

Claim Operations Optimization

White Paper



Introduction

Processing claims quickly and accurately is one of the biggest challenges payers face today. Huge volume of claims notwithstanding, multiple and incompatible systems requiring significant manual hand offs have made the timely disposal of claims the single biggest burden on operating costs of payers. Add to it the problem of incorrectly filed claims that payers need to handle, leading to choking of band-width on account of re-processing; the problem suddenly becomes even more acute. With state specific regulations penalizing such delays, it has become a matter of survival for payers to figure out the optimal trade-off between analysis one claim warrants versus time it takes to get it through the system.

This is a double edged sword – Due to current state of claims processing units, accurate assessment is a time consuming and costly process, while a bandwidth crunched infrastructure itself is susceptible to errors. An inaccurately settled claim on one hand may lead to overpayment while underpayment leads to penalties and blocks additional band-width for the payer’s claim processing unit.

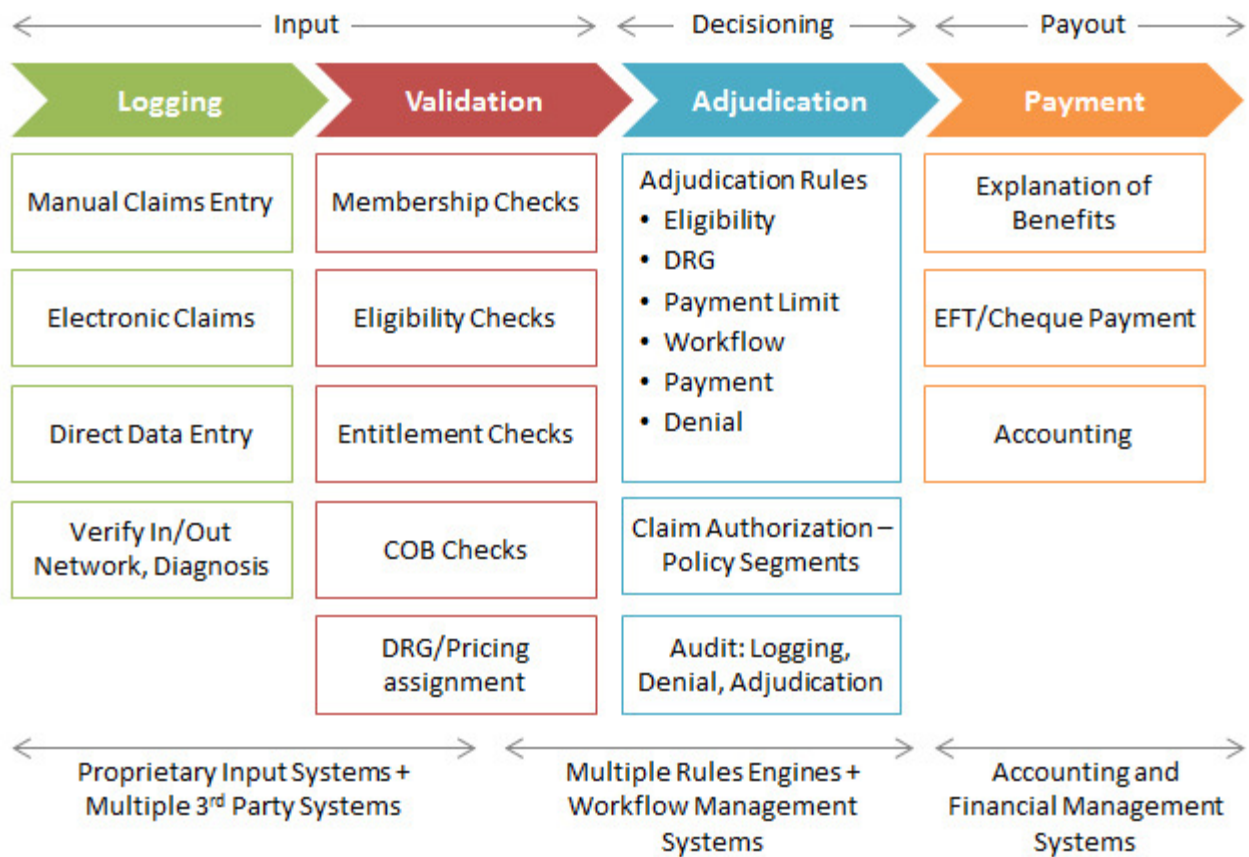
According to American Medical Association’s (AMA) latest research results, there has been an average claims-processing error rate of 19.3 per cent. This high percentage of error rate means every 1 in 5 claims needs to be re-processed, which is obviously a very high level of inefficiency in the industry. (Source: <http://www.ama-assn.org/ama/pub/news/news/ama-health-insurer-report-card.page>)

Seeing this alarming rate of errors and delays in the processing, payers are working relentlessly to improve efficiency through automated processing. Most payers are focusing on below common strategic objectives:

- Reduce Operational Costs
- Focus on core competencies
- Improvement in business efficiency
- Improved customer service and retention

However, in our experience a lot of such well-meaning initiatives fail due to lack of thorough understanding of various inter-linkages of a claims processing life-cycle. Our view is – claims processing is not an operational problem – it’s a dimensionality reduction problem. At Axtria, we follow a top down approach to sift through the symptoms to identify the disease. We use our proprietary ClaimIQ framework to analyze the given problem statement to localize the root cause. Using this framework we have delivered more than \$250 million of savings on account of interest payments reduction for our clientele. In this paper we present a detailed discussion on claim processing life-cycle, its typical challenges and our proprietary ClaimIQ framework. A use case, a disguised client example, has also been presented to expound upon the intuitiveness and simplicity of this framework.

Claims Process Lifecycle



The flow illustrated above is a claim processing lifecycle describing the steps involved in processing a claim entry through to acceptance. This occurs in three phases: Input, Decisioning and Payout. All these phases are further broken down in to four major components:

- Logging
- Validation
- Adjudication
- Payment

Input Phase

Input Phase is a critical component to the process of claims lifecycle. It has two components 'Logging' and 'Validation':

Logging

- After manual claims entry is received, the data is directly entered into the system to convert it in to electronic claim.
- At this stage all the entries are scanned, checked for quality and transferred on to the next stage i.e. Validation.

Validation

- At the Validation stage all the records entered at logging stage are checked against a list of validation rules.
- Records are checked for Membership, Eligibility, Entitlement and COB checks.
- DRG/Pricing assignments are also validated. Any entry that fails the validation is reviewed again for manual correction.

Decisioning Phase

After the data is uploaded and validated, it passes through the decisioning phase. This is known as Claims Adjudication.

Adjudication

- The claims are adjudicated based on various business rules like Eligibility, DRG, Payment limit, Payment and Denial.
- The claims are routed to automatic or manual adjudication on the basis of claim complexity.
- The claims can be rejected, paid or pending at this stage.
- Authorization is done on the basis of assigned policy segments.

Payout Phase

Upon successfully validating, transforming and adjudicating the data, the important function of making the payment is performed.

Payment

- The benefits are clearly explained to the payer when the EFT/cheque payment is generated.
- The accounting details are updated in the system for further maintenance and keeping records.

By and large, this entire process is a composite process and is driven by numerous and incompatible systems leading to recurrent hand-offs.

These three phases are beset with multiple challenges as listed below:

- a. **Input:** Typically any payer needs to handle both paper and electronic claims. While electronic claims are easy to process from input perspective, paper claims require significant manual effort to log into the system. Typically payers maintain multiple sites where such logging happens. As with any manual process, chances of wrong data entry are very high. There is another problem since a wrongly entered claim in the system gets processed through the system till it reaches adjudication where the error is caught and it is rejected. The whole cycle, needs to be repeated for the claim upon resubmission.

Validation rules of some of the payers go back decades with no redundancy check or re-alignment. This leads to wastage of time and resources for checking archaic and immaterial rules.

- b. **Decisioning:** Manual adjudication is a time consuming process. And a process where significant band-width is wasted on account of up-stream errors. Simplistic queuing methodologies which lead to even simple or immaterial claims being routed to manual adjudication unit again adds to the inefficiencies.

- c. **Payout:** This is a relatively small process but has its fair share of challenges as well. Usually, payment module is a separate system which is not integrated with main processing system. This leads to operational errors due to manual hand offs.

As can be seen, this ecosystem is encumbered with several challenges which can be broadly classified into Process, Technology, Operating model, and Talent while state level regulations add regulatory dimension to it. This results in significant delays in claim processing and closure.

In such a scenario, a problem which seems as simple as one of bandwidth shortage at the manual adjudication unit may actually have its root cause at the logging stage which is incorrectly logging in paper claims into the system. Unless peeled appropriately, this can lead to a false sense of efficiency at the logging stage and a false sense of bottleneck at the adjudication stage.

It is thus critical to really peel the onion and localize the challenges of claims processing delays.

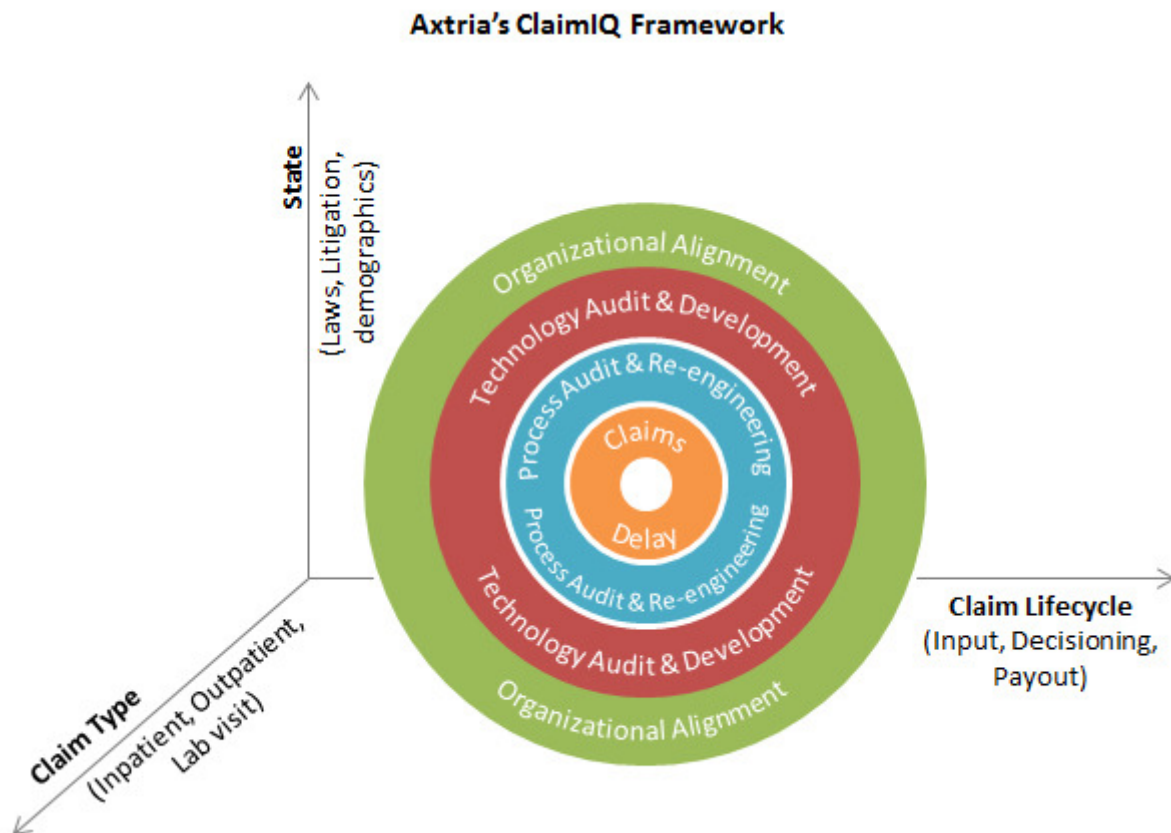
Solution

At Atria, we have developed a proprietary framework called ClaimIQ which helps payers reduce the dimensionality of the problem pertaining to claim processing delays. ClaimIQ is a multi-layered framework which helps localize the root cause of claims processing delays by replicating the proverbial “peeling of the onion”. At first the problem is segmented into a cube across three dimensions, to isolate high prevalence of claim processing delays:

- a. Is there a particular “state”?
- b. Is there a particular claim type (IPD, OPD, Lab visit)?
- c. Is there a particular step in the claim processing lifecycle?

Once areas of high incidences are identified, the framework tries to zoom in to the idiosyncratic root cause of each incidence by further evaluating below three dimensions:

- a. Process: Is the process designed appropriately?
- b. Technology: Is the technology automated or integrated?
- c. Organization: Is the organization aligned towards effective claims processing?



The steps involved in analyzing each of these dimensions are as shown in the graphic below:

Process Audit and Re-engineering	Technology Audit and Development	Organizational Alignment
<p>Define</p> <ul style="list-style-type: none"> Map processes and sub-processes - SIPOC* framework <p>Evaluate and Analyze ('Localize')</p> <ul style="list-style-type: none"> Measure efficiency – delay analysis Identify error hotspots (Incorrect CPT code, modifier, Bundling etc.) Analyze bottle-necks (CPM analysis) – appeals ratio Sequential dependencies <p>Re-engineer</p> <ul style="list-style-type: none"> Automate Reduce hand-offs / Rationalize audits Re-design process flow Assign queue optimally <p>Compliance and Control</p> <ul style="list-style-type: none"> Create KPIs for the new process and track 	<p>Automate</p> <ul style="list-style-type: none"> Manual hand offs Integrate across rule engines, 3rd party softwares (CMS, APC) Standardize data classes <p>Scale</p> <ul style="list-style-type: none"> Identify 'chokepoints' and capacity levels (across systems) Error handling flexibility and workflows Evaluate software / hardware requirements to scale <p>Build Predictive Capabilities</p> <ul style="list-style-type: none"> Claim severity / frequency Litigation propensity Time to resolution Fraud and abuse 	<p>Benchmark performance</p> <ul style="list-style-type: none"> In-house, outsourced, offshore, geographies (across clearing house, Claim adjudicators etc.) <p>Talent Management</p> <ul style="list-style-type: none"> Availability Training Skill alignment <p>Organization Structure</p> <ul style="list-style-type: none"> Process versus department view Merge – demerge departments Incentive alignment (across departments)



* Supplier Input Process Output Customer framework for process mapping

Process Audit and Re-engineering

Process audit is the first step in identification of process redundancies and inefficiencies. To properly conduct this analysis, Axtria has developed the DEARC methodology. This is a five-step process: Define, Evaluate, Analyze, Re-engineer, and Control.

In *Defining*, we map the process as it is. This entails exhaustive data gathering with all the company's stakeholders in claim processing flow, from executives to people handling the claims. In detail, we break the process into sub-processes and identify the following:

- a. Supplier: Who supplies the input to the process?
- b. Input: What is the input, in what form and shape it is provided?
- c. Process: What is done by the resource with in the process under review?
- d. Output: What output is prepared, in what format and shape?
- e. Customer: Who is the end consumer of this output and for what purpose it is being provided?

Post mapping of processes the *Evaluation and Analysis* of efficiency of each process is done. This helps in identification of redundancies, bottlenecks, sequential dependencies versus parallel processing opportunities and error hot-spots like incorrect CPT code, bundling etc. Once a comprehensive view of the entire process has been obtained process *Re-engineering* can be done to achieve optimum levels of efficiency. Last step in process re-engineering initiative is creation of *control* metrics which need to be measured to pro-actively warn management against any future process failure.

Technology Audit and Development

The current processing software used by major payers are an amalgamation of various third-party software and in-house technology solutions. A technology audit will thus always consist of figuring out which parts in the technology chain are not integrated and need *Automation*. It includes key steps like the automation of manual handoffs and the standardization of data classes so programs can more effectively communicate with one another throughout the workflow as claims flow back and forth.

For example, at certain steps in the process, notably adjudication, multiple rules engines are employed simultaneously to process claims. If these rules engines are integrated, data flow is faster and more efficient.

Another necessary task is under-standing the system *Scalability*. This entails identification of choke points and capacity levels across every system and at every step. Just as we realign steps to ease bottlenecks, data flow solutions are built to ease choke points and create a process that more accurately reflects the system's capacity.

System capacity measurement and thresholds are made to understand the system stress, allowing creation of rapid response alerts before choke points actually develop into bottlenecks. Error handling flexibility is a must, where we critically evaluate the system's responses to claims errors. A clean claim

should be processed quickly so that no interest is accrued; while system should also have the capability to have a quick response and intervention module in case an error is found.

The last segment of our technology offering is *Predictive Capabilities*, where we build and implement advanced predictive capabilities. Claim severity and frequency is one such piece which enables payers assess total claims payout and make an assessment of required provisions; gathering data and building probabilistic models that take into account litigation propensity and time to resolution allows claims to be assigned more accurate priority rankings.

Concurrently, fraud and abuse patterns help form the basis of automatic fraud checks. Using data on current trends in fraud and abuse, like demographic patterns as well as codes that are more likely to be fraudulent when paired with one another, predictive fraud capability can be built into the workflow to guide the eyes and empower the judgment of auditors far more effectively.

Aligning the Organization

The third solution lever takes a step back from the real process and technology underpinning it to properly examine the structure of the payer. Is it set up in the most efficient way to meet the thresholds for efficiency? If not, can it be efficiently made so?

Careful analysis of the business model of each particular firm is a necessary prerequisite: is every task in-house or are certain tasks outsourced? If certain tasks are outsourced, how core are they to business operations? What are the controls in case core operations are outsourced? Is the outsourced firm capable enough to handle sophisticated cases? Are they in a different part of the United States, or across the world in a country like India? This analysis must be conducted for each step in the process: essentially: Who does what? How is hand off done? How are defects communicated?

Even before a decision to outsource is made talent management within the firm needs to be analytically evaluated. Is the right talent available? If not, is it because proper alignment has not been done of existing skill set which provides a false sense of talent unavailability?

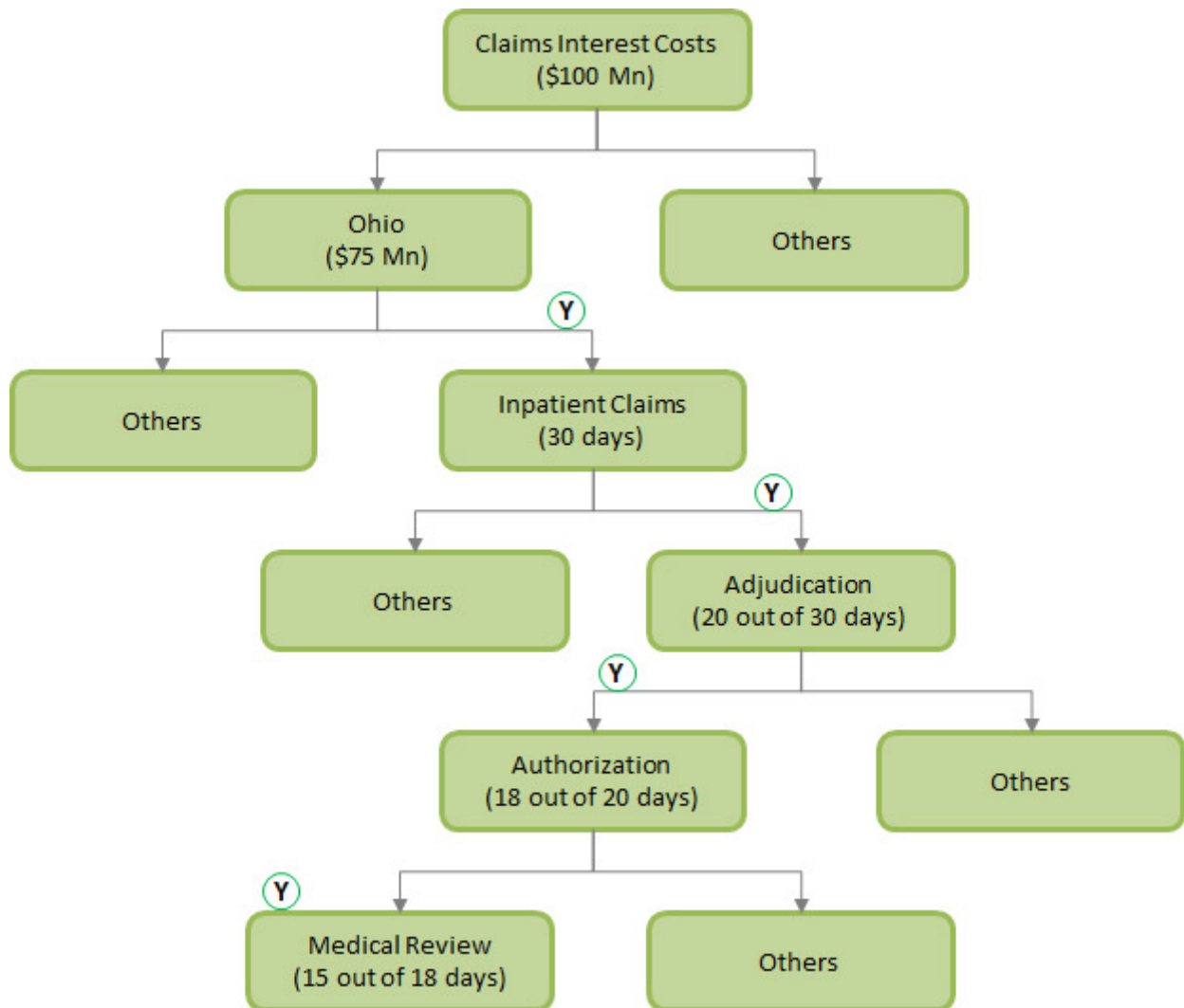
Then there is a larger point of process versus department. Are all components of one process managed by a single department? If not, this may be a potential case of divergent goals pulling the process components into different directions.

Organizational alignment is a huge step, and is the most complex step used in our internal solution lever framework. However, it is one of the most powerful component of ClaimIQ. An effective organizational structure provides incentives to all parties involved to drive smarter claims processing by encouraging collaborative and assured decision-making.

At Atria, we have leveraged the above-mentioned framework quite extensively to solve processing delay issues at several payers. The next section describes a case study where ClaimIQ was leveraged effectively to 'localize' the problem effectively.

Use Case: ClaimIQ in Action

In the (illustrative) example discussed below, ClaimIQ was applied to a typically broad question, or rather a statement: In the specific client situation, Ohio state was witnessing high interest costs. When Axtria was roped in, we identified this was far too broad a problem to be easily solved. As mentioned earlier, we applied ClaimIQ framework to ‘localize’ the situation. What emerged was the decision tree shown in the graphic below:



In this case, we begin at the state and regulatory external axis. The total claims interest costs were around \$100 million. At the state level, \$75 million of that was being paid in Ohio.

We applied the claim type external axis and asked: Which claims is causing the most delays? The answer was inpatient claims, taking 30 days to process.

Next was the claim life-cycle external axis. We identified that adjudication was taking the longest steps in the process, taking 20 of the 30 days an inpatient claim takes for processing.

We then applied the next level of solution levers and identified that queue at authorization was taking up 18 days out of the 30 being spent in adjudication.

Upon further querying, we identified that waiting for medical review was taking 15 out of the 18 days the case was in queue at authorization.

As can be seen, the initial problem statement of “Ohio was a problem” changed to “Medical referrals response time needs to be improved” Now the problem was far easier to solve than what it appeared earlier.

This is the power of ClaimIQ in action: it takes the quintessential big data problem of health care claims cost reduction and carefully, systematically and patiently detritus until clear, actionable delay causes are isolated. Taking care of the delay causes is a simpler issue when these are posed as specific questions instead of broad, unclear complaints or presumptions.

Conclusions

Delays occurring in claims processing are a huge challenge for payers today. Solving this challenge is all about peeling the onion systematically and reducing the dimensionality of the problem. At Atria, we have developed ClaimIQ – a framework and tool to help ‘localize’ the multiple dimensions involved, in a systematic and structured manner.

We believe, optimizing claim processing time is not something that can be done in an ad-hoc manner. First of all, it needs a clear commitment from executive management since addressing it comprehensively is probably a two to three year journey. Further, given the multiple dimensions and processes (and systems) involved – it needs a rigorous structured framework to remove the noise and localize the problem to select meaningful dimensions. Once the ‘localization has been achieved, it is to be addressed through either a process re-engineering initiative, technology automation project or an organizational alignment program. We truly believe frameworks and tools like ClaimIQ are a must-have if you are to embark on this journey.

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