.
- 316 4. When the user selects "View my linked accounts" he will be presented with the  
317 screen with
  - 318 a. A table containing two columns, labelled "Organisation" and "Temporary  
319 Account Identifier" and at the left hand side by each table entry will be a  
320 tick box that the user can tick to remove the linked account. Above the  
321 column of tick boxes will be the word Delete.
  - 322 b. "Delete" button, which will remove the chosen accounts from the table and  
323 return the user to this page
  - 324 c. "Home Page" button, which will take the user to Welcome screen
  - 325 d. "Make my linked accounts available to services" button, which will take the  
326 user to the next screen.
  - 327 e. Notice or pledge about respecting User's privacy
- 328 5. When the user selects the "Make my linked accounts available to services"  
329 button he will be presented with a screen containing
  - 330 a. An explanation about opt-in in the linking (if you do not make accounts  
331 available, the default will be no linking).

## 2.10 Choosing among Multiple Service Providers

---

- 332 b. A table with 3 columns and a delete tick box beside each row of the table.  
333 The table columns are "Service", "Organisation" and "Temporary Account  
334 Identifier". The table will always be empty for new users when they first  
335 approach this screen.
- 336 c. A picking list of all the services in the federation, obtained from the meta-  
337 data of the federation. The first entry in the list will be "All Other Services".
- 338 d. Once the user selects a service provider or "All Other Services" from the  
339 picking list, a picking list of all the IdPs that are currently linked together  
340 and that appear in the table of the My Linked Accounts Screen, minus the  
341 IdPs that have already been paired with the selected service provider is dis-  
342 played.  
343 The first row of this picking list will be "All My Linked Accounts". The user  
344 will then pick one of his linked accounts or "All My Linked Accounts". If  
345 the user picks "All My Linked Accounts" a wild card will be inserted into  
346 the third column. If the user picks one of his accounts then the third column  
347 will be automatically completed with the account Persistent ID unless the  
348 user has two or more accounts at the same IdP, in which case the third  
349 column will contain a picking list of Persistent IDs sent from that IdP, minus  
350 any already selected for this service provider.  
351 It is important that the table always lists the service providers in alphabetical  
352 order so that the user can easily see which links he has set up for which SPs,  
353 and for every SP, the linked IdPs are in alphabetical order.
- 354 e. "Delete" button, which will remove the chosen accounts from the table and  
355 return the user to this page
- 356 f. "Home Page" button, which will take the user to Welcome screen
- 357 g. "View my linked accounts" button, which will take the user to the screen  
358 referred to in step (4), above.

## 359 **2.10 Choosing among Multiple Service Providers**

360 Sometimes user will have choice of multiple possible providers for a given service.  
361 In this situation Trust and Privacy Negotiation function can be used to narrow  
362 down the list. If after narrowing down more than one choice still remains, it may  
363 be reasonable to ask the user to make the choice.

### 364 **2.10.1 Simple Choice of Provider**

#### 365 **Cognitive Walkthrough**

##### 366 **1. IdP choice as usual**



## 2.10 Choosing among Multiple Service Providers

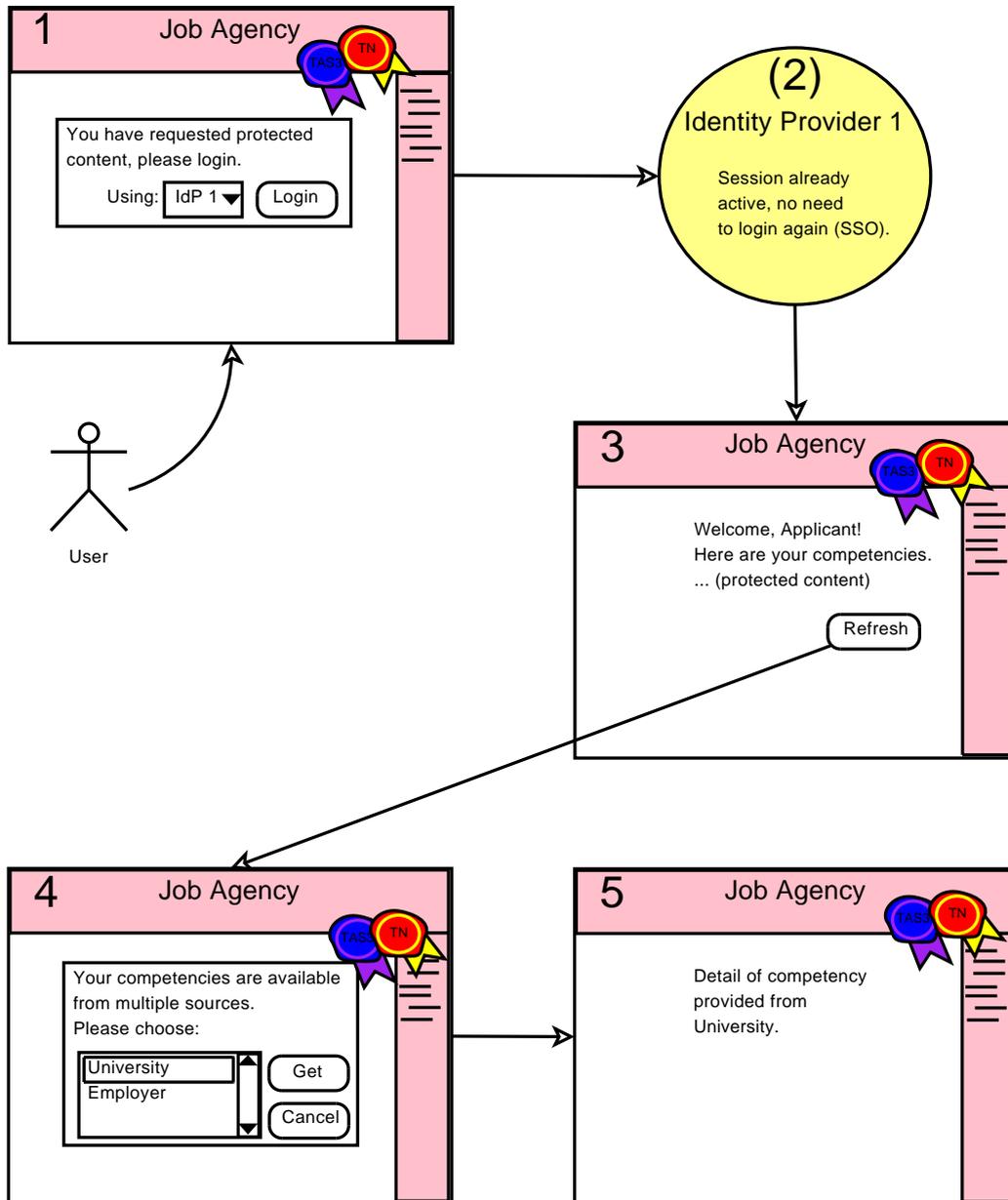


Figure 11: Story board: Choice of Service Provider.

367 2. Authentication as usual

368 3. User triggers action, as usual

369 4. Choose Service Provider

370 **Motivation** The decision point will be imposed to the user through modal

## 2.11 User-Not-Present Transaction

---

371 user interaction. User will be motivated to make the choice as he may  
372 guard different information, e.g. different personae, at different Attribute  
373 Authorities.

374 **Available and understandable** User's choice should only be solicited if there  
375 is genuine choice. System should implement automatic discovery and  
376 detection as much as possible.

377 The choices should be formulated in human language, with translations  
378 as appropriate.

379 **Feedback** Once User makes his choice, he will land on the requestor's page.  
380 This in itself may be sufficient feedback, but indicating on the page where  
381 the information came from is recommended.

### 382 **2.10.2 Trust and Privacy Negotiation Assisted by User Interaction**

#### 383 **Cognitive Walkthrough**

384 **1. IdP choice as usual**

385 **2. Authentication as usual**

386 **3. User triggers action, as usual**

387 **4. Negotiate appropriate supplier for service or information**

388 **Motivation** User will be forced to the decision point by modal user interface  
389 flow. User will be motivated to make a choice either because he has  
390 no prior relationship with proposed SPs and he needs to rely on trust  
391 preceptions, or because user wants to be in control and avoid machine  
392 deciding for him.

393 **Available and understandable** Presenting complex trust based decision is  
394 not easy. This topic will be further researched during TAS<sup>3</sup> project.

395 **Feedback** Once User makes his choice, he will land on the requestor's page.  
396 This in itself may be sufficient feedback, but indicating on the page where  
397 the information came from is recommended.

398 Further Use Cases depicting complex Trust and Privacy Negotiations will be  
399 elaborated in other project deliverables.

## 2.11 User-Not-Present Transaction

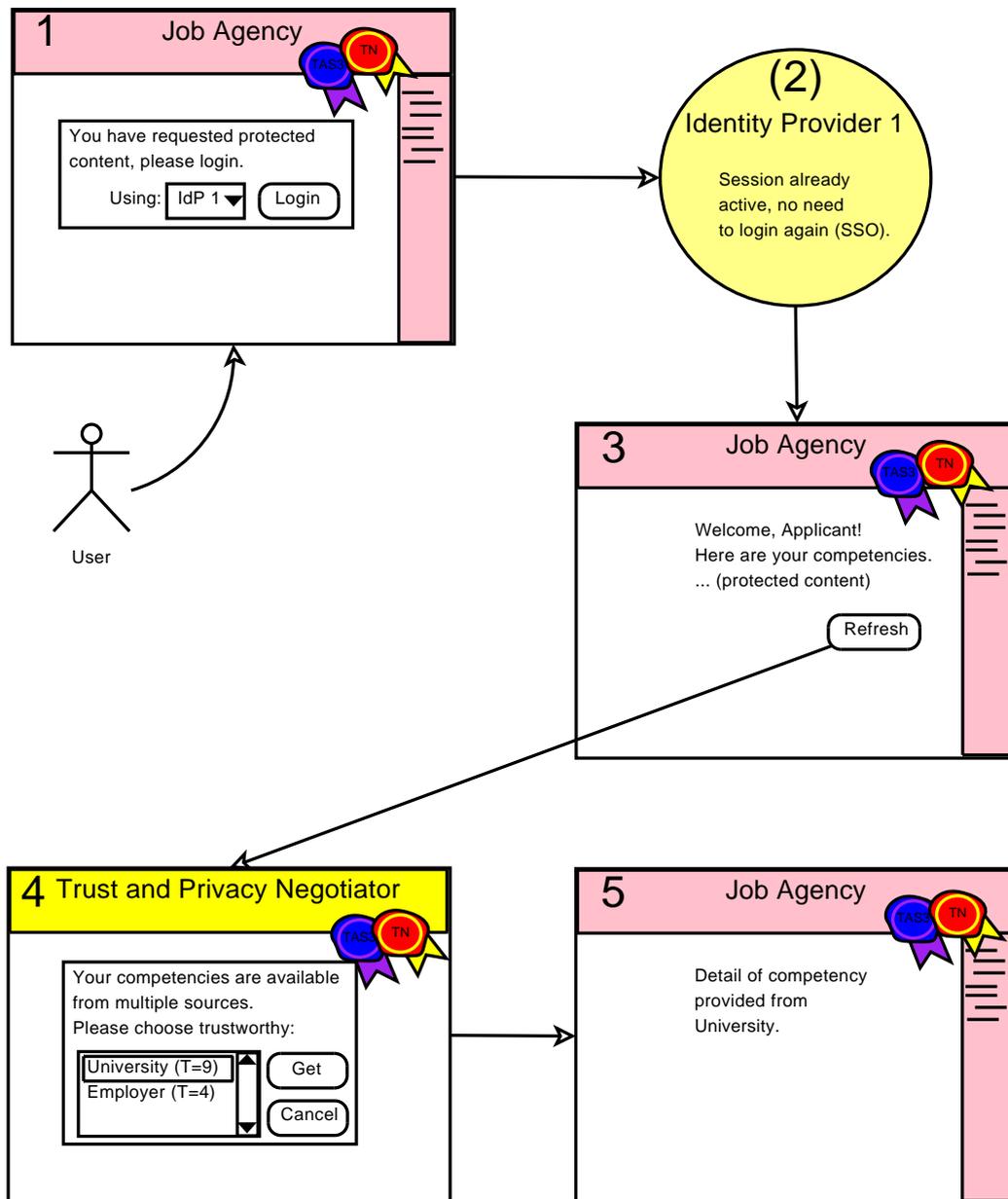


Figure 12: Story board: Trust and Privacy Negotiation with User Interaction.

## 2.11 User-Not-Present Transaction

User-not-present scenario can be driven in three ways:

1. User has been present in some earlier time and authorized, indirectly, the transaction. Audit trail MUST show this authorization.

## 2.12 User Present Delegation

---

404 2. There is an over-arching legal or legitimate business requirement. Existence of  
405 such requirement MUST be demonstratable from the audit trail.

406 3. "Break the glass" scenarios. Again audit trail MUST capture legitimate reason  
407 why the scenario was invoked and the audit trail should be especially detailed  
408 about the actions performed under the break the glass authority.

409 Actual triggering of the event will depend on a business process. To gain acute  
410 authorization to execute the operation, the business process will have to declare  
411 its intent and show evidence why it should be authorized (see (1) and (2), above).  
412 Then, the operation MUST be thoroughly recorded in the audit trail.

413 User's only contact point with User-Not-Present transaction is to audit it after  
414 the fact using the Dashboard.

## 415 **2.12 User Present Delegation**

416 See Fig-13.

- 417 • Problem of choosing to whom to delegate, buddy list visualization
- 418 - How to obtain human readable names without violating privacy of the  
419 buddies?

420 Delegation of permissions to access repositories is addressed more fully in  
421 [TAS3D42Repo].

## 422 **2.13 User-Not-Present Delegation**

423 This will cover situations such as administrative or judicial decisions that result in  
424 delegation without the User necessarily wanting the delegation to happen.

425 We will explore these use cases in more detail in a future deliverable (M30  
426 D2.1).

## 427 **2.14 Other Use Case Work**

428 [TAS3D42Repo] has an extensive section on use cases, which should be viewed  
429 as a complement or extension of what is presented here.

430 [?] has some usage scenarios, especially relating to the pilots, although they  
431 are not refined into use cases.

## 2.15 Future Use Case Work

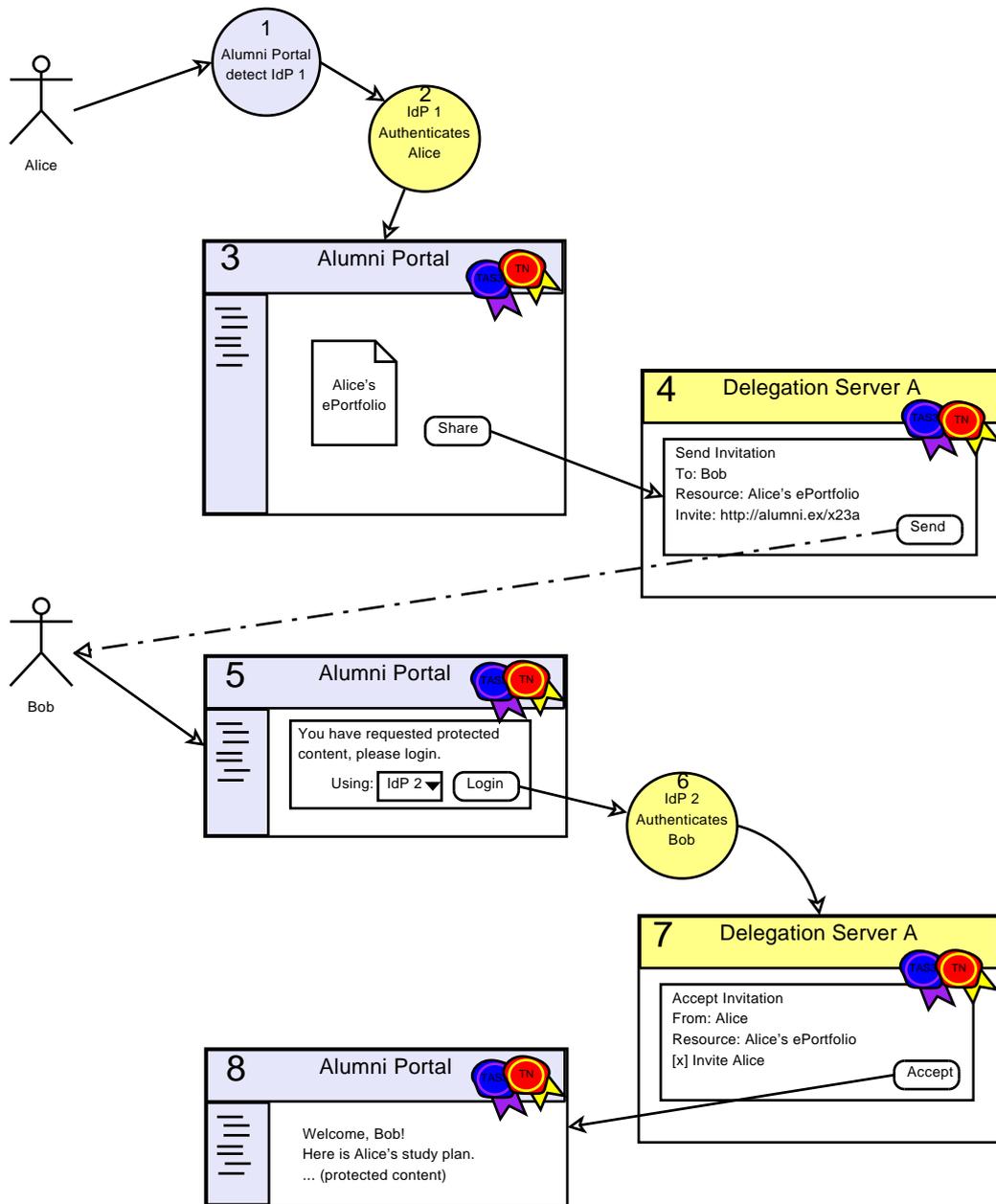


Figure 13: Story board: Alice invites Bob to view her ePortfolio.

## 432 2.15 Future Use Case Work

433 Some other User Cases we may elaborate on, or that will be elaborated in other  
434 TAS<sup>3</sup> deliverables, include:

- 435 • Full elaboration of the Trust and Privacy Negotiation Use Case(s)

## REFERENCES

---

- 436 • SP BPel4People UI
- 437 • Trust Guarantor UI
- 438 • SP registration process UI
- 439 • Bulletin board UI's
- 440 • Statistical services from anonymised data UI
- 441 • Situation where additional data request deep in the recursive Web Services
- 442 or business process requires Step-Up authentication
- 443 • Processes that may take long time and have start stop states taking longer
- 444 than a web service call can be reasonably expected to take.
- 445 BPEL engine can monitor this: any timeout is service failure and recorded
- 446 as such. All service providers must agree to terms SLA on sign up to TAS<sup>3</sup>
- 447 network and a key element of this will be service reliability and perfor-
- 448 mance.
- 449 - Human steps in process flow can be slow (e.g. process can be waiting
- 450 sometimes for days / weeks)
- 451 • Use case: User wants to audit and complain
- 452 - like on ebay give negative feedback and influence reputation of Service
- 453 Provider
- 454 - Complaining to wrong entity
- 455 - Misidentifying probable cause
- 456 - Ability trace all the way to the legal evidence
- 457 • 3rd party wants to audit or demonstrate that something happened,
- 458 - nonrepudiation
- 459 - articulation to proof in law suits
- 460 • Registering a new service to the trust network

## REFERENCES

---

### References

- 461
- 462 [FMC03] Frank Keller, Siegfried Wendt: "FMC: An Approach Towards  
463 Architecture-Centric System Development", Hasso Plattner In-  
464 stitute for Software Systems Engineering, 2003.
- 465 [FMCWeb] "Fundamental Modeling Concepts" <http://fmc-modeling.org/>
- 466 [UML2] [http://www.sparxsystems.com.au/resources/uml2\\_tutorial/](http://www.sparxsystems.com.au/resources/uml2_tutorial/)
- 467 [Wharton94] C. Wharton et al. "The cognitive walkthrough method: a prac-  
468 titioner's guide" in J. Nielsen & R. Mack "Usability Inspection  
469 Methods" pp. 105-140, Wiley, 1994.
- 470 [CogWalkthruWeb] <http://www.cc.gatech.edu/classes/cs3302/documents/cog.walk.html>
- 471 [TAS3BIZ] Sampo Kellomäki (EIFEL), ed.: "TAS3 Business Model", TAS3  
472 Consortium, 2009. Document: tas3-biz-model-2009-v05.pdf
- 473 [RFC2119] S. Bradner, ed.: "Key words for use in RFCs to Indicate Require-  
474 ment Levels", Harvard University, 1997.
- 475 [TAS3D42Repo] David Chadwick, ed.: "Specification of information containers  
476 and authentic repositories", TAS3 Deliverable 4.2, 2009.
- 477 [TAS3D14Req] TAS3 Deliverable 1.4, 2009.
- 478 **Revision History**
- 479 **08** 4.4.2009 Sampo
- 480 • NOT PUB
  - 481 • Incorporated comments from David and Luk
- 482 **07** 3.4.2009 Sampo
- 483 • First draft out of blue
- 484 **Document ID** tas3-user-inteface-v08.pdf
- 485 **Repository path** repo.tas3.eu:/var/lib/tas3repo/arch/tas3-user-interface.pd  
486 (1.23)

## REFERENCES

---

```
487         export CVSROOT=:ext:repo.tas3.eu:/var/lib/tas3repo
488         cvs co arch
489         cd arch
490         # modify tas3-*.pd
491         cvs ci -m 'What changed...'
```

492 **URL path** <https://portal.tas3.eu/arch/review/tas3-user-interface-v08.pdf>

### 493 **Commenting**

- 494 • Please comment on the [TAS3WP02@LISTSERV.CC.KULEUVEN.AC.BE](mailto:TAS3WP02@LISTSERV.CC.KULEUVEN.AC.BE)  
495 mailing list, or that failing, send your comments to the editor.
- 496 • Any footnotes in this document will not appear in final version. They  
497 are editorial comments that may help reviewers to put material in con-  
498 text.