

Tessitura



EUROPEAN
CONFERENCE 2015

5 & 6 NOVEMBER
NOTTINGHAM

TIPS & TRICKS FOR TESTING IN TESSITURA

TEST, TEST & TEST AGAIN!

PRESENTER

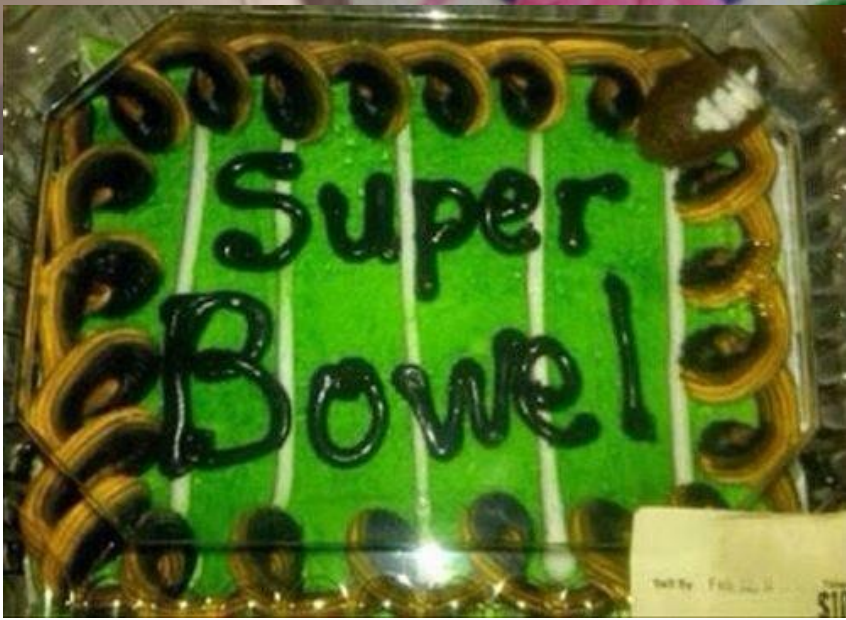
Mark Steel : Tessitura Network



Our Goals for this Session

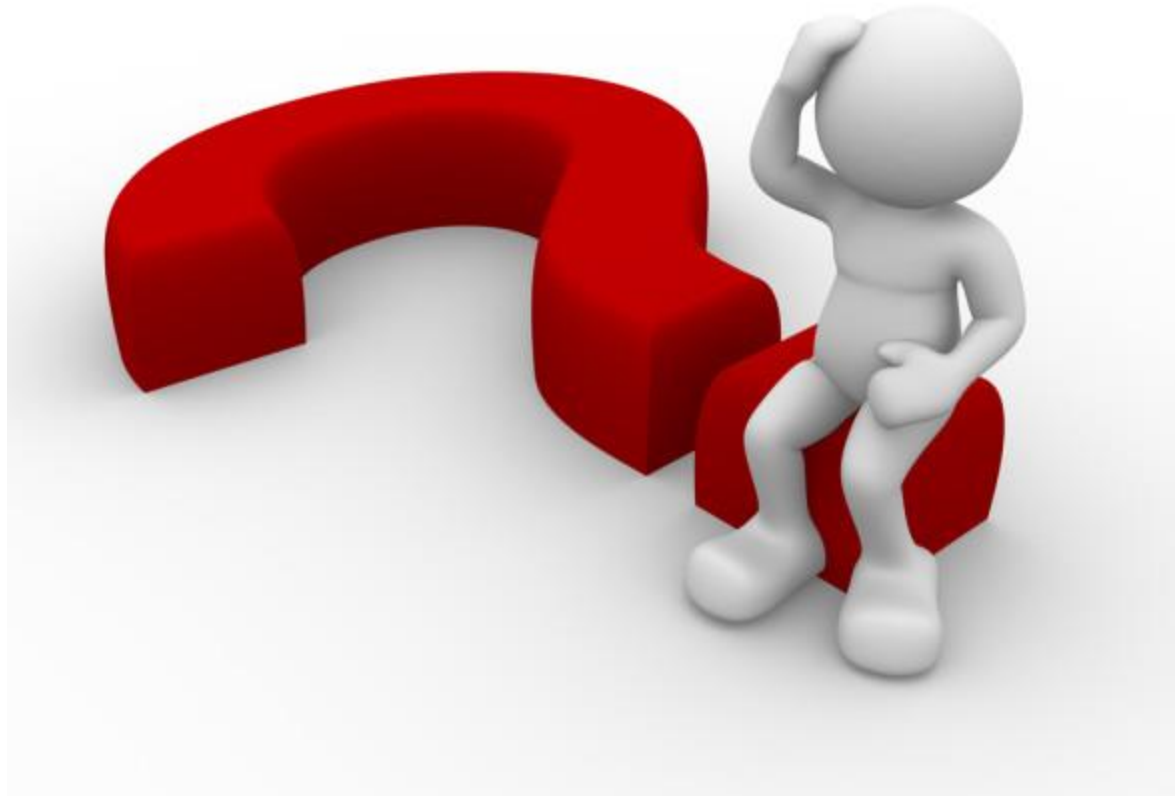
- Be able to develop, establish and oversee a Tessitura test plan
- Understand best practices in testing plan execution
- Understand best practices in testing new or changed web development
- Take home basic test cycle, milestone and asset management

So, testing.





WHAT IS A TEST PLAN AND WHY DO I NEED ONE?





What a Test Plan is NOT...

- A static, concrete document that never changes.
- Something used by only a few people in IT.
- General steps meant to be fleshed out when the plan is executed.
- A plan created by one or two people for use on rare occasions.



The Ideal Test Plan...

- ...is a dynamic document undergoing constant change.
- ...is for use by multiple departments and stakeholders.
-contains detailed, precise steps that produce exact outcomes.
- ...is the point of reference for what constitutes your organisation's comprehensive use of the product.

<http://www.wikihow.com/Be-a-Wizard>



A Test Plan...dynamic and subject to change

- A good test plan has all of these facets, each subject to change:
 - An overall scope
 - Test objectives and success criteria
 - Required resources
 - A rough test schedule
 - Detailed test cases



A Test Plan...requires input and resources from all departments

- Each department is a de facto subject matter expert (SME):
 - Provides resources
 - Determines and refines proper test cases
 - Is accountable for testing
 - Ultimately responsible for sign-off

All of the above:

Co-ownership of the process.



A Test Plan...detailed and exact

- A detailed test plan should allow you to:
 - Identify operational needs
 - Determine which artifacts are needed to prove that a test case passed
 - Use non-SMEs in testing
 - Know when the test plan (or part of it) fails



A Test Plan...is also a blueprint

- A complete test plan documents the depth and breadth of Tessitura use.
- Assets have been identified to help understand how the product is used at your organization.
- Test Plan Users = Tessitura User Group?



When to use a Test Plan?

- Upgrades
- Feature releases*
- Hotfixes*
- Environment changes
 - new hardware, IP addresses, DNS change, move to a new building, change in payment processing
- Development of new functionality*

* = review scope



MAKING THE TEST PLAN





Some terms to define

- **User Acceptance Testing:**
 - A phase of software development in which the software is tested by the intended audience.
- **Acceptance Criteria:**
 - The requirements that have to be met for a “story” to be assessed as complete.
- **Regression Testing:**
 - A type of software testing that seeks to uncover new software bugs, or regressions, in existing functional and non-functional areas of a system after changes such as enhancements, patches, or configuration changes have been made to them.



Test Plan Ingredients

- Scope/Out of Scope
- Assumptions
- Schedule
- Roles and Responsibilities
- Deliverables
- Test Cases
- Defect Management Process
- Exit Criteria

Note: Do not be afraid to be obvious.



Scope/Out of Scope

- **Scope:** What is being tested, i.e. the relevant functions, interfaces and integrations of a product.
 - Subject to change (i.e. new feature vs new version).
- **Out of Scope:** What explicitly is not being tested.
 - (e.g. total financial settlement)



Assumptions/Schedule

- **Assumptions:** What must be present for the test plan to be properly executed.
 - (Very) basic examples: Test environment works, test data is present, needed assets are in place, enough time has been provided
 - Assumptions can double as “risks”
- **Schedule:** A basic timeline with specific milestones.
 - Milestone examples: 20% test cases done, web testing complete, custom procedures 50% tested



Roles and Responsibilities

- **Roles:** Parts to be played in testing.
 - User
 - Test Manager
 - Database Administrator
- **Responsibilities:** What each role is accountable for.
 - “User will take test cases and execute them, reporting back to Test Manager.”
 - “Database Administrator will do Live-To-Test restore for new version.”



Defect Management Process (DMP) and Exit Criteria

- **DMP:** The process to be taken when a test case fails.
 - Create a ticket? Report back to whom?
 - Retest on closure?
- **Exit Criteria:** A list of conditions that determine testing is complete.
 - All test plans have been run and signed off
 - The schedule is complete
 - No defects remain outstanding
 - Acceptable coverage has been accomplished



Test Cases and Deliverables

- **Test Case:** An individual functional test with step by step instructions to an expected outcome.
 - Outcomes can be positive or negative
- **Deliverable:** An artifact to be returned to the Test Plan team.
 - Test Summaries
 - Test narrative (i.e. “was there something you liked or didn’t we should be aware of?”)
 - Defect reports



Example Test Case

- Ensure Upgrade and Alternate line items work as expected.
 1. Create order with Source = 20 and MOS = Subscription.
 2. Add line item for package #1A, with 2 seats at Discount price type in Front Orchestra.
 3. Seat.
 4. Click Alternate button.
 5. Add line item for package #2B (perf and a tour) at Sub price type in Mezzanine.
 6. Save and reload the order.

Result: order totals should be \$126 and only reflect first line item, not alternate.



Helpful Hint: Cascade your like test cases

- Switching to Alternate line correctly prices order
 1. Load order from previous test.
 2. Click Alternate.
 3. Highlight alternate package lineitem and click Primary. Click Exit Alt.

Result: order should be repriced to reflect new primary lineitem.



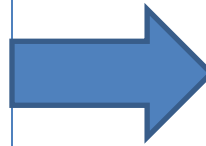
Helpful Hint: Don't mix unlike test cases

- Switching to Alternate line correctly prices order
 1. Load order from previous test.
 2. Click Alternate.
 3. Highlight alternate package lineitem and click Primary. Click Exit Alt.
 4. ~~Pay with Discover card and put refund On Account.~~
 5. ~~Convert On Account funds to membership.~~



Review and Revise

- Scope/Out of Scope
- Assumptions
- Schedule
- Roles and Responsibilities
- Deliverables
- Test Cases
- Defect Management Process
- Exit Criteria



- Gap Analysis:
 - Is there enough coverage?
 - Where are the gaps?
 - How are they filled?



Making the Test Plan in 3 meetings

One meeting

- Form Test Plan group – stakeholders from across the organization; decide on leadership
- Decide on Scope, Assumptions, Roles & Responsibilities
- Ask for Test Cases from different areas/departments of your business

Dept. meeting

- Compile Test Cases and set a rough schedule
- Schedule time to execute the test cases, then revise schedule and define your Deliverables

Last meeting

- Gap Analysis (could be done via email)
- Formalize the plan and Exit Criteria
- Revise and decide on sign off and Defect procedures

Most important: Ensure dialog at all times.

Also important: Steal as needed. (Documents, not stuff)

Maintaining the Test Plan

- Lifecycle of a Test Plan
 - Original plan – reflects current functionality
 - Review changes in new version/functionality
 - Create a “secondary” test plan based on new functionality
 - Merge the two plans



This gives you a new “original” test plan which can be used as your starting point next time



Advice from the trenches

- Repeat: each department has an area of expertise.
- There are less frivolous requests for customization/custom reports if the requester is the one who must test it.
- Part of buy-in; each department must be able to sign off on the ability to do their own work, submit bugs and confirm fixes.
- Empowering! Manage the process for your own business needs and encourage growth in staff competency.
- Mandatory.



EXECUTING THE PLAN





Determine Scope and Assign Roles

- Make sure every needed Role outlined in the Test Plan is assigned to a person or department.
- Review the Responsibilities of the Role and change if needed.
- If new Roles are needed, make them and assign Responsibilities. Remove Roles only if absolutely sure.
 - It's far easier to lose an asset than gain one.

Who Should Test?

- Identify your testers
 - What needs to be tested and who does it affect?
 - Cross-departmental team of super users in your organization
 - Cross-organizational for consortiums
- Find the “breakers”





Scheduling

- Put dates and times on the calendar like any other meeting
- Testing is a high priority – make the time
- Check-in regularly using available tools
 - Confluence, JIRA, intranet chat rooms, MS Project; more on this later
- Ensure the defect/fix process is continual
- Prioritise!



Priorities





Don't forget the peripherals

- TRBO
- Tessitura On the Go
- N-Scan
- T-Stats
- Dashboards





Consortium Concerns

- Make sure you have representation from each organization in the consortium
 - Communicate timelines and priorities
 - Make sure all consortium members have completed testing before moving forward





Training

- Train your testers!
 - Tessitura Network will provide training resources for new versions
 - Webinars
 - Training Agendas
 - What's New documents
 - And more – found under Learning Resources on <http://tessituranetwork.com>





Project Management Tools



- Confluence (by Atlassian)**



- Smartsheet



- Trello



- Basecamp



- Wrike

- And More!



Bug Reporting Tools



- JIRA (by Atlassian)**



- TestTrack (by Seapine)



Damn Bugs

- Damn Bugs (by Lean Testing)



- Bugzilla (open source)



- Fogbugz (by Fog Creek)

- And More!



More advice from the trenches

- Query the report tables in Tessitura to find which reports are used the most – test those first.
- Try to test with true, upcoming events.
- Use the calendar as a guide: test daily needs, then weekly needs, then monthly needs, etc...
- Start early.
- Present the product to the team, highlighting new features.
- Remember that this is mandatory.



WEB AND MOBILE TESTING





Web and Mobile Testing





Web and Mobile Testing

- Best Practices for Web & Mobile Testing
- TN Express Web (TNEW) Testing
- TN Mobile Plus (TNMP) Testing





Best Practices for Web & Mobile Testing

- Define the goal – what are you trying to accomplish?
 - Tessitura Upgrades vs New Development
 - Design vs Function





Best Practices for Web & Mobile Testing

- Design vs Function
 - Design = HOW something is displayed (visual appeal)
 - Function = WHAT something is displaying (technical framework)

DESIGN

Invites Users to Explore



Asthetically Pleasing



Is Memorable



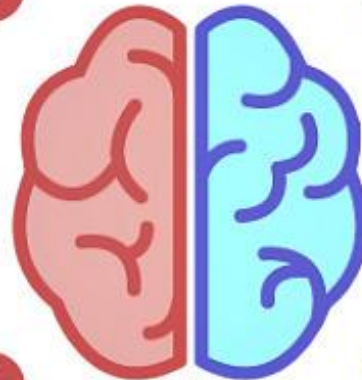
Urges Users to Share With Others



Easily Navigated



Content Tailored for your Audience



FUNCTION



Built Using the Latest Technology



Optimized for Search Engines



Secure & Reliable



Loads Quickly on all Devices



Provides Deep Analytics

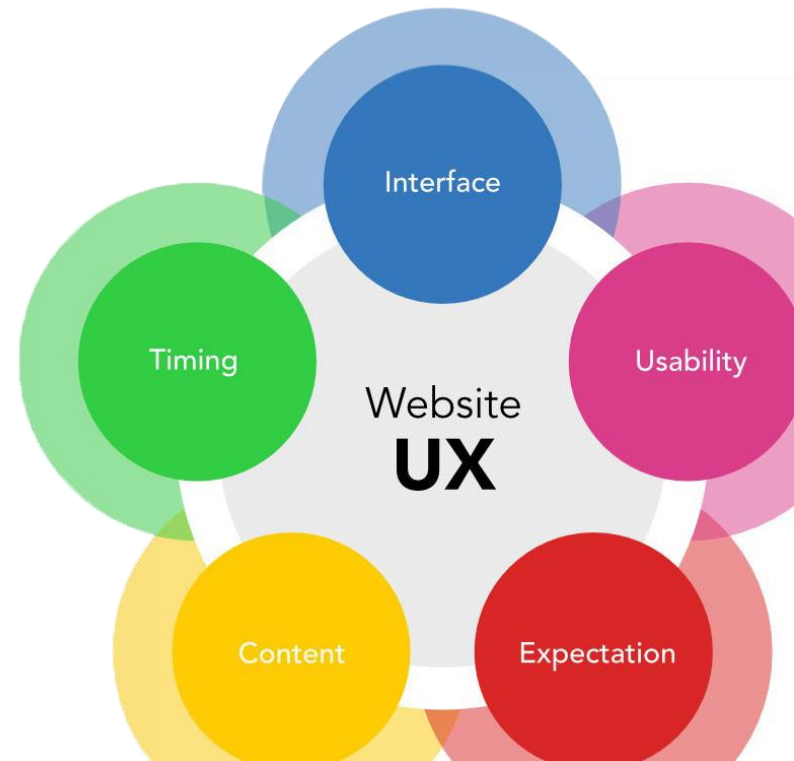


Allows for Communication



Best Practices for Web & Mobile Testing

- Keep the User Experience in mind when testing
 - Go through the purchase path(s) as a customer would
 - Click on **EVERY LINK**
 - Test every purchase path
 - Test multiple user types (members, subscribers, etc.)





Best Practices for Web & Mobile Testing

- Be realistic with your Priority Levels
 - Not every issue is Critical in web testing
 - If a user is prevented from completing a function, it's Critical
 - Cosmetic issues may take a lower priority to functional issues





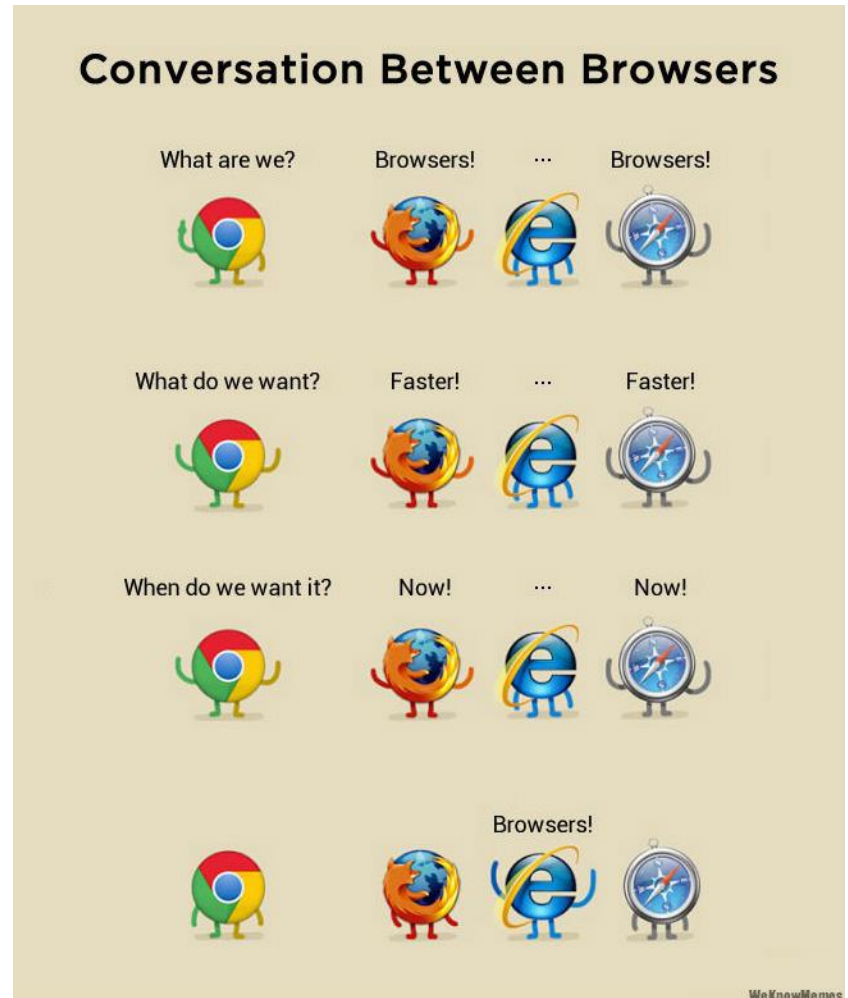
Best Practices for Web & Mobile Testing



- Devices (repeat test plan for different device types)
 - Computers
 - Tablets
 - Smart Phones

Best Practices for Web & Mobile Testing

- **Browsers**
 - Repeat test plan for each browser
 - Understand the differences in various browsers (they are not all created equally!)





Best Practices for Web & Mobile Testing

- Too many devices/browsers/operating systems?
 - Test using real devices
 - Test using “emulated” devices
 - Use a combination of both!





Best Practices for Web & Mobile Testing

■ Emulator

- More devices, browsers and operating system configurations then could ever be setup and maintained

■ Cons

- No User Interactions
- Interruptions not simulated

■ Pros

- Less expensive
- New devices added regularly





Best Practices for Web & Mobile Testing

- Know your limits
 - Decide what you will support
 - What are the most popular devices, browsers, etc. for your customers?
 - Prioritize accordingly





Best Practices for Web & Mobile Testing

- Load Testing
 - If your organization experiences high volume sales you should plan to run load tests
 - Invest in a waiting room, and test the capacity





Best Practices for Web & Mobile Testing

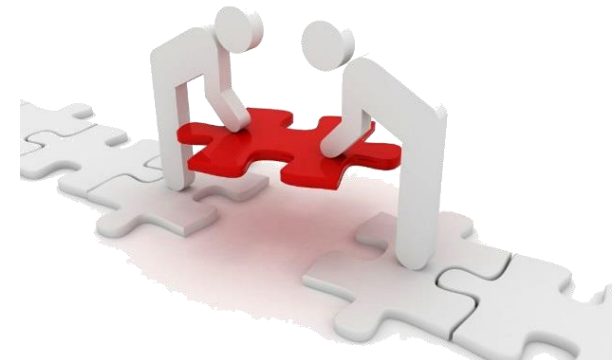
- **Tools and Resources**
 - **Google Chrome**
 - **Incognito Mode**
 - **View Source**
 - **Developer Tools**
 - **Elements**
 - **Network**
 - **Emulated Devices**
 - **Pagespeed Insights**
 - **Pingdom**
 - **Website Speed Test**
<http://tools.pingdom.com/fpt/>





Consortium Concerns

- If you are in a consortium and sell tickets/items on another member's website, be sure to test both websites
 - Include testing customizations
 - Occasionally one member organization will have customizations, but the others won't. This makes for a different user experience.





TN Express Web (TNEW) Testing

- **Tessitura and TNEW Upgrades**
 - In addition to testing the upgrade features:
 - Test transactions in **EVERY** purchase path
 - Test customizations – does Consulting need to make a change?
 - Test the TNEW template (skin)
 - There are sometimes minor CSS changes that can impact the template





TN Express Web (TNEW) Testing

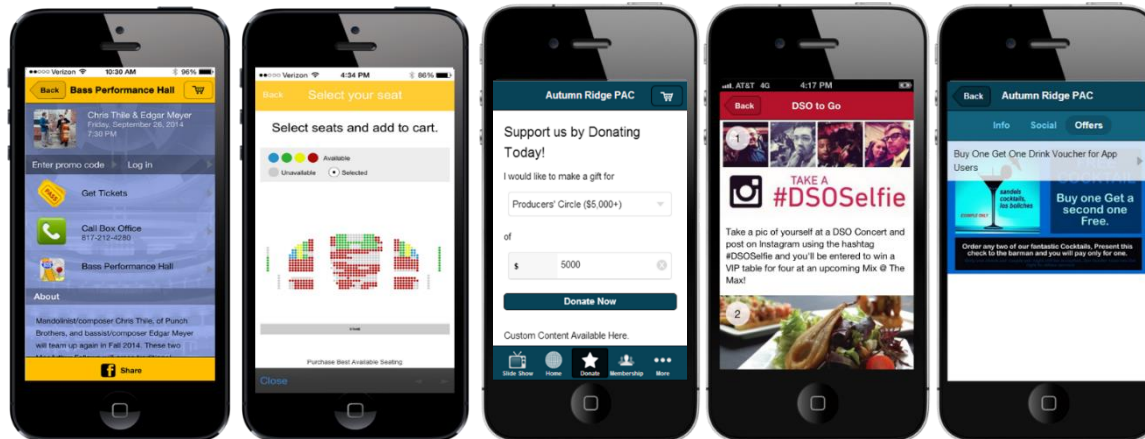
- TNEW Upgrades
 - Web Products team will provide instructions
- TNEW Testing Guide for Upgrades
- TNEW Upgrade Instructions

The screenshot shows the Tessitura Network website. The header includes the logo and tagline "The Global Leader for Arts & Cultural Technology + Services + Community". The navigation menu has "LEARNING & RESOURCES" highlighted with a purple box. The left sidebar lists various resources, with "TN Express Web (TNEW)" highlighted by a purple box and a purple arrow pointing to it from above. The main content area features a search bar for "TN Express Web" and a dropdown menu. Below the search bar, there are links to "Open the v5.5 TNEW Guide" and "Open the v4.5 TNEW Guide". A purple arrow points to the "TN EXPRESS WEB TESTING GUIDE FOR UPGRADES" link in the main content area. At the bottom left, a purple arrow points to the "Send a message to the Resources Team" link. The footer contains copyright information and links for "Website Feedback", "Privacy Policy", "Contact Us", and "Recommend Site".



TN Mobile Plus (TNMP) Testing

- Tessitura, TNEW and TNMP Upgrades
 - In addition to testing the upgrade features:
 - Test transactions in EVERY purchase path
 - Use Sandbox Mode – changes are only applied to the Control Panel previews and will not affect the behavior of your iOS, Android apps or mobile website.





Sample Test Plan

3 TESTING TICKETING TRANSACTIONS

Commit to making as many individual purchases as you can, in various testing sessions, so that you are comfortable that you have reviewed the functionality. You will want to test transactions as a single ticket buyer and as a member.

Make detailed notes and report any oddities, confusing steps or recommendations to the testing coordinator.

3.1 SINGLE TICKET TRANSACTIONS

Single tickets include General Admission and Planetarium shows

1. Login to your account (member account or personal account)
2. On the purchase page for the event
 - a. Review content for readability and spelling.
 - b. Does the image render?
 - c. Are all price types displaying as expected?
 - i. If you are logging in as a member, do you see member pricing?
 - ii. If you are logging in as a single ticket buyer, you should not see member pricing available.
3. Add tickets to your cart
4. Cart Pages
 - a. Review shipping options and messaging if applicable
 - b. Add a Donation in the cart
5. Checkout
 - a. Use a test credit card. Here is a [link](#) to fake credit cards that can be used. DO NOT use a real credit card number.
6. Order Confirmation
 - a. Once the transaction is completed, check that the on-screen order confirmation is correct and review messaging.
 - b. Confirm the delivery of the order confirmation email and check that the information is correct and review messaging.



Strategy

- Develop a Web and Mobile testing strategy
 - Which devices, browsers and operating systems will you support?
 - Define your web and mobile test plan
 - Go through every purchase path as a customer would
 - Test with real devices and emulators
 - Include a tester from the Box Office or Admissions





Jessitura



**EUROPEAN
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QUESTIONS?

- Tell us who you are and where you are from.....

Jessitura



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WHAT'S NEXT?

🕒 **BREAK 12 NOON – 12.15PM**
You will find drinks in or near all conference rooms. We suggest that you make your way to your next session before finding refreshments.

🕒 **NEXT SESSION : 12.15PM – 1.15PM**